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MILITARY STANDARDIZATION HANDBOOK
A GUIDE TO THE SPECIFICATIONS FOR FLEXIBLE RUBBER PRODUCTS

FSC 9320

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DEPARTMENT OF DEFENSE

WASHINGTON, D.C.

MIL-HDBK-699A(MR)

A Guide to the Specifications
for Flexible Rubber Products

1. This standardization handbook was developed by the Department of Defense in accordance with established procedures.

2. This publication was approved on 25 February 1977 for printing and inclusion in the Military standardization handbook series.

3. This handbook provides information concerning all known Federal, Military and nationally recognized technical society specifications and standards for those flexible rubber products considered to be of interest to the Department of Defense. The handbook is not intended to be referenced in purchase specifications or other contractual documents nor shall it supersede any specification requirements.

4. Every effort has been made to reflect the latest information on specifications for flexible rubber products. It is the intent to review this handbook periodically to insure its completeness and currency. Users of this document are encouraged to report any errors discovered and any recommendations for changes to Army Materials and Mechanics Research Center, ATTN: DRXMR-LS, Watertown, MA. 02172

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CONTENTS

	Page
Foreword	1
Table I - Types of Government and Technical Society Specifications for Rubber	3
Specifications for Multipurpose Rubbers	4
Specifications for Cellular Materials	16
Specifications for Clothing and Protective Equipment	33
Specifications for Coated Fabrics	36
Specifications for Hose, Duct and Tubing	48
Specifications for Mats and Floor Coverings	71
Specifications for O-Rings	73
Specifications for Packings and Gaskets	78
Specifications for Tires, Tubes and Related Items	89
Specifications for Wire, Cable and Related Electrical Items	93
Specifications for Miscellaneous Items	111
Abbreviations	119

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FOREWORD

The purpose of this handbook is to provide information concerning all known Federal, Military and nationally recognized technical society specifications for flexible rubber products. Specifications from the following technical societies are included:

American Society for Testing and Materials (ASTM)
1916 Race Street, Philadelphia, Pa. 19103

American National Standards Institute (ANSI)
1430 Broadway, New York, New York 10018

Society of Automotive Engineers (SAE and AMS)
400 Commonwealth Drive, Warrendale, Pa. 15096

The following types of information are furnished for each specification:

1. Specification number, title, and where applicable, the Federal Supply Classification (FSC) code number.

2. Whether or not a Qualified Products List (QPL) has been issued.

3. The type of rubber (natural, neoprene, butyl, etc.) from which the product is usually fabricated.

4. A brief description of the rubber product in terms of the specification requirements (tensile strength, resistance to high and low temperatures, resistance to fluids, etc.)

5. A brief description of the construction characteristics of those products which are composites of rubber and other materials. For example, the type, number and weight of the fabric plies in rubber coated fabrics.

The information provided by this handbook is designed to assist the user in answering questions similar to these:

1. Does a specification exist which describes rubber O-rings suitable for use at 500°F.?

2. Is there a specification for rubber hose suitable for use with gasoline and flexible at -40°F.?

3. Which specification(s) describes closed cell silicone rubber sponge?

4. Is there a specification for neoprene jacketed electrical cable and does this specification provide a list of suppliers (QPL)?

The handbook describes seven types of specifications, as shown in Table I. Particular products are covered in the following sections of the handbook: Cellular materials, Clothing and protective equipment, Coated fabrics, Hose, duct and tubing, Mats and floor covering, O-Rings, Packings and gaskets, Tires and tubes, Wire and cable and Miscellaneous.

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The general product specifications are covered in the "Multipurpose Rubbers" section of the handbook. As the word "multipurpose" implies, any one of these specifications may be used for the procurement of a variety of products. For example, under Specification MIL-R-3065, one may procure molded products, extruded shapes, calendered goods and sheet packings. The handbook lists about 60 multipurpose rubber specifications, encompassing approximately 100 different grades of rubber. Because of their broad coverage of rubber grades and product types, the multipurpose rubber specifications should prove to be very helpful to users of this handbook, especially when a search of a particular product section has failed to reveal a specification having a desired set of requirements. For example, suppose that a specification is sought for an O-ring which will be non-brittle at -40°F, which will show good strength retention after exposure in air at 212°F and which need not be oil resistant. The O-ring section of the handbook does not list such a specification. However, the multipurpose rubber section does list the desired specification, namely, MIL-R-3065 (and its accompanying document MIL-STD-417), for Class RN or Class RS rubber. Thus, the O-ring having the desired characteristics may be procured by furnishing the supplier a dimensional drawing which cites a material reference to an appropriate rubber (class and code number) under MIL-R-3065.

It should be noted that the handbook descriptions of the specification requirements are incomplete, since in very few instances have all of the requirements of a specification been listed. The information given in the handbook is intended to guide the user to the specification(s) which best meets his needs, however, to verify the validity of his choice, the user should always obtain the selected specification(s) in order to ascertain its complete scope.

The chief criterion for determining whether or not a specification for a rubber product was to be included in the handbook was the flexibility of the product. Specifications were included only for those products which were believed to be capable of being hand flexed.

The majority of the listed specifications are for vulcanized products, however, unvulcanized products such as inner tube repair patches, retread rubber and room temperature vulcanizing (RTV) potting and encapsulating compounds are included.

Some specifications for products fabricated from materials which are commonly considered to be plastic (polyvinyl chloride), but which exhibit rubber-like properties, are included.

Excluded from the handbook are specifications for hard rubber (ebonite) products, adhesives, coatings, sealers and tapes. Also excluded are composites in which rubber is in admixture with other ingredients, as in rubber-asbestos packings or rubber-cork gaskets. Complex items are assemblies, such as certain oxygen masks and fuel tanks have also been omitted. A large number of specifications for rubber products which were deemed to be of no interest to the Department of Defense, such as surgical operating pads, rubber bands and ice bags, were excluded.

Unless otherwise noted, the specification requirements given in the tabular sections of the handbook pertain to tests performed on the complete product.

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TABLE I - TYPES OF GOVERNMENT AND TECHNICAL SOCIETY SPECIFICATIONS FOR RUBBER

I.	Broad Multipolymer -	A large number of grades of rubber compounds based on a wide variety of polymers (MIL-STD-417, ASTM D2000)
II.	Limited Multipolymer -	Several grades of rubber compounds based on a few types of polymers (MIL-R-6855)
III.	Broad Single Polymer -	Several grades of rubber compositions based on one polymer family (ZZ-R-765)
IV.	Single Composition -	One grade having specific properties (MIL-R-43109, AMS 3000 series)
V.	Composition and Product -	One or two grades of rubber compounds based on one polymer plus an item made from that compound (MIL-R-7362, MIL-R-25897)
VI.	Single Product -	One item (MIL-P-5315, AMS 7000 series)
VII.	Multi Product -	Several classes of items (MIL-C-20696, MIL-C-13777)

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MULTIPURPOSE RUBBERS[1]

SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T, 1000-3500 psi; E, 100-600%; H, 30-90	Natural rubber		9320	Rubber Composition, Vulcanized General Purpose, Solid (Symbols and Tests)	MIL-STD-417 Type R, Class RN
Cooling medium, ASTM D746	-67	-	F_2 suffix, no cracks					
Cooling medium, ASTM D746	-40	-	F_1 suffix, no cracks					
Air, compression set	158	22	Basic cmpd., 50% max; B suffix, 25% max.					
Air, original properties	Ambient	-	T, 1000-2500 psi; E, 100-400%; H, 30-90	SBR or Butyl		9320	Rubber Composition, Vulcanized General Purpose, Solid (Symbols and Tests)	MIL-STD-417 Type R, Class RS
Cooling medium, ASTM D746	-67	-	F_2 suffix, no cracks					
Cooling medium, ASTM D746	-40	-	F_1 suffix, no cracks					
Air, oven aging	212	70	A_1 suffix, max. change: T, -25%; E, -35%					
Air, original properties	Ambient	-	T, 500-2000 psi; E, 100-400%; H, 40-90	Polysulfide		9320	Rubber Composition, Vulcanized General Purpose, Solid (Symbols and Tests)	MIL-STD-417 Type S, Class SA
Cooling medium, ASTM D746	-67	-	F_2 suffix with H. 40-60, no cracks					
Cooling medium, ASTM D746	-40	-	F_1 suffix, no cracks					
Air, oven aging	212	70	A_1 suffix, max. change: T, -10%; E, -30%					
ASTM #3 petroleum oil	212	70	Volume change, 0 to +10%					
Air, original properties	Ambient	-	T, 500-2000 psi; E, 100-450%; H, 40-90	Nitrile		9320	Rubber, Composition, Vulcanized General Purpose, Solid (Symbols and Tests)	MIL-STD-417 Type S, Class SB
Cooling medium, ASTM D746	-67	-	F_2 suffix, no cracks					
Cooling medium, ASTM D746	-40	-	F_1 suffix, no cracks					
Air, compression set	212	70	Basic cmpd., 60% max; B_1 suffix, 35% max.					
ASTM #3 petroleum oil	212	70	Volume change, 0 to + 40%					
Air, original properties	Ambient	-	T, 500-2500 psi; E, 200-400%; H, 30-90	Chloroprene		9320	Rubber Composition, Vulcanized General Purpose, Solid (Symbols and Tests)	MIL-STD-417 Type S, Class SC
Cooling medium, ASTM D746	-67	-	F_2 suffix with H. 30-60, no cracks					
Cooling medium, ASTM D746	-40	-	F_1 suffix, no cracks					
Air, compression set	158	22	50% max.					
ASTM #3 petroleum oil	212	70	Volume change, 0 to + 120%					
Air, original properties	Ambient	-	T, 500-1200 psi; E, 50-500%; H, 40-80	Silicone		9320	Rubber, Composition, Vulcanized General Purpose, Solid (Symbols and Tests)	MIL-STD-417 Type T, Class TA
Cooling medium, ASTM D746	-67	-	No cracks					
Cooling medium, ASTM D746	-103	-	F_3 suffix, no cracks					
Air, oven aging	437	70	Max. change: T, -50%; E, -50%; H, +15					
ASTM #1 petroleum oil	302	70	E_1 suffix, volume change, 0 to + 20%					

[1] For those entries which cover more than one grade of rubber (for example, Class RN, MIL-STD-417, a range of property values is given (tensile strength 1000-3500 psi)).

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T, 500-1500 psi; E, 100-200%; H, 40-80	Polyacrylate		9320	Rubber Composition, Vulcanized General Purpose, Solid (Symbols and Tests)	MIL-STD-417 Type T, Class TB
Air, oven aging	347	70	Max. change: T, -30%; E, -50%; H, +10					
Air, compression set	302	70	60% max.					
ASTM #3 petroleum oil	302	70	Volume change, 0 to +20%					
(All Grades Covered by this Document are also Covered Under MIL-STD-417 and ASTM D2000							Elastomer Compounds for Automotive Applications	ASTM D735/ (SAE J14)
Air, original properties	Ambient	-	T, 700-500 psi; E, 250-125%; H, 40-80	Silicone		9320	Rubber, Silicone	ZZ-R-765 Classes 1a and 1b
Cooling medium, ASTM D746	-103	0.05	No cracks					
Air, oven aging	437	70	T change, -30% max; E change, -50% max					
ASTM #1 petroleum oil	212	70	Volume change, +10 to +15%					
Air, original properties	Ambient	-	T, 700-650 psi; E, 400-60%; H, 40-80	Silicone		9320	Rubber, Silicone	ZZ-R-765 Classes 2a and 2b
Cooling medium, ASTM D746	-80	0.05	No cracks					
Air, oven aging	437	70	T change, -20% max; E change, -40% max					
ASTM #1 petroleum oil	302	70	Volume change, +15% max					
Air, original properties	Ambient	-	T, 800-1200 psi; E, 500-400%; H, 25-80	Silicone		9320	Rubber, Silicone	ZZ-R-765 Class 3a and 3b
Cooling medium, ASTM D746	-103	0.05	No cracks (for grades 25, 50 and 60)					
Cooling medium, ASTM D746	-80	0.05	No cracks (for grade 60)					
ASTM #1 petroleum oil	302	70	Volume change, +5% max					
(Many grades available. Following is a typical example)								
Air, original properties	Ambient	-	T, 2000 psi. min; E, 500% min; H, 45 ± 5	Natural			Latex Dipped Goods and Coatings for Automotive Applications	ASTM D1764/ (SAE J19) Type LR
Air, oven aging	158	70	Min values: T, 1500 psi; E, 400%					
(Many grades available. Following is a typical example)								
Air, original properties	Ambient	-	T, 1500 psi. min; E, 400% min; H, 55 ± 5	Chloroprene			Latex Dipped Goods and Coatings for Automotive Applications	ASTM D1764 (SAE J19) Type LS, Class LSC
Air, oven aging	212	70	Min values: T, 1200 psi; E, 300%					
ASTM #2 petroleum oil	212	22	Volume change % max; Basic cmpd, 80; E_2 suffix, 50					
Air, original properties	Ambient	-	T, 500-3500 psi; E, 75-600%; H, 30-90	Natural Rubber, SBR or butyl			Elastomeric Materials for Automotive Applications	ASTM D2000/ (SAE J200) Material AA
Cooling medium, ASTM D746	-40	-	F17 suffix, pass					
Air, oven aging	158	70	Max. change: T, ± 30%; E, -50%; H, ± 15					
Air, compression set	158	22	Basic cmpd, 50% max; B13 suffix, 25% max.					

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T, 1000-2500 psi; E, 100-400%; H, 30-90	SBR or butyl			Elastomeric Materials For Automotive Applications	ASTM D2000 (SAE J200) Material BA
Cooling medium, ASTM D746	-40	-	F17 suffix, pass					
Air, oven aging	212	70	Max change: T, ± 30%; E, -50%, H, ± 15					
Air, compression set	158	22	50% max.					
Air, original properties	Ambient	-	T, 500-3400 psi; E, 50-500%; H, 30-90	Chloroprene			Elastomeric Materials For Automotive Applications	ASTM D2000 (SAE J200) Material BC
Cooling Medium, ASTM D746	-40	-	F17 suffix, pass					
Air, oven aging	212	70	Max change: T, ± 30%; E, -50%; H, ± 15					
Air, compression set	212	22	Basic cmpd, 80% max; B14 suffix, 35% max.					
ASTM #3 petroleum oil	212	70	Volume change, +120% max.					
Air, original properties	Ambient	-	T, 500-2500 psi; E, 100-500%; H, 40-90	Chloroprene			Elastomeric Materials For Automotive Applications	ASTM D2000 (SAE J200) Material BE
Cooling medium, ASTM D746	-13	-	F15 suffix, pass					
Air, oven aging	212	70	Max, change: T, ± 30%; E, -50%; H, ± 15					
Air, compression set	212	22	Basic cmpd, 40-50%, B14 suffix, 25% max.					
ASTM #3 petroleum oil	212	70	Volume change, + 80% max.					
Air, original properties	Ambient	-	T, 500-2500 psi; E, 100-350%; H, 60-80	Nitrile			Elastomeric Materials For Automotive Applications	ASTM D2000 (SAE J200) Material BF
Cooling medium, ASTM D746	-67	-	F19 suffix, pass					
Air, oven aging	212	70	Max change: T, ± 30%; E, -50%; H, ± 15					
Air, compression set	212	22	50% max.					
ASTM #3 petroleum oil	212	70	Volume change, +60% max.					
Air, original properties	Ambient	-	T, 500-4000 psi; E, 50-450%; H, 40-90	Polyurethane			Elastomeric Materials For Automotive Applications	ASTM D2000 (SAE J200) Material BG
Cooling medium, ASTM D746	-40	-	F17 suffix, pass					
Air, oven aging	212	70	Max change: T, ± 30%; E, -50%; H, ± 15					
Air, compression set	212	22	Basic cmpd, 50% max; B14 suffix, 25 or 50% max.					
ASTM #3 petroleum oil	212	70	Volume change, +40% max.					
Air, original properties	Ambient	-	T, 500-2500 psi; E, 50-400%; H, 40-90	Polysulfide			Elastomeric Materials For Automotive Applications	ASTM D2000 (SAE J200) Material BK
Cooling medium, ASTM D746	-40	-	F17 suffix, pass					
Air, oven aging	212	70	Max change: T, ± 30%; E, -50%; H, ± 15					
ASTM #3 petroleum oil	212	70	Volume change, 10% max.					
Isooctane	Ambient	70	Volume change, E51 suffix, ± 5%					
Air, original properties	Ambient	-	T, 1000-2500 psi; E, 200-400%; H, 50-80	Hypalon			Elastomeric Materials For Automotive Applications	ASTM D2000 (SAE J200) Material CE
Cooling medium, ASTM D746	-67	-	F19 suffix, pass					
Air, oven aging	257	70	Max change: T, ± 30%; E, -50%; H, ±15%					
ASTM #3 petroleum oil	257	70	Volume change, 80% max.					

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T, 500-2500 psi; E, 50-350%; H, 60-90	Nitrile			Elastomeric Materials For Automotive Applications	ASTM D2000 (SAE J200) Material CH
Cooling medium, ASTM D746	-40	-	F17 suffix, pass					
Air, oven aging	257	70	Max. change: T, ± 30%; E, -50%; H, ± 15					
ASTM #3 petroleum oil	257	70	Volume change, +50% max.					
Air, original properties	Ambient	-	T, 800-1200 psi; E, 100-225%; H, 40-90	Polyacrylate			Elastomeric Materials For Automotive Applications	ASTM D2000 (SAE J200) Material DF
Cooling medium, ASTM D746	0	-	F14 suffix, pass					
Air, oven aging	302	70	Max change: T, ± 30%; E, -50%; H, ± 15					
ASTM #3 petroleum oil	302	70	Volume change, +60% max.					
Air, original properties	Ambient	-	T, 800-1500 psi; E, 100-300%; H, 40-90	Polyacrylate			Elastomeric Materials For Automotive Applications	ASTM D2000 (SAE J200) Material DH
Cooling medium, ASTM D746	+14	-	F13 suffix, pass					
Air, oven aging	302	70	Max. change: T, ± 30%; E, -50%; H, ± 15					
ASTM #3 petroleum oil	302	70	% max. vol. chg: basic cmpd, +30; F36 suffix, +25					
Air, original properties	Ambient	-	T, 500-1200 psi; E, 200-500%; H, 30-70	Silicone			Elastomeric Materials For Automotive Applications	ASTM D2000 (SAE J200) Material FC
Cooling medium, ASTM D746	-103	-	F1-11 suffix, pass					
Air, oven aging	392	70	Max change: T, ± 30%; E, -50%; H, ± 15					
ASTM #3 petroleum oil	302	70	Volume change, +120% max.					
Air, original properties	Ambient	-	T, 400 psi min; E, 400% min; H, 30 ± 5	Silicone			Elastomeric Materials For Automotive Applications	ASTM D2000 (SAE J200) Material FE
Cooling medium, ASTM D746	-67	-	F19 suffix, pass					
Air, oven aging	392	70	Max change: T, ± 30%; E, -50%; H, ± 15					
ASTM #3 petroleum oil	302	70	Volume change, +80% max.					
Air, original properties	Ambient	-	T, 800 psi min; E, 150% min; H, 60 ± 5	Fluorosilicone			Elastomeric Materials For Automotive Applications	ASTM D2000/ (SAE J200) Material FK
Cooling medium, ASTM D746	-67	-	F19 suffix, pass					
Air, oven aging	392	70	Max change: T, ± 30%; E, -50%; H, ± 15					
ASTM #3 petroleum oil	302	70	Volume change, +10% max.					
Air, original properties	Ambient	-	T, 500-700 psi; E, 50-400%. H, 30-80	Silicone			Elastomeric Materials For Automotive Applications	ASTM D2000/ (SAE J200) Material GE
Cooling medium, ASTM D746	-67	-	F19 suffix, pass					
Air, oven aging	437	70	Max change: T, ± 30%; E, -50%; H, ± 15					
ASTM #3 petroleum oil	302	70	Volume change, +80%					
Air, original properties	Ambient	-	T, 1000-2000 psi; E, 100-200%; H, 60-80	Fluorocarbon			Elastomeric Materials For Automotive Applications	ASTM D2000/ (SAE J200) Material HK
Cooling medium, ASTM D746	-13	-	F15 suffix, pass					
Air, oven aging	482	70	Max change: T, ± 30%, E, -50%; H, ± 15					
ASTM #3 petrloeum oil	302	70	Voulme change, +10% max.					
70/30 Isooctane/toluene	Ambient	70	E61 suffix, volume change, 0 to ± 10%					
(For description of grades covered see MIL-STD-417 and ASTM D2000)							Rubber, Fabricated Parts	MIL-R-3065

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T, 1400 psi. min; E, 250% min; H, 60 ± 5	Nitrile			Synthetic Rubber, Hydraulic Fluid (Petroleum Base) Resistant (55-65)	AMS 3200
Cooling medium, ASTM D746	-40	-	No cracks					
Air, oven aging	212	70	Max change: T, -10%; E, -45%; H, 0 to +15					
ASTM #3 petroleum oil	212	70	Volume change, 0 to +25%					
Air, original properties	Ambient	-	T, 1000 psi. min; E, 300% min; H, 40 ± 5	Nitrile			Synthetic Rubber Dry Heat Resistant (35-45)	ASM 3201
Air, ASTM D736 bent loop	-40	5	No cracks					
Air, test tube aging	300	70	Max change: T, -60%; E, -70%; H, 0 to +20					
Air, compression set	212	70	75% max.					
ASTM #3 petroleum oil	212	70	Volume change, -10 to +50%					
Air, original properties	Ambient	-	T, 1500 psi. min; E, 250% min; H, 60 ± 5	Nitrile			Synthetic Rubber, Dry Heat Resistant (55-65)	AMS 3202
Air, ASTM D736 bent loop	-40	5	No cracks					
Air, test tube aging	300	70	Max change: T, -60%; E, -70%, H, 0 to +20					
Air, compression set	212	70	50% max.					
ASTM #3 petroleum oil	212	70	Volume change, -10 to +50%					
Air, original properties	Ambient	-	T, 1000 psi. min; E, 350% min; H, 30 ± 5	Nitrile			Synthetic Rubber, Low Temperature Resistant (25-35)	AMS 3204
Cooling medium, ASTM D746	-60	.2	No cracks					
Air, oven aging	212	70	Max change: T, -35%; E, -35%; H, 0 to +15					
ASTM #3 petroleum oil	158	70	Volume change, 0 to +75%					
Air, original properties	Ambient	-	T, 1200 psi. min; E, 300% min; H, 70 ± 5	Nitrile			Synthetic Rubber, Low Temperature Resistant (45-55)	AMS 3205
Cooling medium, ASTM D746	-55	.2	No cracks					
Air, oven aging	212	70	Max change: T, -20%; E, -40%; H, 0 to +15					
ASTM #3 petroleum oil	158	70	Volume change, 0 to +80%					
Air, original properties	Ambient	-	T, 500 psi. min; E, 400% min; H, 30 ± 5	Chloroprene			Synthetic Rubber, Weather Resistant, Chloroprene Type (25-35)	AMS 3207
Cooling medium, ASTM D746	-40	-	No cracks					
Air, oven aging	212	70	Max change: T, -25%; E, -30%, H, 0 to +15					
ASTM #3 petroleum oil	212	70	Volume change, +90 to +150%					
Air, original properties	Ambient	-	T, 1200 psi. min; E, 300% min; H, 50 ± 5	Chloroprene			Synthetic Rubber, Weather Resistant, Chloroprene Type (45-55)	AMS 3208
Cooling medium, ASTM D746	-40	-	No cracks					
Air, oven aging	212	70	Max change: T, -25%; E, -40%; H, 0 to +15					
ASTM #3 petroleum oil	212	70	Volume change, +50 to +110%					
Air, original properties	Ambient	-	T, 1700 psi, min; E, 200% min; H, 70 ± 5	Chloroprene			Synthetic Rubber, Weather Resistant, Chloroprene Type (65-75)	AMS 3209
Cooling medium, ASTM D746	-40	-	No cracks					
Air, oven aging	212	70	Max change: T, -20%; E, -50%; H, 0 to +10					
ASTM #3 petroleum oil	212	70	Volume change, +40 to +100%					

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SPECIFICATION TEST CONDITIONS				ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS					
Air, original properties	Ambient	-	T, 1000 psi. min; E, 400% min; H, 70 ± 5	Chloroprene			Synthetic Rubber, Electrical Resistance, Chloroprene Type (65-75)	AMS 3210
Cooling medium, ASTM D746	-30	-	No cracks					
Air, oven aging	212	70	Max change: T, -35%; E, -50%; H, 0 to +10					
Electricity	Ambient	-	Dielectric value, 300 volts/mil., min.					
Air, original properties	Ambient	-	T, 1700 psi, min; E, 300% min; H, 60 ±5	Nitrile			Synthetic Rubber, Aromatic Fuel Resistant (55-65)	AMS 3212
Cooling medium, ASTM D746	-10	.2	No cracks					
Air, oven aging	212	70	Max change: T, -20%; E, -50%; H, 0 to +10					
Isooctane	80	24	Volume change, -5% max.					
Air, original properties	Ambient	-	T, 1500 psi. min; E, 150% min; H, 80 ± 5	Nitrile			Synthetic Rubber, Aromatic Fuel Resistant (75-85)	AMS 3213
Cooling medium, ASTM D746	-10	.2	No cracks					
Air, compression set	212	70	50% max.					
Isooctane	80	24	Volume change, -5% max.					
Air, original properties	Ambient	-	T, 1000 psi. min; E, 400% min; H, 40 ± 5	Nitrile			Synthetic Rubber, Aromatic Fuel Resistant (35-45)	AMS 3214
Cooling medium, ASTM D746	-20	.2	No cracks					
Air, oven aging	212	70	Max change: T, -20%; E, -50%; H, 0 to +15					
Isooctane	80	24	Volume change, -5% max.					
Air, original properties	Ambient	-	T, 1500 psi. min; E, 250% min; H, 70 ± 5	Nitrile			Synthetic Rubber Aromatic Fuel Resistant (65-75)	AMS 3215
Cooling medium, ASTM D746	-10	.2	No cracks					
Air, oven aging	212	70	Max change: T, -20%; E, -40%; H, 0 to +10					
Isooctane	80	24	Volume change, -5% max.					
Air, original properties	Ambient	-	E, 200% min; H, 60 ± 5	Chloroprene			Synthetic Rubber (55-65)	AMS 3220
Air, oven aging	212	15	E, 150% min; H, 70 max.					
ASTM #1 petroleum oil	300	5	E, 150% min. H, 70 max.					
Isooctane	80	5	Volume change, 0 to +30%					
Air, original properties	Ambient	-	T, 1500 psi, min; E, 400% min; H, 50 ± 5	Chloroprene			Synthetic Rubber, Hot Oil Resistant, High Swell (45-55)	AMS 3222
Air, ASTM D736 bent loop	-40	5	No cracks					
Air, oven aging	212	70	Max change: T, -40%; E, -50%; H, 0 to +10					
ASMT #1 petroleum oil	300	70	Volume change, +15 to +40%					
Air, original properties	Ambient	-	T, 1200 psi, min; E, 350% min; H, 50 ± 5	Nitrile			Nitrile Rubber, Hot Oil and Coolant Resistant, Low Swell (45-55)	AMS 3226
Air, ASTM D736 bent loop	-40	5	No cracks					
Air, oven aging	212	70	Max change: T, -25%; E, -50%; H, 0 to +10					
ASTM #3 petroleum oil	300	70	Volume change, 0 to +50%					
Ethylene glycol	300	70	Volume change, 0 to +25%					

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T, 1500 psi. min; E, 300% min; H, 60 ± 5	Nitrile			Nitrile Rubber, Hot Oil and Coolant Resistant, Low Swell (55-65)	AMS 3227
Air, ASTM D736 bent loop	-40	5	No cracks					
Air, oven aging	212	70	Max change: T, -25%; E, -40%; H, 0 to +10					
ASTM #3 petroleum oil	300	70	Volume change, 0 to +45%					
Ethylene glycol	300	70	Volume change, 0 to +25%					
Air, original properties	Ambient	-	T, 1000 psi, min; E, 250% min; H, 70 ± 5	Nitrile			Nitrile Rubber, Hot Oil and Coolant Resistant (65-75)	AMS 3228
Air, ASTM D736 bent loop	-40	5	No cracks					
Air, oven aging	212	70	Max change: T, -25%; E, -40%; H, 0 to +10					
ASTM #3 petroleum oil	300	70	Volume change, 0 to +45%					
Ethylene glycol	300	70	Volume change, 0 to +20%					
Air, original properties	Ambient	-	T, 1000 psi, min; E, 150% min; H, 80 ± 5	Nitrile			Nitrile Rubber Hot Oil Resistant, Low Swell (75-85)	AMS 3229
Air, ASTM D736 bent loop	-40	5	No cracks					
Air, compression set	250	70	50% max.					
ASTM #3 petroleum oil	300	70	Volume change, 0 to +45%					
Air, original properties	Ambient	-	T, 1100 psi, min; E, 550% min; H, 40 ± 5	Butyl			Synthetic Rubber, Phosphate Ester Resistant, Butyl Type (35-45)	AMS 3237
Cooling medium, ASTM D746	-40	.2	No cracks					
Air, oven aging	212	70	Max change: T, -25%; E, -50%; H, 0 to +15					
Tri-n-butyl phosphate	212	70	Volume change, 0 to +35%					
Air, original properties	Ambient	-	T, 1500 psi. min; E, 300% min; H, 70 ± 5	Butyl			Synthetic Rubber, Phosphate Ester Resistant, Butyl Type (65-75)	AMS 3238
Cooling medium, ASTM D746	-40	.2	No cracks					
Air, oven aging	212	70	Max change: T, -20%; E, -40%; H, 0 to +10					
Tri-n-butyl phosphate	212	70	Volume change, 0 to +30%					
Air, original properties	Ambient	-	T, 1500 psi. min; E, 200% min; H, 90 ± 5	Butyl			Synthetic Rubber, Phosphate Ester Resistant, Butyl Type (85-95)	AMS 3239
Cooling medium, ASTM D746	-35	.2	No cracks					
Air, oven aging	212	70	Max change: T, -15%; E, -35%; H, 0 to +5					
Tri-n-butyl phosphate	212	70	Volume change, 0 to +30%					
Air, original properties	Ambient	-	T, 900 psi. min; E, 350% min; H, 40 ±5	Chloroprene			Synthetic Rubber, Weather Resistant, Chloroprene Type (35-45)	AMS 3240
Cooling medium, ASTM D746	-40	-	No cracks					
Air, oven aging	212	70	Max change: T, -25%; E, -50%; H, 0 to +15					
ASTM #3 petroleum oil	212	70	Volume change, +60 to +120%					
Air, original properties	Ambient	-	T, 1500 psi. min; E. 250% min; H, 60 ± 5	Chloroprene			Synthetic Rubber, Weather Resistant, Chloroprene Type (55-65)	AMS 3241
Cooling medium, ASTM D746	-40	-	No cracks					
Air, oven aging	212	70	Max change: T, -25%; E, -40%; H, 0 to +10					
ASTM #3 petroleum oil	212	70	Volume change, +40 to +100%					

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SPECIFICATION TEST CONDITIONS								
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Air, original properties	Ambient	-	T, 1900 psi. min; E, 150% min; H, 80 ± 5	Chloroprene			Synthetic Rubber, Weather Resistant, Chloroprene Type (75-85)	AMS 3242
Cooling medium, ASTM D746	-40	-	No cracks					
Air, oven aging	212	70	Max change: T, -20%; E, -50%; H, 0 to +10					
ASTM #3 petroleum oil	212	70	Volume change, +30 to +90%					
Air, original properties	Ambient	-	T, 900 psi, min; E, 200% min; H, 60 ± 5	Chloroprene			Synthetic Rubber, Flame Resistant, Chloroprene Type (55-65)	AMS 3243
Cooling medium, ASTM D746	-40	.2	No cracks					
Air, oven aging	250	70	Max change: T, -30%; E, -50%; H, 0 to +20					
ASTM #3 petroleum oil	212	24	Volume change, +40 to +100%					
70/30 Isooctane/toluene	80	24	Volume change, 0 to +80%					
Air, original properties	Ambient	-	T, 1000 psi. min; E, 200% min; H, 70 ±5	Chloroprene			Synthetic Rubber, Flame Resistant, Chloroprene Type (65-75)	AMS 3244
Cooling medium, ASTM D746	-40	.2	No cracks					
Air, oven aging	250	70	Max change: T, -30%; E, -50%; H, 0 to +20					
ASTM #3 petroleum oil	212	24	Volume change, +30 to +90%					
70/30 Isooctane/toluene	80	24	Volume change, 0 to +80%					
Air, original properties	Ambient	-	T, 500 psi, min; E, 250% min; H, 40 ± 5	Silicone			Silicone Rubber, General Purpose (35-45)	AMS 3301
Cooling medium, ASTM D746	-85	.2	No cracks					
Air, oven aging	450	24	Max change: T, -15%; E, -25%; H, -5 to +10					
ASTM #1 petroleum oil	350	70	Volume change, 0 to +20%					
Air, original properties	Ambient	-	T, 700 psi. min; E, 200% min; H, 50 ± 5	Silicone			Silicone Rubber, General Purpose (45-55)	AMS 3302
Cooling medium, ASTM D746	-85	.2	No cracks					
Air, oven aging	450	24	Max change: T, -10%; E, -25%; H, -5 to +10					
ASTM #1 petroleum oil	350	70	Volume chnage, 0 to +15%					
Air, original properties	Ambient	-	T, 600 psi. min; E, 100% min; H, 60 ± 5	Silicone			Silicone Rubber, General Purpose (55-65)	AMS 3303
Cooling medium, ASTM D746	-65	.2	No cracks					
Air, oven aging	450	24	Max change: T, -20%; E, -35%; H, -5 to +10					
ASTM #1 petroleum oil	350	70	Volume change, 0 to +10%					
Air, original properties	Ambient	-	T, 500 psi. min; E, 60% min; H, 70 ± 5	Silicone			Silicone Rubber General Purpose (65-75)	AMS 3304
Cooling mdeium, ASTM D746	-65	.2	No cracks					
Air, oven aging	450	24	Max change: T, -10%; E, -30%; H, -5 to +10					
ASTM #1 petroleum oil	350	70	Volume change, 0 to +10%					
Air, original properties	Ambient	-	T, 500 psi. min; E, 60% min; H, 80 ± 5	Silicone			Silicone Rubber, General Purpose (75-85)	AMS 3305
Cooling medium, ASTM D746	-65	.2	No cracks					
Air, oven aging	450	24	Max change: T, -15%; E, -35%; H, -5 to +10					
ASTM #1 petroleum oil	350	70	Volume change, 0 to +10%					

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T, 750 psi. min; E, 150% min; H, 60 ± 5	Silicone			Silicone Rubber, Fuel and Oil Resistant (55-65)	AMS 3325
Cooling medium, ASTM D746	-80	.2	No cracks					
Air, oven aging	450	24	Change: T, ±30%; E, ±25%; H, -5 to +10					
Di-2-ethylhexyl sebacate	300	48	Volume change, +15% max.					
Air, original properties	Ambient	-	T, 800 psi, min; E, 130% min; H, 50 to 65	Silicone			Silicone Rubber, Fuel and Oil Resistant (50-65)	AMS 3326
Cooling medium, ASTM D746	-80	.2	No cracks					
Air, oven aging	450	24	Max change; T, -25%; E, -15%; H, ± 5					
SAE phosphate ester fluid 1A	158	48	Volume change, 0 to +30%					
Air, original properties	Ambient	-	T, 400 psi. min; E, 350% min; H, 15 to 30	Silicone			Silicone Rubber, Extreme Low Temperature Resistant (15-30)	AMS 3332
Cooling medium, ASTM D746	-110	-	No cracks					
Air, oven aging	450	24	Max change: T, -15%; E, -20%; H, -5 to +10					
ASTM #1 petroleum oil	350	70	Volume change, 0 to +25%					
Air, original properties	Ambient	-	T, 500 psi. min; E, 250% min; H, 40 ±5	Silicone			Silicone Rubber, Extreme Low Temperature Resistant (35-45)	AMS 3334
Cooling medium, ASTM D746	-100	-	No cracks					
Air, oven aging	212	24	Max change: T, -10%; E, -15%; H, 0 to +5					
ASTM #1 petroleum oil	212	70	Volume change, 0 to +15%					
Air, original properties	Ambient	-	T, 600 psi, min; E, 175% min; H, 50 ± 5	Silicone			Silicone Rubber, Extreme Low Temperature Resistant (45-55)	AMS 3335
Cooling medium, ASTM D746	-100	-	No cracks					
Air, oven aging	212	24	Max change: T, -10%; E, -15%; H, 0 to +5					
ASTM #1 petroleum oil	212	70	Volume change, 0 to +10%					
Air, original properties	Ambinet	-	T, 600 psi, min; E, 150% min; H, 60 ± 5	Silicone			Silicone Rubber, Extreme Low Temperature Resistant (55-65)	AMS 3336
Cooling medium, ASTM D746	-100	-	No cracks					
Air, oven aging	212	24	Max change: T, -10%; E, -15%; H, 0 to +5					
ASTM #1 petroleum oil	212	70	Volume change, 0 to +10%					
Air, original properties	Ambient	-	T, 600 psi, min; E, 150% min; H, 70 ± 5	Silicone			Silicone Rubber, High and Extreme Low Temperature Resistant (65-75)	AMS 3337
Cooling medium, ASTM D746	-110	.2	No cracks					
Air, oven aging	450	24	Max change: T, -15%; E, -20%; H, -5 to +10					
ASTM #1 petroleum oil	350	70	Volume change, 0 to 25%					
Air, original properties	Ambient	-	T, 600 psi, min; E, 60% min; H, 80 ± 5	Silicone			Silicone Rubber, Extreme Low Temperature Resistant (75-85)	AMS 3338
Cooling medium, ASTM D746	-100	.2	No cracks					
Air, oven aging	212	24	Max change: T, -10%; E, -15%; H, 0 to +5					
ASTM #1 petroleum oil	212	70	Volume change, 0 to +10%					

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T, 1800 psi. min; E, 500% min; H, 50 ± 5	Silicone			Silicone Rubber - 1800 psi. (45-55)	AMS 3344*
Cooling medium, ASTM D746	-105	.2	No cracks					
Air, oven aging	400	70	Max change: T, -30%; E, -30%; H, 0 to +10					
ASTM #1 petroleum oil	300	70	Volume change, 0 to +15%					
Air, original properties	Ambient	-	T, 1000 psi. min; E, 450% min; H, 50 ± 5	Silicone			Silicone Rubber, 1000 psi. (45-55)	AMS 3345
Cooling medium, ASTM D746	-105	.2	No cracks					
Air, oven aging	400	70	Max change: T, -40%; E, -50%; H, 0 to +15					
ASTM #1 petroleum oil	300	70	Volume change, 0 to +15%					
Air, original properties	Ambient	-	T, 1000 psi. min; E, 400% min; H, 60 ± 5	Silicone			Silicone Rubber, 1000 psi. (55-65)	AMS 3346
Cooling medium, ASTM D746	-105	-	No cracks					
Air, oven aging	400	70	Max change: T, -40% E, -50%; H, 0 to +20					
ASTM #1 petroleum oil	300	70	Volume change, 0 to +15%					
Air, original properties	Ambient	-	T, 600 psi. min; E, 175% min; H, 60 ± 5	Silicone			Silicone Rubber, Lubricating Oil and Compression Set Resistant, Electrical Grade (55-65)	AMS 3356
Cooling medium, ASTM D746	-65	-	No cracks					
Air, oven aging	450	24	Max change: T, -15%; E, -20%; H, 0 to +10					
ASTM #1 petroleum oil	350	70	Volume change, 0 to +15%					
Electricity	Ambient	-	Dielectric value, 350 volts/mil., min.					
Air, original properties	Ambient	-	T, 600 psi. min; E, 150% min; H, 70 ± 5	Silicone			Silicone Rubber, Lubricating Oil and Compression Set Resistant (65-75)	AMS 3357
Cooling medium, ASTM D746	-65	.2	No cracks					
Air, oven aging	450	24	Max change: T, -15%; E, -20%; H, -5 to +10					
ASTM #1 petroleum oil	350	70	Volume change, 0 to +25%					
Air, original properties	Ambient	-	T, 100 psi. min; E, 100% min; H, 30 - 45	Silicone			Silicone Rubber Compound - Room Temperature Vulcanizing - 50,000 Centipoises Viscosity (30-45)	AMS 3363
Cooling medium, ASTM D746	-67	.2	No cracks					
Air, oven aging	450	24	Max change: T, -40%; E, -10%, H, -25 to +10					
Air, compression set	212	22	35% max.					
Air, original properties	Ambient	-	T, 350 psi. min; E, 100% min; H, 40 - 50	Silicone			Silicone Rubber Compound - Room Temperature Vulcanizing - 35,000 Centipoises Viscosity (40-55)	AMS 3365
Cooling medium, ASTM D746	-67	.2	No cracks					
Air, oven aging	450	24	Max change: T, -35%; E, -25%; H, ± 10					
Air, compression set	212	22	60% max.					
Air, original properties	Ambient	-	T, 450 psi. min; E, 70% min; H, 55 - 70	Silicone			Silicone Rubber Compound - Room Temperature Vulcanizing - 55,000 Centipoises Viscosity (55-70)	AMS 3366
Cooling medium, ASTM D746	-67	.2	No cracks					
Air, oven aging	450	24	Max change: T, -35%; E, -25%; H, ± 10					
Air, compression set	212	22	60% max.					

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SPECIFICATION TEST CONDITIONS								
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Air, original properties	Ambient	-	T, 700-500 psi; E, 250-125%; H, 35-85	Silicone		9320	Rubber, Silicone; Low - and High - Temperature - and Tear Resistant	ZZ-R-765 Class 1a
Cooling medium, ASTM D746	-103	-	No cracks					
Air, compression set	212	22	35 to 45%					
ASTM #1 petroleum oil	212	70	Volume change, +10 to +15%					
Air, original properties	Ambient	-	T, 700-500 psi; E, 250-125%; H, 35-85	Silicone		9320	Rubber, Silicone; Low - and High - Temperature - and Tear Resistant	ZZ-R-765 Class 1b
Cooling medium, ASTM D746	-103	-	No cracks					
Air, compression set	302	70	35 to 45%					
ASTM #1 petroleum oil	212	70	Volume change, +10 to +15%					
Air, original properties	Ambient	-	T, 700-650 psi; E, 240-100%; H, 35-85	Silicone		9320	Rubber, Silicone; Low - and High - Temperature - and Tear Resistant	ZZ-R-765 Class 2a
Cooling medium, ASTM D746	-80	-	No cracks					
Air, compression set	302	70	35 to 45%					
ASTM #1 petroleum oil	302	70	Volume change, +15% max.					
Air, original properties	Ambient	-	T, 700-650 psi; E, 240-60%; H, 35-85	Silicone		9320	Rubber, Silicone; Low - and High - Temperature - and Tear Resistant	ZZ-R-765 Class 2b
Cooling medium, ASTM D746	-80	-	No cracks					
Air, compression set	302	70	25 to 30%					
ASTM #1 petroleum oil	302	70	Volume change, +15% max.					
Air, original properties	Ambient	-	T, 800-1200 psi; E, 500-200%; H, 20-85	Silicone		9320	Rubber, Silicone; Low - and High - Temperature - and Tear Resistant	ZZ-R-765 Class 3b
Cooling medium, ASTM D746	-103	-	(Applicable for H. range 20-65) No cracks					
Cooling medium, ASTM D746	-80	-	(Applicable for H. Range 80±5) No cracks					
Air, compression set	212	70	40% max.					
ASTM #1 petroleum oil	302	70	Volume change, +15 to +20%					
Air, original properties	Ambient	-	T, 1000-1600 psi; E, 500-200%; H, 30-80	Nitrile		9320	Rubber; Synthetic, Sheeted, Molded, and Extruded	MIL-R-6855 Class 1
Air, ASTM D736 bent loop	-67	5	No cracks					
Air, compression set	212	70	40% max.					
70/30 Isooctane/toluene	Ambient	168	Volume change, +25 to +40%					
Air, original properties	Ambient	-	T, 1500-1600 psi; E, 500-150%; H, 30-80	Chloroprene		9320	Rubber; Synthetic, Sheeted, Molded, and Extruded	MIL-R-6855 Class 2
Air, ASTM D736 bent loop	-67	5	No cracks					
Air, compression set	212	70	40 to 50%					
ASTM #1 petroleum oil	212	70	Volume change, ±10%					
Air, original properties	Ambient	-	T, 1000-1500 psi; E, 450-150%, H, 30-80	SBR		9320	Rubber; Synthetic, Sheeted, Molded, and Extruded	MIL-R-6855 Class 3
Air, ASTM D736 bent loop	-67	5	No cracks					
Air, compression set	212	70	40% max.					
Water	212	70	Volume change, 0 to +25%					

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T, 1100-1500 psi; E, 450-150%; H, 30-80	Nitrile		9320	Rubber; Synthetic, Sheeted, Molded, and Extruded	MIL-R-6855 Class 4
Air, ASTM D736 bent loop	-67	5	No cracks					
Air, compression set	212	70	50% max.					
ASTM #1 petroleum oil	212	70	Volume change, ± 10%					
Air, original properties	Ambient	-	T, 1000-1300 psi; E, 450-150%; H, 30-80	SBR		9320	Rubber; Synthetic, Sheeted, Molded, and Extruded	MIL-R-6855 Class 5
Air, ASTM D736 bent loop	-67	5	No cracks					
Air, compression set	212	70	40% max.					
Water	212	70	Volume change, 0 to +25%					
Air, original properties	Ambient	-	T, 1500 psi. min; E, 250% min; H, 70 ± 5	Nitrile	Yes	9320	Rubber Sheet, Solid, Molded and Extruded Shapes, Synthetic Oil Resistant	MIL-R-7362 Type II, Comp. A
Cool. med, ASTM D1329 TR-10	-40	-	10% recovery @ 50% elongation					
Air, oven aging	275	70	Max change: T, -20%; E, -80%					
Di-2-ethylhexyl sebacate	257	70	Volume change, +2 to +15%					
Air, original properties	Ambient	-	T, 1475 psi. min; E, 400% min; H, 55 ± 3	SBR		9320	Synthetic Rubber Compound, Butadiene-Styrene Type, Ozone Resistant, For Low Temperature Service	MIL-S-21923
Air, ball drop test	-65	4	No breaks, cracks or ruptures					
Air, oven aging	212	70	Max change: T, ± 15%; E, -20%; H, 60					
Water	212	70	Volume change, +5% max.					
Ozone, 50 pphm	100	168	Crack free @ 20X magnification					
Air, original properties	Ambient	-	T, 1600 psi. min; E, 125% min; H, 75 ±5	Fluorocarbon		9320	Rubber, Fluorocarbon Elastomer, High Temperature, Fluid, and Compression Set Resistant	MIL-R-83248 Type II Class 1
Air, oven aging	528	70	Max, change: T -35%; E, -15, H, +10 -5					
70/30 Isooctane/toluene	Ambient	70	Vol. change: 1 to +10%					
Air, original properties	Ambient	-	T, 1600 psi. min; E, 100% min; H, 90 ± 5	Fluorocarbon		9320	Rubber, Fluorocarbon Elastomer, High Temperature, Fluid and Compression Set Resistant	MIL-R-83248 Type II Class 2
Air, oven aging	528	70	Max change: T, -45%; E, -20; H, +10 -5					
70/30 Isooctane/toluene	Ambient	70	Vol. change: 1 to +10%					

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CELLULAR MATERIALS

SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, indent. defl. @25% defl. Air, oven aging Air, compression set	73 158 212	0.02 22 22	Available in defl. range 2 to 205 lb/50 sq. in. Deflection change, ± 20% 15% max.				Flexible Foams Made From Polymers or Copolymers of Vinyl Chloride	SAE J15
Air, indent. defl. @25% defl. Air, compression deflection Air, oven aging	73 -40 212	- 5 22	Available in defl. range 2 to 205 lb/50 sq. in. FI suffix, defl. change, 75% max. Deflection change, ± 20%	Nat. and/or reclaimed and/or synthetic			Latex Foam Rubbers	SAE J17
Air, comp. defl. @25% defl. Air, compression deflection Air, oven aging	Ambient -40 158	- 5 168	Available in defl. range 1/2 to 24 psi. FI suffix, defl. change, 25% max. Deflection change, ± 20%	Nat., reclaimed or synthetic			Sponge and Expanded Cellular - Rubber Products	SAE J18 Type R Grade RO
Air, comp. defl. @25% defl. Water	Ambient 80	- 0.05	Available in defl. range 2 to 24 psi. Volume change, + 1% max.	Nat., reclaimed or synthetic			Sponge and Expanded Cellular - Rubber Products	SAE J18 Type R Grade RE
Air, comp. defl. @25% defl. Air, compression deflection Air, oven aging ASTM #3 petroleum oil	Ambient -40 158 158	- 5 168 22	Available in defl. range 1/2 to 24 psi. FI suffix, defl. change, 50% max. Deflection change, ± 20% Volume change, -25 to +10%	Nat., reclaimed or synthetic			Sponge and Expanded Cellular - Rubber Products	SAE J18 Type S Class SB Grade SBO
Air, comp. defl. @25% defl. Water	Ambient 80	- 0.05	Available in defl. range 2 to 24 psi. Volume change, +1% max.	Nat., reclaimed or synthetic			Sponge and Expanded Cellular - Rubber Products	SAE J18 Type S Class SB Grade SBE
Air, comp. defl. @25% defl. Air, compression deflection Air, oven aging ASTM #3 petroleum oil	Ambient -40 158 158	- 5 168 22	Available in defl. range 1/2 to 24 psi. FI suffix, defl. change, 50% max. Deflection change, ± 20% Volume change, +10 to +60%	Nat., reclaimed or synthetic			Sponge and Expanded Cellular - Rubber Products	SAE J18 Type S Class SC Grade SCO
Air, comp. defl. @25% defl. Water	Ambient 80	- 0.05	Available in defl. range 2 to 24 psi. Volume change, +1% max.	Nat., reclaimed or synthetic			Sponge and Expanded Cellular - Rubber Products	SAE J18 Type S Class SC Grade SCE
(Covered in ASTM D1752)						5330-5610	Filler, Expansion Joint, Bituminous; (Asphalt and Tar) and Nonbituminous (Preformed for Concrete)	HH-F-341 Type II Class A

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, indent. defl. @25% defl. Steam, autoclave Flame	Ambient Ambient 220 -	- - 3 -	Min: D, 1.5 lb/cu ft; T, 12 psi; E, 250% Deflection, 10 to 20 lb/50 sq. in. Deflection change, -20% max. Self burning, 30 sec. max.	Water or fluoro-hydrocarbon blown		9330	Plastic Material, Cellular, Urethane	L-P-00386 Class 1
Air, original properties Air, indent. defl. @25% defl. Steam, autoclave Flame	Ambient Ambient 220 -	- - 3 -	Min: D, 1.5 lb/cu ft; T, 12 psi; E, 250% Deflection, 20 to 35 lb/50 sq. in. Deflection change, -20% max. Self burning, 30 sec. max	Water or fluoro-hydrocarbon blown		9330	Plastic Material, Cellular, Urethane	L-P-00386 Class 2
Air, original properties Air, indent. defl. @25% defl. Steam, autoclave Flame	Ambient Ambient 220 -	- - 3 -	Min: D, 1.5 lb/cu ft; T, 12 psi; E, 250% Deflection, 35 to 55 lb/50 sq in. Deflection change, -20% max. Self burning, 30 sec. max.	Water or fluoro-hydrocarbon blown		9330	Plastic Material, Cellular, Urethane	L-P-00386 Class 3
Air, original properties Air, thermal conductivity Water	Ambient - Ambient	- - 168	Density 5 to 8.5 lb/cu ft. K=0.30 BTU/hr/ft^2/°F/in max. Volume change, +5% max.	Synthetic		5640	Insulation Thermal, Flexible Unicellular (Sheet & Pipe Covering)	HH-I-00573
Air, indent. defl. @25% defl. Air, compression deflection Air, oven aging Air, comp. set @50% defl.	Ambient -40 212 158	- 5 22 22	Available in defl. range 2 to 205 lb/50 sq. in. Fl suffix, defl. change, 75% max. Deflection change, ± 20% 20% max.	Natural or SBR, open cell, latex foam		9320	Classification System and Tests for Cellular Elastomeric Materials	MIL-STD-670 Type R Grades RC & RU
Air, comp. set @50% defl. Air, comp. defl. Air, oven aging Air, comp. set @50% defl.	Ambient -67 158 158	- 5 168 22	Available in defl. range 1/2 to 23 psi. F2 suffix, defl. change, 25% max. Deflection change, ± 20% 15% max	Natural or SBR, open cell, sponge		9320	Classification System and Tests for Cellular Elastomeric Materials	MIL-STD-670 Type R Grade RO
Air, comp. defl. @25% defl. Water	Ambient Ambient	- 0.05	Available in defl. range 2-1/2 to 23 psi. L suffix, weight change, +1% max.	Natural or SBR, closed cell		9320	Classification System and Tests for Cellular Elastomeric Materials	MIL-STD-670 Type R Grade RE
Air, comp. defl. @25% defl. Air, compression deflection Air, oven aging ASTM #3 petroleum oil	Ambient -40 158 158	- 5 168 22	Available in defl. range 1/2 to 23-1/2 psi. Fl suffix, defl. change, 50% max. Deflection change, ± 20% Volume change, -25 to +10%	Nitrile, open cell, sponge and foam		9320	Classification System and Tests for Cellular Elastomeric Materials	MIL-STD-670 Type S Class SB Grade SBO
Air, comp. defl. @25% defl. Water	Ambient Ambient	- 0.05	Available in defl. range 1-1/2 to 23-1/2 psi. L suffix, weight change, +1% max.	Nitrile, closed cell		9320	Classification System and Tests for Cellular Elastomeric Materials	MIL-STD-670 Type S Class SB Grade SBE

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, comp. defl. @25% defl.	Ambient	-	Available in defl. range 1/2 to 23-1/2 psi.	Chloroprene, open cell, sponge and foam		9320	Classification System and Tests for Cellular Elastomeric Materials	MIL-STD-670 Type S Class SC Grade SCO
Air, compression deflection	-40	5	FI suffix, defl. change, 50% max.					
Air, oven aging	158	168	Deflection change, ± 20%					
ASTM #3 petroleum oil	158	22	Volume change, +10 to +60%					
Air, comp. defl. @25% defl.	Ambient	-	Available in defl. range 1-1/2 to 23-1/2 psi.	Chloroprene, closed cell		9320	Classification System and Tests for Cellular Elastomeric Materials	MIL-STD-670 Type S Class SC Grade SCE
Water	Ambient	0.05	L suffix, weight change, +1% max.					
Air, comp. defl. @25% defl.	Ambient	-	Available in defl. range 1-1/2 to 23-1/2 psi.	Silicone, closed cell, sponge		9320	Classification System and Tests for Cellular Elastomeric Materials	MIL-STD-670 Type T Grade TE
Air, compression deflection	-102	5	F3 suffix, defl. change, 25% max.					
Air, heat aging	347	22	A4 suffix, defl. change, ± 25%					
Water	Ambient	0.05	L suffix, weight change, +2% max.					
Air, comp. defl. @25% defl.	Ambient	-	Available in defl. range 1-1/2 to 23-1/2 psi.	Silicone, open cell, sponge		9320	Classification System and Tests for Cellular Elastomeric Materials	MIL-STD-670 Type T Grade TO
Air, compression deflection	-67	5	Deflection change, ± 5%					
Air, heat aging	302	22	Deflection change, ± 5%					
Air, indent. defl. @25% defl.	Ambient	-	Available in defl. range 7-36 lb/50 sq. in.	Urethane, open cell, foam		9320	Classification System and Tests for Cellular Elastomeric Materials	MIL-STD-670 Type U Grades UC & UU
Air, compression deflection	-40	5	FI suffix, defl. change, 100% max.					
Air, compression deflection	220	3	Deflection change, 20% max.					
Air, heat aging	257	22	A2 suffix, defl. change, ± 20%					
Air, indent. defl. @25% defl.	Ambient	-	Available in defl. range 2-205 lb/50 sq. in.	PVC, open cell, foam		9320	Classification System and Tests for Cellular Elastomeric Materials	MIL-STD-670 Type V Grades VC & VU
Air, compression deflection	-40	5	FI suffix, defl. change, 100% max.					
Air, oven aging	212	22	Deflection change, ± 20%					
ASTM #3 petroleum oil	158	22	E suffix, Vol. change, +10 to +60%					
Flame	-	-	Self extinguishing					
Air, comp. defl. @25% defl.	Ambient	-	Available in defl. range 1-1/2 to 17 psi.	PVC, open, cell foam		9320	Classification System and Tests for Cellular Elastomeric Materials	MIL-STD-670 Type V Grade VO
Air, compression deflection	-40	5	FI suffix, defl. change, 100% max.					
Air, indent. defl.	212	22	Defl. change, ± 20%					
ASTM #3 petroleum oil	158	22	E suffix, Vol. change, +10 to +60%					
Flame	-	-	Self extinguishing					
Air, comp. defl. @25% defl.	Ambient	-	Available in defl. range 1/2 to 23-1/2 psi.	PVC, closed cell, foam		9320	Classification S and Tests for C Elastomeric Ma	
Flame			Self extinguishing					

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, comp. defl. @25% defl. Oxygen, aging	Ambient Ambient 158	- - 120	Density, 0.006 to 0.015 lb/cu. in. Deflection, 5 psi. max. No cracks or loss of properties	Natural or Syn., open cell		7210	Cushions, Chair; Sponge-Rubber and Synthetic Rubber	ZZ-C-00766 Class 1
Air, original properties Air, comp. defl. @25% defl. Oxygen, aging	Ambient Ambient 158	- - 120	Density, 0.006 to 0.020 lb/cu. in. Deflection, 5 to 9 psi. No cracks or loss of properties	Natural or Syn., closed cell		7210	Cushions, Chair; Sponge Rubber and Synthetic Rubber	ZZ-C-00766 Class 2
(Test on Elastomer only) Air, compression deflection Aging, oven Compression set	 158 158 158	 70 166 22	 Thickness change 5-9 lb/in.^{2} -20% max. deflection change -15% max.	Natural or Syn.		7220	Cushion (Under lay) Carpet and Rug, Cellular Rubber	ZZ-C-00811 Types I and II Class 1
Air, compression deflection Aging, oven Compression set	158 158 158	70 166 22	Thickness change 2.5 - 5 lb/in.^{2} -20% max. deflection change -17.5% max.	Natural or Syn.		7220	Cushion (Under lay) Carpet and Rug., Cellular Rubber	ZZ-C-00811 Types I and II Class 2
Air, compression deflection Aging, oven Compression set	158 158 158	70 166 22	Thickness change 1-2.5 lb/in.^{2} -20% max. def. change -20% max. def. change	Natural or Syn.		7220	Cushion (Under lay) Carpet and Rug., Cellular Rubber	ZZ-C-00811 Types I & II Class 3
Air, compressive stiffness Air, mandrel bend Air, shrinkage Water	Ambient -65 165 Ambient	- 24 24	Strain @ 40 psi., 0.75 in/in No cracks, tears or separation Linear change, -0.5% max. Volume change, +5% max.			8135	Cushioning Material, Polystyrene, Expanded, Resilient (For Packaging Uses)	PPP-C-850 Class 1 Types I & II
Air, compressive stiffness Air, mandrel bend Air, shrinkage Water	Ambient -65 165 Ambient	- - 24 24	Strain @ 40 psi, 0.71 in/in No cracks, tears or separation Linear change, -1.0% max. Volume change, +5% max.			8135	Cushioning Material, Polystyrene, Expanded, Resilient (For Packaging Uses)	PPP-C-850 Class 2 Types I & II
Air, compressive stiffness Air, mandrel bend Air, shrinkage Water	Ambient -65 165 Ambient	- - 24 24	Strain @ 40 psi., 0.62 in/in No cracks, tears or separation Linear change, -1.5% max. Volume change, +5% max.			8135	Cushioning Material, Polystyrene, Expanded Resilient (For Packaging Uses)	PPP-C-850 Class 3 Types I & II
Air, compressive stiffness Air, mandrel bend Air, shrinkage Water	Ambient -65 165 Ambient	- - -24 24	Strain @ 40 psi., 0.64 in/in No cracks, tears or separation Linear change, -1.5% max. Volume change, +5% max.			8135	Cushioning Material, Polystyrene, Expanded, Resilient (For Packaging Uses)	PPP-C-850 Class 4 Types I & II

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SPECIFICATION TEST CONDITIONS				ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS					
(All Grades Covered in MIL-STD-670, Type R, Grades RC and RU)							Latex Foam Rubbers	ASTM D 1055
(All Grades Covered in MIL-STD-670, Type R, Grades RO, RE, and Type S)							Sponge and Expanded Cellular Rubber Products	ASTM D 1056
(All Grades Covered in MIL-STD-670, Type U)							Flexible Urethane Foam	ASTM D 1564
(All Grades Covered in MIL-STD-670, Under Grades VC, VU and VO)							Flexible Foams Made From Polymers or Copolymers of Vinyl Chloride	ASTM D 1565
(All Grades Covered in MIL-STD-670, Under Grade VE)							Sponge Made From Closed Cell Poly (Vinyl Chloride) or Copolymers Thereof	ASTM D 1667
Air, original properties	Ambient	-	Density, 40 lb/cu. ft. min.	Synthetic or natural sponge			Preformed Expansion Joint Fillers For Concrete Paving and Structural Construction	ASTM D 1752 Type I
Air, comp. defl. @50% defl.	Ambient	0.17	Available in Defl. range 50 to 1500 psi.					
(All Grades Covered in MIL-STD-670)						9320	Cellular Elastomeric Materials, Fabricated Parts	MIL-C-3133
Air, original properties	Ambient	-	Density, 0.020 lb/cu. in. max.	Closed cell			Silicone Rubber Sponge, Medium Low Temperature	AMS 3193
Air, comp. defl. @25% defl.	78	-	Deflection, 6 to 14 psi.					
Air, ASTM D736	-130	5	No cracks					
Air, comp. set @50% defl.	212	22	60% max.					
Air, original properties	Ambient	-	Density, 0.030 lb/cu. in. max.	Closed cell			Silicon Rubber Sponge, Closed Cell, Firm, Extreme Low Temperature	AMS 3194
Air, comp. defl. @25% defl.	78	-	Deflection, 12-20 psi.					
Air, ASTM D736	-130	5	No cracks					
Air, comp. set @50% defl.	212	22	60% max.					
Air, original properties	Ambient	-	Density, 0.020 lb/cu. in. max.	Closed cell			Silicone Rubber Sponge, Closed Cell - Medium	AMS 3195
Air, comp. defl. @25% defl.	78	-	Deflection, 6 to 14 psi.					
Air, ASTM D736	-100	5	No cracks					
Air, comp. set @50% defl.	212	22	60% max.					

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, comp. defl. @25% defl. Air, ASTM D736 Air, comp. set @50 defl.	Ambient 78 -100 212	- - 5 22	Density, 0.030 lb/cu. in. max. Deflection, 12 to 20 psi. No cracks 60% max.	Closed cell			Silicone Rubber Sponge, Closed Cell - Firm	AMS 3196
Air, comp. defl. @25% defl. Air, oven aging	78 212	- 22	Deflection, 1 to 4 psi. Deflection change, -5 to +30%	Open cell			Sponge, Chloroprene Rubber, Soft	AMS 3197
Air, comp. defl. @25% defl. Air, oven aging	78 212	- 22	Deflection, 6 to 13 psi. Deflection change, -5 to +30%	Open cell			Sponge, Chloroprene Rubber, Medium	AMS 3198
Air, comp. defl. @ 25% defl. Air, oven aging	78 212	- 22	Deflection, 15 to 22 psi. Deflection change, -5 to +30%	Open cell			Sponge, Chloroprene Rubber, Firm	AMS 3199
Air, indent. defl. @ 25% defl. Air, compression deflection Air, comp. defl. @ 25% defl. Flame	Ambient -40 212 -	- 5 48 -	Deflection, 50 to 80 lb/50 sq. in. Thickness change, -20% max. Thickness change, -12% max. Self extinguishing in 3 sec.				Flexible Polyurethane Foam, Open Cell, Medium Flexibility 2.5 lb/cu. ft.	AMS 3570
Air, original properties Air, comp. defl. @ 25% defl. Air, oven aging Flame	Ambient 77 160 -	- - 168 -	Density, 8.5 lb/cu. ft. Deflection, 5 psi. No loss of properties Self burning 5 sec. max.				Plastic Sheet - Cellular, Shock Absorbing, (Closed Cell, Foamed Modified Vinyl Sheet)	AMS 3635
(All Grades Covered in MIL-STD-670)				Natural or SBR sponge		5340	Bumpers, Rubber, Duplex Round	MIL-B-4792 Type I
(All Grades Covered in, MIL-R-6130 Type II, Grade A Med.)				Chloroprene		5340	Bumpers, Rubber, Duplex Round	MIL-B-4792 Type II
Air, original properties Air, indent. defl. @ 25% defl. Air, oven aging Flame	Ambient Ambient 212 -	- - 70 -	Available in density range 0.0050 to 0.0069 lb/cu. in./in. Available in defl. range to 10 to 55 psi. Deflection change, ± 15% Self burning, 50 sec. max.	Chloroprene, open cell	Yes	9320	Rubber; Latex Foam Sponge	MIL-R-5001 Type I Grade A
Air, original properties Air, indent. defl. @ 25% defl. Air, oven aging	Ambient Ambient 212	- - 70	Available in density range 0.0039 to 0.0058 lb/cu. in./in. Available in defl. range 10 to 55 psi. Deflection change, ± 15%	SBR, open cell	Yes	9320	Rubber; Latex Foam Sponge	MIL-R-5001 Type I Grade B

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	Available in density range 0.0039 to 0.0058 lb/cu. in. /in.	Natural, open cell	Yes	9320	Rubber; Latex Foam Sponge	MIL-R-5001 Type I Grade C
Air, indent. defl. @ 25% defl.	Ambient	-	Available in defl. range 10 to 55 psi.					
Air, oven aging	212	70	Deflection change, ± 15%					
Air, original properties	Ambient	-	Available in density range 0.0060 to 0.0120 lb/cu. in.	Chloroprene, open cell	Yes	9320	Rubber; Latex Foam Sponge	MIL-R-5001 Type II Grade A
Air, indent. defl. @ 25% defl.	Ambient	-	Available in defl. range 0.20 to 1.70 psi.					
Air, indentation deflection	-40	5	Deflection change, -70% max.					
Air, oven aging	212	70	Deflection change, ± 15%					
Flame	-	-	Self burning, 50 sec. max.					
Air, original properties	Ambient	-	Available in density range 0.0045 to 0.0075 lb/cu. in.	SBR, open cell	Yes	9320	Rubber; Latex Foam Sponge	MIL-R-5001 Type II Grade B
Air, indent. defl. @ 25% defl.	Ambient	-	Available in defl. range 0.20 to 1.70 psi.					
Air, indentation deflection	-40	5	Deflection change, -60% max.					
Air, oven aging	212	70	Deflection change, ± 15%					
Air, original properties	Ambient	-	Available in density range 0.0045 to 0.0075 lb/cu. in.	Natural, open cell	Yes	9320	Rubber; Latex Foam Sponge	MIL-R-5001 Type II Grade C
Air, indent. defl. @ 25% defl.	Ambient	-	Available in defl. range 0.20 to 1.70 psi.					
Air, indentation deflection	-40	5	Deflection change, -25% max.					
Air, oven aging	212	70	Deflection change, ± 15%					
Air, comp. defl. @ 25% defl.	Ambient	-	Available in defl. range 2 to 21 psi.	Chloroprene, open cell	Yes	9320	Rubber, Cellular, Chemically Blown	MIL-R-6130 Type I Grade A
Air, compression deflection	-42	5	Deflection change, -70% max.					
Air, oven aging	212	70	Deflection change, -45 to +45%					
ASTM #2 petroleum oil	158	70	Volume change, -15 to +30%					
Air, comp. defl. @ 25% defl.	Ambient	-	Available in defl. range 2 to 21 psi.	SBR, open cell	Yes	9320	Rubber, Cellular, Chemically Blown	MIL-R-6130 Type I Grade B
Air, compression deflection	-42	5	Deflection change, -70% max.					
Air, oven aging	212	70	Deflection change, -45 to +45%					
Air, comp. defl. @ 25% defl.	Ambient	-	Available in defl. range 2 to 21 psi.	Natural, open cell	Yes	9320	Rubber, Cellular, Chemically Blown	MIL-R-6130 Type I Grade C
Air, compression deflection	-67	5	Deflection change, -55% max.					
Air, oven aging	212	70	Deflection change, -45 to +45%					
Air, comp. defl. @ 25% defl.	Ambient	-	Available in defl. range 2 to 21 psi.	Chloroprene, closed cell	Yes	9320	Rubber, Cellular, Chemically Blown	MIL-R-6130 Type II Grade A
Air, compression deflection	-24	5	Deflection change, -70% max.					
Air, oven aging	212	70	Deflection change, -30 to +30%					
ASTM #2 petroleum oil	158	70	Volume change, -15 to +30%					
Water	75	22	Weight change, +5% max.					

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, comp. defl @ 25% defl. Air, compression deflection Air, oven aging Water	Ambient - 24 212 75	- 5 70 22	Available in defl. range 2 to 21 psi. Deflection change, -70% max. Deflection change, -30 to +30% Weight change, +5% max.	SBR, closed cell	Yes	9320	Rubber, Cellular, Chemically Blown	MIL-R-6130 Type II Grade B
Air, comp. defl. @ 25% defl. Air, compression deflection Air, oven aging Water	Ambient -67 212 75	- 5 70 22	Available in defl. range 2 to 21 psi. Deflection change, -55% max. Deflection change, -30% to +30% Weight change, +5% max.	Natural, closed cell	Yes	9320	Rubber, Cellular, Chemically Blown	MIL-R-6130 Type II Grade C
Air, original properties Air, oven aging Electricity Air, 100% relative humidity	Ambient 165 Ambient 100	- 0.5 - 240	Tensile, 185 to 450 psi. Tensile change, -30% max. Dielectric constant, 1.26 to 1.51 Weight change, +1.8 to +6.5%	Urethane	Yes	9330	Core Material, Foamed - In-Place, Urethane	MIL-C-8087 Type I Class 1
Air, original properties Air, oven aging Air, 100% relative humidity	Ambient 165 100	- 0.5 240	Tensile, 185 to 450 psi. Tensile change, -30% max. Weight change, +1.8 to +6.5%	Urethane	Yes	9330	Core Material, Foamed - In-Place, Urethane	MIL-C-8087 Type I Class 2
Air, original properties Air, oven aging Electricity Air, 100% relative humidity	Ambient 350 Ambient 100	- 0.5 - 240	Tensile, 130 to 330 psi. Tensile change, -30% max. Dielectric constant, 1.26 to 1.51 Weight change, +1.8 to +6.5%	Urethane	Yes	9330	Core Material, Foamed - In-Place, Urethane	MIL-C-8087 Type II Class I
Air, original properties Air, oven aging Air, 100% relative humidity	Ambient 350 100	- 0.5 240	Tensile, 130 - 330 psi. Tensile change, -30% max. Weight change, +1.8 to +6.5%	Urethane	Yes	9330	Core Material, Foamed - In-Place, Urethane	MIL-C-8087 Type II Class 2
(All Grades Covered in MIL-STD-670, Grades RE or RO)				Natural or SBR, closed cell		2040	Fenders, Marine, Rubber-Filled	MIL-F-11435
Air, original properties Air, compression set Air, oven aging Water	Ambient Ambient 200 Ambient	- 22 96 48	T, 60 psi, min; E, 50% min; D, 7 lb/cu. ft. 12% max. T, 60 psi. min; E, 50% min. Weight change, 50% max.	Vinyl, Nitrile or other rubber		9330	Plastic Material	MIL-P-12420 Type I Class 1
Air, original properties Air, compression set Air, oven aging Water	Ambient Ambient 200 Ambient	- 22 96 48	T, 80 psi. min; E, 100% min; D, 7 lb/ft^3 20% max. T, 80 psi. min; E, 100% min. Weight change, 50% max.	Vinyl, nitrile or other rubber		9330	Plastic Material Cellular, Elastomeric	MIL-P-12420 Type I Class 2

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Air, original properties Air, compression set Air, oven aging Water	Ambient Ambient 200 Ambient	- 22 96 48	T, 90 psi. min; E, 100% min; D, 7 lb/ft^3 30% max. T, 90 psi. min; E, 100% min. Weight change, 50% max.	Vinyl, nitrile or other rubber		9330	Plastic Material Cellular, Elastomeric	MIL-P-12420 Type I Class 3
Air, original properties Air, mandrel bend Air, oven aging Water	Ambient -40 200 Ambient	- - 96 48	T, 30 psi. min; E, 150% min; D, 5 lb/ft^3 No breaking, cracking or bending T, 30 psi. min; E, 150% min. Weight change, 60% max.	Vinyl, nitrile or other rubber		9330	Plastic Material Cellular Elastomeric	MIL-P-12420 Type II Class 4
Air, original properties Air, mandrel bend Air, oven aging Water	Ambient -40 200 Ambient	- - 96 48	T, 50 psi. min; E, 200% min; D, 6 lb/ft^3 No breaking, cracking or bending T, 50 psi. min; E, 150% min. Weight change, 50% max.	Vinyl, nitrile or other rubber		9330	Plastic Material Cellular, Elastomeric	MIL-P-12420 Type II Class 5
Air, original properties Air, oven aging Water	Ambient 200 Ambient	- 96 48	T, 100 psi. min; E, 200% min; D, 10 lb/ft^3 T, 100 psi. min; E, 150% min. Weight change, 50% max.	Vinyl, nitrile or other rubber		9330	Plastic Material Cellular, Elastomeric	MIL-P-12420 Type III
(Covered in MIL-STD-670 RE)				SBR closed cell		2590	Pads Cushioning; Personnel - Protection, Vehicular	MIL-P-14401 Class CS
(Covered in MIL-STD-670 RE)				PVC closed cell		2590	Pads Cushioning; Personnel - Protection, Vehicular	MIL-P-14401 Class VS
(Covered in MIL-R-17252, Type II, Class 1)				Natural or chloroprene		2590	Pads Cushioning; Personnel - Protection, Vehicular	MIL-P-14401 Class FR
Air, comp. defl. @ 25% defl. Air, 180° bend Water Flame	Ambient -65 - -	- - 24 -	Deflection, 2.0 to 3.5 psi. No cracks Weight change, +2% max. Self extinguishing	Closed cell		5970	Insulation Sheet, Cellular, Plastic; Thermal	MIL-I-4511
Air, comp. defl. @ 25% defl. Air, oven aging Fuel oil Compression set	Ambient 180 Ambient	- 168 70	Deflection, 2.0 to 6.0 psi No cracking No softening or swelling 24% max.			9330	Plastic Material, Unicellular (sheet & tube)	MIL-P-15280 Form T

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, comp. defl. @ 25% defl.	Ambient	-	Deflection, 3 to 6 psi.			9330	Plastic Material, Unicellular (sheet & tube)	MIL-P-15280 Form S
Air, mandrel bend	28	4	No cracking					
Fuel oil	Ambient	70	No softening or swelling					
Compression set	Ambient	-	24% max.					
Air, comp. defl. @ 25% defl.	70	-	Deflection, 2 psi.	Closed cell		5640	Insulation, Synthetic, Rubber-Like, Chemically Expanded, Cellular (Sheet Form)	MIL-I-16562
Air, 180° bend	-50	-	No cracking					
Air, oven aging	140	168	Volume change, ± 5% max.					
Petroleum oil	212	70	No swelling or softening					
Flame	-	-	Self burning, 2 sec. max.					
Air, comp. defl. @ 25% defl.	80	-	Available in defl. range 0.10 to 1.70 psi.	Natural, open cell		9320	Rubber, Cellular (Bonded Shredded)	MIL-R-17252 Class 1 Types I & II
Air, compression deflection	-20	5	Deflection change, -70% max.					
Air, heat aging @ 60 psi.	260	2	No hardening or softening					
Flame	-	-	Self burning, 30 sec. max					
Air, comp. defl. @ 25% defl.	80	-	Available in defl. range 0.10 to 1.70 psi.	Natural, open cell		9320	Rubber, Cellular (Bonded Shredded)	MIL-R-17252 Class 2 Types I & II
Air, compression deflection	-20	5	Deflection change, -70% max.					
Air, heat aging @ 60 psi.	260	2	No hardening or softening					
Air, original properties	Ambient	-	Density, 5.5 lb/cu. ft. max.	Polychloroprene		7210	Mattresses, Berth, Synthetic Sponge Rubber, Naval Shipboard	MIL-M-18351
Air, oven aging	212	70	Deflection change 20% max.					
Air, original properties	Ambient	-	Available in density range 5.5 to 8.1 PCF	Chloroprene		9320	Rubber Sheets and Molded Shapes, Cellular, Synthetic, Open Cell (Foamed Latex)	MIL-R-20092 Type I Class 1
Air, comp. defl. @ 25% defl.	70	-	Available in defl. range 5 to 55 psi.					
Air, oven aging	212	70	Deflection change, 15% max.					
Flame	-	-	Self burning, 30 sec. max.					
Air, original properties	Ambient	-	Available in density range 5.5 to 8.1 PCF	Chloroprene		9320	Rubber Sheets and Molded Shapes, Cellular, Synthetic, Open Cell (Foamed Latex)	MIL-R-20092 Type I Class 4
Air, comp. defl. @ 25% defl.	70	-	Available in defl. range 5 to 55 psi.					
Air, oven aging	212	70	Deflection change, 15% max.					
Fire resistance	-	2	Flame 10 sec. max.					
Air, original properties	Ambient	-	Available in density range 10-4 to 19.0 PCF	Chloroprene		9320	Rubber Sheets and Molded Shapes Cellular, Synthetic, Open Cell (Foamed Latex)	MIL-R-20092 Type II Class 1
Air, comp. defl. @ 25% defl.	70	-	Available in defl. range 0.20 to 1.70 psi.					
Air, compression deflection	-20	5	Deflection change, -70% max.					
Air, oven aging	212	70	Deflection change, 15% max.					

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, comp. defl. @ 25% defl. Air, compression deflection Air, oven aging Fire resistance	70 -20 212 -	- 5 70 2	Available in defl. range 0.20 to 1.70 psi. Deflection change, -70% max. Deflection change, 15% max. Flame 10 sec. max.	Chloroprene		9320	Rubber Sheets and Molded Shapes, Cellular, Synthetic, Open Cell (Foamed Latex)	MIL-R-20092 Type II Class 4
Air, 95% rel. humid. @ 60% strain	120	336	Stress change, ± 10%	Urethane		8135	Polyurethane Foam, Rigid or Flexible, For Packaging	MIL-P-26514 Class 1
Air, comp. set @ 20% strain Air, 180° bend Air, 95% rel. humid. @ 60% strain	Ambient -65 120	4 4 336	+10% max. No cracks, tears or separations Stress change, ± 10% max.	Urethane		8135	Polyurethane Foam, Rigid or Flexible, For Packaging	MIL-P-26514 Class 2
Air, original properties Air, compression set Air, 95% rel. humid. @ 50% strain	Ambient Ambient 120	- 4 336	Available in density range 2 to 12 lb/cu. ft. 15% max. Stress change, ± 10%	Not known		8135	Cushioning Material, Elastic Type, General	MIL-C-26861
Air, original properties Air, compression set Air, oven aging Autoclave humidity	Ambient 158 212 220	- 22 3 3	T, 15 psi.; E, 200%; D, 2 lb/ft^3 15% max. Weight change, 2% max. Thickness change, -15% max.	Polyether polyurethane, open cell		1660	Seat Cushion Insert, Polyurethane Foam, Plastic, General Specification For	MIL-S-27332
Air, original properties Air, compression set	Ambient 75	- 70	T, 800 to 1150 psi; E, 100 to 350% 15% max.	Fluorosilicone		5330	Rubber Fluorosilicone Elastomer, Oil & Fuel Resistant, Sheets, Strips & Molded Parts & Extruded Shapes	MIL-R-25988 Type II
(Covered in MIL-R-5001)				Natural, open cell		7210	Mattress, Bed: Foam - Rubber, Ambulance Stretcher	MIL-M-40024
Air, original properties Water Flame	Ambient Ambient -	- 24 -	Density, 2.0 lb/cu. ft. Weight change, 0.06 lb/cu. ft. Self extinguishing	Closed cell		9330	Plastic Foam Insulation, Thermal	MIL-P-43110 Class 1

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Water Flame	Ambient Ambient -	- 24 -	Density, 4 to 10 lb/cu. ft. Weight change, 0.06 lb/cu. ft. Self extinguishing	Closed cell		9330	Plastic Foam Insulation, Thermal	MIL-P-43110 Class 2
Air, tensile strength Air, ASTM D736 Water	Ambient -100 Ambient	- 2 24	40 psi min No cracks 5% absorption, max	Closed cell silicone		9320	Rubber, Sponge, Silicone, Closed Cell	MIL-R-46089
Air, density Air, load deflection @ 3 psi.	Ambient Ambient	- -	10 ± 1 pounds per cubic foot 0.043 max.	Silicone		9320	Silicone, Foam, Low-Density, Room Temperature Vulcanizing	MIL-S-46090

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CLOTHING AND PROTECTIVE EQUIPMENT

SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, oven aging Air, breakdown voltage	Ambient 158 Ambient	- 168 -	T, 2500 psi min; E, 600% min Change in T and E, -25% max 20,000 to 30,000 volts, depending on class	Type of rubber not specified			Rubber Insulating Gloves	ASTM D120
Air, hardness Air, oven aging	Ambient 212	- 24	C1 1,2,&3, 60 to 75; C1 5&6, 45 to 60 Hardness increase, 10 points max.	Natural or synthetic		8335	Heels; Rubber	ZZ-H-141 Classes 1, 2, 3, 5 and 6
Air, tensile strength Air, 3/4 ft. lb. impact Oxygen, bomb aging Sulfuric acid (15%)	Ambient -20 158 75	- 1 70 46	Body, 1600 psi min; cuff, 1700 psi min No cracks Tensile strength, 1500 psi min Tensile strength, 1500 psi min	Type of rubber not specified		8415	Gloves, Rubber, Industrial	ZZ-G-381 Type I
Air, tensile strength Oxygen, bomb aging Isooctane/toluene, 70/30	Ambient 158 Ambient	- 70 70	Body, 1600 psi min; cuff, 1700 psi min Tensile strength, 1500 psi min Tensile strength, 1000 psi min	Type of rubber not specified		8415	Gloves, Rubber, Industrial	ZZ-G-381 Type II
Air, tensile strength Oxygen, bomb aging Organic solvent mixture	Ambient 158 Ambient	- 70 16	Body, 1600 psi min; cuff, 1700 psi min Tensile strength, 1500 psi min Tensile strength, 1500 psi min	Type of rubber not specified		8415	Gloves, Rubber, Industrial	ZZ-G-381 Type III
Air, original properties Air, oven aging	Ambient 158	- 168	T, 2500 psi min; E, 700% min T and E change, -20% max	Natural		8415	Gloves; Rubber (For) Electrical Workers (For Use in Connection With Apparatus or Circuits Not Exceeding 3000 Volts to Ground)	ZZ-G-401
Air, tensile strength Oxygen, bomb aging @ 300 psi Oxygen, bomb aging @ 300 psi	Ambient 158 158	- 96 48	Gr A, 4000 psi min; Gr B, 3000 psi min Grade A, change in T, -25% max Grade B, change in T, -25% max	Natural		6515	Gloves, Rubber; Surgeons'	ZZ-G-421
(Tests on rubber only) Air, original properties Air, oven aging	Ambient 212	- 16	T, 1450 psi min; E, 350% min Change in T and E, -25% max	Natural or synthetic rubber, cotton cloth		8430	Overshoe, Rubber (Man's 5 Buckle Type)	MIL-0-836
Air, original properties Air, tension set Air, dielectric breakdown	Ambient Ambient Ambient	- - 0.05	T, 1600 psi min; E, 350% min 7% max No breakdown @ 20,000 volts	Natural or synthetic			Rubber Insulator Hoods (Proof Test 20,000 Volts, 3 minutes)	ASTM D1049

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, tear strength Air, oven aging	Ambient Ambient 158	- - 168	T, 2600 psi min; E, 650% min 165 pounds per inch, min Max change: T, -15%; E, -25%	Natural		4240	Faceblanks, Field Protective Mask, Natural Rubber; General Specification	MIL-F-10135
Air, original properties Air, tear strength Air, oven aging	Ambient Ambient 158	- - 168	T, 3000 psi min; E 600% min 300 pounds per inch, min Max change T-32%, E-30%	Natural		4240	Faceblanks, Field Protective Mask	MIL-F-0010135 (MU)
Air, original properties Air, 0.75 ft. lb. impact Air, oven aging Liquid mustard, penetration	Ambient -20 212 100	- 1 48 -	T, 1100 psi min; E, 400% min No cracks . T, 1000 psi min; E, 350% min Min time for penetration, 300 minutes	Butyl		8415	Gloves Toxicological Agents, Protective	MIL-G-12223
Air, original properties Air, oven aging Air, compression set Ozone, 1000 pphm	Ambient 212 212 100	- 72 72 1	T, 1000 psi min; E, 400% min; H, 50 ± 5 Change in T and E, -15% max 35% max No cracks under 10X magnification	Type of rubber not specified		1660	Mask, Oxygen and Smoke, Full Face	MIL-M-19417
(Tests on rubber only) Air, original properties	Ambient	-	Hardness, 45 ± 5; tear, 150 lbs/inch min	Silicone	Yes	1660	Mask, Oxygen, MBU-5/p	MIL-M-27274
Air, original properties Air, oven aging	Ambient 212	- 24	Hardness, 72 to 85 Hardness, 72 to 90	Natural or synthetic		8335	Soles, Rubber, Shoe	MIL-S-40043 Classes 1, 2 and 5
Air, original properties Air, oven aging Isooctane/toluene, 70/30	Ambient 212 74	- 24 46	Hardness, 72 to 85 Hardness, 72 to 90 Volume change, +60 max	Synthetic rubber		8335	Soles, Rubber, Shoe	MIL-S-40043 Classes 3, 4 and 6
(Tests on rubber only) Air, original properties Cooling medium, ASTM D1053 Cooling medium, ASTM D1053 Air, oven aging	Ambient -40 -65 212	- 0.08 0.08 16	T, 2500 psi min; E, 500% min Type I, Young's modulus 10,000 psi max Type II, Young's modulus 10,000 psi max Change in T and E, -25% max	Type of rubber not specified		8430	Boots, Insulated, Cold Weather, Rubber (Wet-Cold; Dry-Cold)	MIL-B-41816
Air, original properties Air, flexibility Air, oven aging	Ambient -25 158	- 72 168	T, 3000 psi min; E, 600% min 5 fold increase in stiffness, max T, 2550 psi min; E, 450% min	Natural		4240	Faceblank, C17	MIL-F-50070
Air, original properties Air, flexibility Air, oven aging	Ambient -25 158	- 72 168	T, 3000 psi min; E, 600-700% 5 Fold increase T 2550 psi min; E 400% min	Natural		4240	Faceblank, Protective Mask, C12R4	MIL-F-51109

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T, 1500 psi min; E, 400% min; H, 55 ± 5	EPDM		4240	Rubber Fabricated	MIL-R-51283
Compression set	155	22	25% max	Silicone, Tube			Products for M171A1	
Ozone 100 pphm	122	72	No cracks	and gaskets			Mask.	
Low temp impact	-67		pass					
Air, original properties	Ambient	-	T, 3500 psi min; E, 750% min	Natural		8415	Gloves, Radioactive	MIL-G-82,242
Air, oven aging	158	72	T, 2800 psi min; E, 600% min				Contaminants	
Water	158	46	T, 2100 psi min; E, 600% max				Protective	
Water	158	46	Volume change, +15% max					
(Tests on rubber only)								
Air, original properties	Ambient	-	T, 1200 psi min; E, 600% min	Flannel coated		8415	Gloves, Cloth, Vinyl	MIL-G-82,253
Air, oven aged	194	22	T, 1000 psi min; E, 500% min	with chloroprene			Dipped, General Purpose	Type I
Water	194	22	Max change: T, -25%; E, -15%					
(Tests on PVC only)								
Air, original properties	Ambient	-	T, 700 psi min; E, 350% min	Flannel coated		8415	Gloves, Cloth, Vinyl	MIL-G-82,253
Air, oven aged	194	22	T, 600 psi min; E, 300% min	with PVC			Dipped, General Purpose	Type II
Water	194	22	Max change: T, -25%; E, -15%					

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COATED FABRICS

SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	CONSTRUCTION			QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD^2	THICK, INCH				
Air, original properties Air, low temperature set Air, low temperature elong. Air, oven aging	Ambient -25 -40 300	- 72 2 2	Permanent set, 8% max Permanent set, 35% max Elongation, 10% min Permanent set, 20% max	Cotton yarn and natural or synthetic rubber strands				8305	Webbing, Textile, (Cotton, Elastic)	JJ-W-155
Air, inflation @ 3 psi	Ambient	0.08	No leakage	Cotton sheet coated with natural, SBR, chloroprene or butyl				7210	Pillows; Air, Rubber and Synthetic Rubber	ZZ-P-351
Air, breaking strength Oxygen, bomb aging @ 300 psi Ethyl alcohol	Ambient 158 Ambient	- 240 2	55 to 65 pounds, min No softening or stiffening No stickiness or hardening	Natural, synthetic or PVC coated fabric				7210	Blankets; Rubber and Synthetic-Resin	ZZ-B-426
Air, breaking strength Air, oven aging Steam, sterilization	Ambient 158 250	- 166 0.3	Warp, 50 lbs; Fill, 50 lbs No deterioration No deterioration	Nat. or syn. Cotton or syn. Nat. or syn. Composite		 0.015		8305	Cloth, Coated (Rubber and Plastic) and Plastic Sheeting for Hospital Use	ZZ-C-450 Type I
Air, breaking strength Steam, sterilization	Ambient 250	- 0.3	Warp, 50 lbs; Fill, 50 lbs No deterioration	PVC Cotton or syn. PVC Composite		 0.015		8305	Cloth, Coated (Rubber and Plastic) and Plastic Sheeting for Hospital Use	ZZ-C-450 Type II
Air, tearing strength (For other properties see L-P-375)	Ambient	-	200 lbs/inch of thickness, min	PVC sheeting				8305	Cloth, Coated (Rubber and Plastic) and Plastic Sheeting Per Hospital Use	ZZ-C-450 Type III
Air, breaking strength	Ambient	-	Warp, 50 lbs; Fill, 40 lbs	Cotton Cell. nitrate Composite	4.8 1.5 6.3				Cloth, Coated: Pyroxylin Coated	CCC-C-501 Type I, Class 1
Air, breaking strength	Ambient	-	Warp, 40 lbs; Fill, 35 lbs	Cotton Cell. nitrate Composite	2.7 5.0 7.7			8305	Cloth, Coated: Pyroxylin Coated	CCC-C-501 Type I Class 2
Air, breaking strength	Ambient	-	Warp, 85 lbs; Fill, 75 lbs	Cotton Cell. nitrate Composite	8.2 3.8 12.0			8305	Cloth, Coated: Pyroxylin Coated	CCC-C-501 Type I, Class 3

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SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	CONSTRUCTION			OPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD²	THICK, INCH				
Air, breaking strength	Ambient	-	Warp, 110 lbs; Fill, 100 lbs	Cell. nitrate Cotton Cell. nitrate Composite	3.65 8.20 3.65 15.50			8305	Cloth, Coated: Pyroxylin Coated	CCC-C-501 Type II, Class 1
MIL-F-16884, Diesel Oil MIL-F-16884, Diesel Oil Culture, mildew resistant	73 73 84	22 46 336	No delamination Volume change, 25% Max. No fungus growth	Cotton Chloroprene Multilayer Laminate	8.0	<¼->1		8305	Cloth, Duck, Cotton, Synthetic Rubber Impregnated and Laminated, Oil Resistant	MIL-C-882 Class I
MIL-F-16884, Diesel Oil MIL-F-16884, Diesel Oil Culture, mildew resistant	73 73 84	22 46 336	No delamination Volume change, 25% Max. No fungus growth	Cotton Nitrile Multilayer Laminate	8.0	<¼->1		8305	Cloth, Duck, Cotton, Synthetic Rubber Impregnated and Laminated, Oil Resistant	MIL-C-882 Class II
Air, breaking strength	Ambient	-	Warp, 70 lbs	Silicone Glass Silicone Composite	1.43 4.80	0.002 0.005			Fully Cured Silicone Rubber-Coated Glass Fabric and Tapes for Electrical Insulation	ASTM D1931
Air, breaking strength	Ambient	-	Warp, 125 lbs	Silicone Glass Silicone Composite	3.16 7.68	0.004 0.007			Fully Cured Silicone Rubber-Coated Glass Fabric and Tapes for Electrical Insulation	ASTM D1931
Air, breaking strength	Ambient	-	Warp, 125 lbs	Silicone Glass Silicone Composite	3.16 10.88	0.004 0.010			Fully Cured Silicone Rubber-Coated Glass Fabric and Tapes for Electrical Insulation	ASTM D1931
Air, breaking strength	Ambient	-	Warp, 250 lbs	Silicone Glass Silicone Composite	6.00 14.40	0.015			Fully Cured Silicone Rubber-Coated Glass Fabric and Tapes for Electrical Insulation	ASTM D1931
Air, breaking strength Air, burst test Air, burst test	Ambient Ambient -20	- - 0.5	Warp, 55 lbs min; Fill, 45 lbs min 25 psi min 25 psi min	Cotton cloth coated with synthetic rubber				8340	Paulin, Waterproof, Special Purpose, 10 Feet Long By 8 Feet Wide	MIL-P-1956
Air, breaking strength Air, ASTM D746 Air, oven aging Isooctane ASTM #3 petroleum oil	Ambient -20 212 80 212	- 0.167 70 70 70	Warp, 40 lbs; Fill, 40 lbs No cracks Flexible, no deterioration Vol. change, +20% Max. Vol. change, +20 to +65%	Chloroprene Cotton Chloroprene Composite	8.0	0.008			Synthetic Rubber Sheet, Cotton Fabric Reinforced. Weather Resistant - Chloroprene Type	AMS 3270

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SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	CONSTRUCTION			QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD^2	THICK, INCH				
Air, breaking strength	Ambient	-	Warp, 37 lbs; Fill, 19 lbs	Chloroprene	1.87				Synthetic Rubber Sheet,	AMS 3270
Air, ASTM D746	-20	0.167	No cracks	Cotton	6.25				Cotton Fabric Rein-	
Air, oven aging	212	70	Flexible, no deterioration	Chloroprene	1.87				forced. Weather Re-	
Isooctane	80	70	Vol. change, +20% Max.	Composite	9.99	0.010			sistant - Chloroprene	
ASTM #3 petroleum oil	212	70	Vol. change, +20 to +65%						Type	
Air, breaking strength	Ambient	-	Warp, 90 lbs; Fill, 90 lbs	Chloroprene					Synthetic Rubber Sheet,	AMS 3270
Air, ASTM D746	-20	0.167	No cracks	Cotton					Cotton Fabric Rein-	
Air, oven aging	212	70	Flexible, no deterioration	Chloroprene					forced. Weather Re-	
Isooctane	80	70	Vol. change, +20% Max.	Composite	27.0	0.025			sistant - Chloroprene	
ASTM #3 petroleum oil	212	70	Vol. change, +20 to +65%						Type	
Air, breaking strength	Ambient	-	Warp, 250 lbs; Fill, 170 lbs	Chloroprene					Synthetic Rubber Sheet,	AMS 3270
Air, ASTM D746	-20	0.167	No cracks	Cotton					Cotton Fabric Rein-	
Air, oven aging	212	70	Flexible, no deterioration	Chloroprene					forced. Weather Re-	
Isooctane	80	70	Vol. change, +20% Max.	Composite	35.0	0.035			sistant - Chloroprene	
ASTM #3 petroleum oil	212	70	Vol. change, +20 to +65%						Type	
Air, breaking strength	Ambient	-	Warp, 250 lbs; Fill, 170 lbs	Chloroprene					Synthetic Rubber Sheet,	AMS 3270
Air, ASTM D746	-20	0.167	No cracks	Cotton					Cotton Fabric Rein-	
Air, oven aging	212	70	Flexible, no deterioration	Chloroprene					forced. Weather Re-	
Isooctane	80	70	Vol. change, +20% Max.	Composite	54.0	0.050			sistant - Chloroprene	
ASTM #3 petroleum oil	212	70	Vol. change, +20 to +65%						Type	
Air, breaking strength	Ambient	-	Warp, 35 lbs; Fill, 35 lbs	Chloroprene					Synthetic Rubber Sheet,	AMS 3273
Air, ASTM D746	-65	0.167	No cracks	Nylon					Nylon Fabric Rein-	
Air, oven aging	212	70	No deterioration	Chloroprene					forced. Weather Re-	
Isooctane	80	70	Volume change, -5 to +20%	Composite		0.008			sistant - Chloroprene	
ASTM #3 petroleum oil	212	70	Volume change, +20 to +65%						Type	
Air, breaking strength	Ambient	-	Warp, 65 lbs; Fill, 60 lbs	Chloroprene					Synthetic Rubber Sheet,	AMS 3273
Air, ASTM D746	-65	0.167	No cracks	Nylon					Nylon Fabric Rein-	
Air, oven aging	212	70	No deterioration	Chloroprene					forced. Weather Re-	
Isooctane	80	70	Volume change, -5 to +20%	Composite		0.010-			sistant - Chloroprene	
ASTM #3 petroleum oil	212	70	Volume change, +20 to +65%			0.025			Type	
Air, breaking strength	Ambient	-	Warp, 300 lbs; Fill, 300 lbs	Chloroprene					Synthetic Rubber Sheets,	AMS 3273
Air, ASTM D746	-65	0.167	No cracks	Nylon					Nylon Fabric Rein-	
Air, oven aging	212	70	No deterioration	Chloroprene					forced. Weather Re-	
Isooctane	80	70	Volume change, -5 to +20%	Composite		0.030-			sistant - Chloroprene	
ASTM #3 petroleum oil	212	70	Volume change, +20 to +65%			0.050			Type	
Air, breaking strength	Ambient	-	Warp, 35 lbs; Fill, 35 lbs	Nitrile					Synthetic Rubber Sheet,	AMS 3274
Air, ASTM D746	-65	0.167	No cracks	Nylon					Nylon Fabric Rein-	
Air, oven aging	212	70	No deterioration	Nitrile					forced. Aromatic	
Isooctane	80	24	Volume change, -20 to +10%	Composite		0.008			Fuel Resistant	
70/30 isooctane/toluene	80	24	Volume change, +35% Max.							

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SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	CONSTRUCTION			QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD²	THICK, INCH				
Air, breaking strength	Ambient	-	Warp, 65 lbs; Fill, 60 lbs	Nitrile					Synthetic Rubber Sheet, Nylon Fabric Reinforced. Aromatic Fuel Resistant	AMS 3274
Air, ASTM D746	-65	0.167	No cracks	Nylon						
Air, oven aging	212	70	No deterioration	Nitrile						
Isooctane	80	24	Volume change, -25 to 0%	Composite		0.010-				
70/30 isooctane/toluene	80	24	Volume change, +35% Max.			0.017				
Air, breaking strength	Ambient	-	Warp, 65 lbs; Fill, 60 lbs	Nitrile					Synthetic Rubber Sheet, Nylon Fabric Reinforced. Aromatic Fuel Resistant	AMS 3274
Air, ASTM D746	-65	0.167	No cracks	Nylon						
Air, oven aging	212	70	No deterioration	Nitrile						
Isooctane	80	24	Volume change, -25 to 0%	Composite		0.020+				
70/30 isooctane/toluene	80	24	Volume change, +40% Max.			0.030				
Air, breaking strength	Ambient	-	Warp, 300 lbs; Fill, 300 lbs	Nitrile					Synthetic Rubber Sheet, Nylon Fabric Reinforced. Aromatic Fuel Resistant	AMS 3274
Air, ASTM D746	-65	0.167	No cracks	Nylon						
Air, oven aging	212	70	No deterioration	Nitrile						
Isooctane	80	24	Volume change, -25 to 0%	Composite		0.025+				
70/30 isooctane/toluene	80	24	Volume change, +40% Max.			0.050				
Air, breaking strength	Ambient	-	Warp, 70 lbs; Fill, 70 lbs	Silicone					Silicone Rubber Sheet, Glass Fabric Reinforced	AMS 3315
Air, ASTM D736	-70	5	No cracks	Glass	3.16	0.004				
Air, oven aging	450	24	No deterioration	Silicone						
ASTM #1 petroleum oil	350	70	Volume change, +10% Max.	Composite		0.010				
Air, breaking strength	Ambient	-	Warp, 200 lbs; Fill, 150 lbs	Silicone					Silicone Rubber Sheet, Glass Fabric Reinforced	AMS 3315
Air, ASTM D736	-70	5	No cracks	Glass	6.00	0.007				
Air, oven aging	450	24	No deterioration	Silicone						
ASTM #1 petroleum oil	350	70	Volume change, +10% Max.	Composite		0.017				
Air, breaking strength	Ambient	-	Warp, 400 lbs; Fill, 300 lbs	Silicone					Silicone Rubber Sheet, Glass Fabric Reinforced	AMS 3315
Air, ASTM D736	-70	5	No cracks	Glass	12.4	0.015				
Air, oven aging	450	24	No deterioration	Silicone						
ASTM #1 petroleum oil	350	70	Volume change, +10% Max	Composite		0.032				
Air, breaking strength	Ambient	-	Warp, 800 lbs; Fill, 600 lbs	Silicone					Silicone Rubber Sheet, Glass Fabric Reinforced	AMS 3315
Air, ASTM D736	-70	5	No cracks	Glass	25.9	0.027				
Air, oven aging	450	24	No deterioration	Silicone						
ASTM #1 petroleum oil	350	70	Volume change, +10% Max.	Composite		0.050				
Air, breaking strength	Ambient	-	Warp, 300 lbs; Fill, 300 lbs	Silicone					Silicone Rubber Sheet, Glass Fabric Reinforced. Heat and Weather Resistant (60-80)	AMS 3320
Air, ASTM D736	-70	5	No cracks	Glass						
Air, oven aging	450	24	180° bend, no cracks	Silicone						
ASTM #1 petroleum oil	350	70	Volume change, +10% Max.	Composite		1/16-1/8				

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SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	CONSTRUCTION			QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD^2	THICK, INCH				
Air, breaking strength	Ambient	-	Warp, 125 lbs; Fill, 100 lbs	PVC	0.85				Fabric, Glass, Vinyl	AMS 3663
Air, mandrel bend	-65	5	No cracks or delamination	Glass	2.80				Coated, Porous	
Air, oven aging	200	24	No deterioration	PVC	0.85					
Flame	-	-	Flame, 1 sec. Max.	Composite	4.50	0.004				
Air, breaking strength	Ambient	-	Warp, 160 lbs; Fill, 150 lbs	PVC	1.03				Fabric, Glass, Vinyl	AMS 3663
Air, mandrel bend	-65	5	No cracks or delamination	Glass	3.93	0.005			Coated, Porous	
Air, oven aging	200	24	No deterioration	PVC	1.03					
Flame	-	-	Flame, 1 sec. Max.	Composite	5.99	0.006				
Air, breaking strength	Ambient	-	Warp, 225 lbs; Fill, 150 lbs	PVC	0.81				Fabric, Glass, Vinyl	AMS 3663
Air, mandrel bend	-65	5	No cracks or delamination	Glass	5.37	0.006			Coated, Porous	
Air, oven aging	200	24	No deterioration	PVC	0.81					
Flame	-	-	Flame, 1 sec. Max.	Composite	6.99	0.008				
Air, breaking strength	Ambient	-	Warp, 70 lbs; Fill, 40 lbs	PVC	1.53				Fabric, Glass, Vinyl	AMS 3664
Air, mandrel bend	-65	5	No cracks or delamination	Glass	1.43	0.0020			Coated	
Air, oven aging	200	24	No deterioration	PVC	1.53					
Flame	-	-	Flame, 1 sec. Max.	Composite	4.49	0.0045				
Air, breaking strength	Ambient	-	Warp, 125 lbs; Fill, 100 lbs	PVC	1.10				Fabric, Glass, Vinyl	AMS 3664
Air, mandrel bend	-65	5	No cracks or delamination	Glass	2.80	0.004			Coated	
Air, oven aging	200	24	No deterioration	PVC	1.10					
Flame	-	-	Flame, 1 sec. Max.	Composite	5.00	0.005				
Air, breaking strength	Ambient	-	Warp, 190 lbs; Fill, 140 lbs	PVC	1.97				Fabric, Glass, Vinyl	AMS 3664
Air, mandrel bend	-65	5	No cracks or delamination	Glass	4.06	0.005			Coated	
Air, oven aging	200	24	No deterioration	PVC	1.97					
Flame	-	-	Flame, 1 sec. Max.	Composite	8.00	0.007				
Air, breaking strength	Ambient	-	Warp, 225 lbs; Fill, 195 lbs	PVC	2.81				Fabric, Glass, Vinyl	AMS 3664
Air, mandrel bend	-65	5	No cracks or delamination	Glass	5.37	0.0065			Coated	
Air, oven aging	200	24	No deterioration	PVC	2.81					
Flame	-	-	Flame, 1 sec. Max.	Composite	10.99	0.011				
Air, breaking strength	Ambient	-	Warp, 215 lbs; Fill, 120 lbs	Chloroprene	21.5			8305	Cloth, Coated, Asbes-	MIL-C-7637
Air, creased 180°	-20	0.5	No cracks or flaking	Asbestos	29.0				tos	Type I
Air, mandrel bend	260	24	No cracks	Chloroprene	21.5					
Flame	-	-	No flame, no glow	Composite	72.0	0.070				

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD²	THICK, INCH				
Air, breaking strength	Ambient	-	Warp, 165 lbs; Fill, 150 lbs	Chloroprene	23.0			8305	Cloth, Coated, Asbestos	MIL-C-7637 Type II
Air, creased 180°	-20	0.5	No cracks or flaking	Asb. and wire	30.0					
Air, mandrel bend	260	24	No cracks	Chloroprene	23.0					
Flame	-	-	No flame, no glow	Composite	76.0	0.070				
Air, breaking strength	Ambient	-	Warp, 50 lbs; Fill, 50 lbs	Nylon	1.1	0.0032	Yes	8305	Cloth, Coated, Rubber Nylon Base	MIL-C-7966 Variety S
Air, creased 180°	-65	0.5	No cracking or flaking	Nat. or syn.	1.9					
Air, blocking	200	0.5	No blocking	Composite	3.0					
Air, breaking strength	Ambient	-	Warp, 200 lbs; Fill, 150 lbs	Nylon	3.50		Yes	8305	Cloth, Coated, Rubber Nylon Base	MIL-C-7966 Variety P
Air, creased 180°	-65	0.5	No cracking or flaking	Nat. or syn.	3.25					
Air, blocking	200	0.5	No blocking	Composite	6.75					
Air, Mullen burst	Ambient	-	125 points	Syn. rubber				8305	Cloth, Coated, Nylon, Rubber Coated, Fuel-Resistant	MIL-C-8068 Type I
Air, mandrel bend	-67	24	Flexible	Nylon	1.6	0.0042				
Air, oven aging	212	70	No deterioration	Syn. rubber						
Isooctane	75	70	Mullen burst, 125 pts.	Composite		0.010-				
70/30 isooctane/toluene	75	70	Mullen burst, 125 pts.			0.020				
Air, Mullen burst	Ambient	-	500 points					8305	Cloth, Coated, Nylon, Rubber Coated, Fuel-Resistant	MIL-C-8068 Type II
70/30 isooctane/toluene	-65	24	Flexible	Syn. rubber						
Air, oven aging	212	70	No deterioration	Nylon	5.5	0.013				
Isooctane	75	70	Mullen burst, 500 pts.	Syn. rubber						
70/30 isooctane/toluene	75	70	Mullen burst, 500 pts.	Composite		0.025+				
Air, Mullen burst	Ambient	-	125 points	Syn. rubber				8305	Cloth, Coated, Nylon, Rubber Coated, Fuel-Resistant	MIL-C-8068 Type III (uncured)
Air, mandrel bend	-67	24	Flexible	Nylon	1.6	0.0042				
Air, oven aging	212	70	No deterioration	Syn. rubber						
Isooctane	75	70	Mullen burst, 125 pts.	Composite		0.012-				
70/30 isooctane/toluene	75	70	Mullen burst, 125 pts.			0.018				
Air, breaking strength	Ambient	-	Warp, 190 lbs; Fill, 140 lbs	Cotton	6.5			8305	Cloth, Laminated, Sateen, Rubberized	MIL-C-9074
Air, creased 180°	-40	0.5	No cracks	Nat. or syn.	10.5					
Oxygen, accelerated aging	158	192	Brk. strength, 15% loss Max.	Cotton	6.5					
				Composite	23.5					
Air, breaking strength	Ambient	-	Warp, 90 lbs; Fill, 90 lbs	Nat. or syn.				8305	Cloth, Laminated and Coated for Waterproof Containers	MIL-C-10351 Type I
Air, cantilever stiffness	-65	0.5	Flexible	Nylon	1.6					
Air, blocking	180	0.5	No blocking	Nat. or syn.						
Weatherometer, break, strength	135	100	Warp, 70 lbs; Fill, 70 lbs	Nylon	1.6					
				Nat. or syn.						
				Composite	9.3					

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD^2	THICK, INCH				
Air, breaking strength	Ambient	-	Warp, 180 lbs; Fill, 170 lbs	Nat. or syn.				8305	Cloth, Laminated and	MIL-C-10351
Air, cantilever stiffness	-65	0.5	Flexible	Nylon	3.0				Coated for Waterproof	Type II
Air, blocking	180	0.5	No blocking	Nat. or syn.					Containers	
Weatherometer, break. strength	135	100	Warp, 160 lbs; Fill, 150 lbs	Nylon	3.0					
				Nat. or syn. Composite	12.5					
(Tests on coated fabric)										
Air, breaking strength	Ambient	-	Warp, 72 lbs min; Fill, 52 lbs	Nylon cloth coated				8465	Mattress, Pneumatic	MIL-M-10747
Air, 180° crease	-70	5	No cracks	with natural or						
Air, burst test @ 40 psi	Ambient	-	No leakage	synthetic rubber						
Air, breaking strength	Ambient	-	Warp, 140 lbs; Fill, 120 lbs	Silicone	6.0			8305	Cloth, Coated, Glass,	MIL-C-10797
Air, cantilever stiffness	-60	4	Flexible	Glass	6.0	0.007			Silicone Rubber	
Air, cantilever stiffness	600	4	Flexible	Silicone	6.0				Coated	
Flame	-	-	Flame, 13 sec. Max.	Composite	18.0					
Air, breaking strength	Ambient	-	Warp, 80 lbs; Fill, 80 lbs	PVC				8305	Cloth, Coated, Cotton,	MIL-C-10799
Air, mandrel bend	-40	4	No cracking or flaking	Cotton	4.5				Vinyl Coated, Fire and	Type I
Air, blocking	180	0.5	No blocking	PVC					Mildew Resistant	Class 1
TT-S-735, 40% aromatic	Ambient	2	Creased 180°, no cracks	Composite	7.8					
Air, breaking strength	Ambient	-	Warp, 130 lbs; Fill, 75 lbs	PVC				8305	Cloth, Coated, Cotton,	MIL-C-10799
Air, mandrel bend	-40	4	No cracking or flaking	Cotton	4.5				Vinyl Coated, Fire and	Type I,
Air, blocking	180	0.5	No blocking	PVC					Mildew Resistant	Class 3
TT-S-735, 40% aromatic	Ambient	2	Creased 180°, no cracks	Composite	10.0					
Air, breaking strength	Ambient	-	Warp, 160 lbs; Fill, 110 lbs	PVC				8305	Cloth, Coated, Cotton,	MIL-C-10799
Air, mandrel bend	-40	4	No cracking or flaking	Cotton	9.85				Vinyl Coated, Fire and	Type II,
Air, blocking	180	0.5	Slight blocking	PVC					Mildew Resistant	Class 1
TT-S-735, 40% aromatic	Ambient	2	Creased 180°, no cracks	Composite	14.50					
Air, breaking strength	Ambient	-	Warp, 125 lbs; Fill, 120 lbs	PVC				8305	Cloth, Coated, Cotton,	MIL-C-10799
Air, mandrel bend	-40	4	No cracking or flaking	Cotton	8.25				Vinyl Coated, Fire and	Type II,
Air, blocking	180	0.5	Slight blocking	PVC					Mildew Resistant	Class 3
TT-S-735, 40% aromatic	Ambient	2	Creased 180°, no cracks	Composite	12.00					
Air, breaking strength	Ambient	-	Warp, 210 lbs; Fill, 130 lbs	PVC				8305	Cloth, Coated, Cotton,	MIL-C-10799
Air, mandrel bend	-40	4	No cracking or flaking	Cotton	12.29				Vinyl Coated, Fire and	Type II,
Air, blocking	180	0.5	Slight blocking	PVC					Mildew Resistant	Class 4
TT-S-735, 40% aromatic	Ambient	2	Creased 180°, no cracks	Composite	18.00					

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SPECIFICATION TEST CONDITIONS			—	CONSTRUCTION						
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD^2	THICK, INCH	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, breaking strength	Ambient	-	Warp, 235 lbs; Fill, 175 lbs	PVC				8305	Cloth, Coated, Cotton, Vinyl Coated, Fire and Mildew Resistant	MIL-C-10799 Type II, Class 5
Air, mandrel bend	-40	4	No cracking or flaking	Cotton	14.77					
Air, blocking	180	0.5	Slight blocking	PVC						
TT-S-735, 40% aromatic	Ambient	2	Creased 180°, no cracks	Composite	22.00					
Air, breaking strength	Ambient	-	Warp, 80 lbs; Fill, 75 lbs	Chloroprene	2.5			8305	Cloth, Laminated: Cotton Balloon, 3 Ply, Air Retaining, Chloroprene	MIL-C-11390
Weatherometer, break. strength	135	200	Loss 10% Max.	Cotton	2.0					
				Chloroprene	3.5					
				Cotton bias	2.0					
				Chloroprene	3.5					
				Cotton	2.0					
				Chloroprene	3.0					
				Composite	18.5					
Air, breaking strength	Ambient	-	Warp, 180 lbs; Fill, 170 lbs	Butyl	11.0			8305	Cloth, Coated, Butyl Coated, Toxicological Agents, Protective	MIL-C-12189
Air, creased 180°	-40	4	Flexible	Cotton	4.25					
Air, blocking	180	0.5	No blocking	Butyl	2.80					
Weatherometer, break, strength	155	100	Warp, 170 lbs; Fill, 160 lbs	Composite	12.25					
Mustard gas (liquid)	100	-	100 M to indicator change							
Air, breaking strength	Ambient	-	Warp, 225 lbs; Fill, 195 lbs	PVC	2.75			8305	Cloth, Glass, Vinyl Coated, Acid and Fuel Resistant	MIL-C-12526
Air, creased 180°	-40	4	No cracking or flaking	Glass	5.37	0.0065				
Air, blocking	180	0.5	Slight blocking	PVC	8.00					
Red fuming nitric acid	Ambient	0.05	No cracking or stiffening	Composite	16.12					
Air, breaking strength	Ambient	-	Warp, 50 lbs; Fill, 50 lbs	Nylon	1.5			8305	Cloth, Coated, Nylon,	MIL-C-14366
Air, cantilever stiffness	30	4	Flexible	Butyral	2.0					
Air, blocking	200	0.5	No blocking	Composite	3.5					
Air, breaking strength	Ambient	-	Warp, 153 lbs; Fill, 135 lbs	Chloroprene	1.20			8305	Cloth, Nylon, Polychloroprene Coated (For Pneumatic Floating Equipment)	MIL-C-14505 Class 3 Schedule B (vulcanized)
Air, creased 180°	-20	96	No cracks	Nylon	3.15					
Air, oven aging	158	96	Break strength, 15% loss Max.	Chloroprene	1.20					
				Composite	5.55					
Air, breaking strength	Ambient	-	Warp, 350 lbs; Fill, 335 lbs	Chloroprene		0.010		8305	Cloth, Nylon, Polychloroprene Coated (For Pneumatic Floating Equipment)	MIL-C-14505 Class 4 (vulcanized)
Air, creased 180°	-20	96	No cracks	Nylon	5.8					
Air, oven aging	158	96	Break strength, 15% loss Max.	Chloroprene		0.010				
Air, breaking strength	Ambient	-	Warp, 400 lbs; Fill, 400 lbs	Chloroprene		0.014		8305	Cloth, Nylon, Polychloroprene Coated (For Pneumatic Floating Equipment)	MIL-C-14505 Class 6 (vulcanized)
Air, creased 180°	-20	96	No cracks	Nylon	8.5	0.020				
Air, oven aging	158	96	Break strength, 15% loss Max.	Chloroprene		0.014				
				Composite		0.048				
Air, breaking strength	Ambient	-	Warp, 650 lbs; Fill, 650 lbs	Chloroprene		0.020		8305	Cloth, Nylon, Polychloroprene Coated (For Pneumatic Floating Equipment)	MIL-C-14505 Class 7 (vulcanized)
Air, creased 180°	-20	96	No cracks	Nylon	13.3	0.029				
Air, oven aging	158	96	Break strength, 15% loss Max.	Chloroprene		0.020				
				Composite		0.069				

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD^2	THICK, INCH				
Air, breaking strength	Ambient	-	Warp, 140 lbs; Fill, 120 lbs	Not known				8305	Cloth, Coated, Fire	MIL-C-15104
Air, creased 180°	0	2	No cracks	Cotton					Resistant, Berth and	Type I
Air, oven aging	158	168	Break. strength, 25% loss Max.	Not known					Bedding Cover	
				Composite	25.0					
Air, breaking strength	Ambient	-	Warp, 135 lbs; Fill, 100 lbs	Not known				8305	Cloth, Coated, Fire	MIL-C-15104
Air, creased 180°	0	2	No cracks	Cotton					Resistant, Berth and	Type II
Air, oven aging	158	168	Break. strength, 25% loss Max.	Not known					Bedding Cover	
				Composite	16.9					
Air, breaking strength	Ambient	-	Warp, 50 lbs; Fill, 50 lbs	Chloroprene	1.5			8305	Cloth, Coated, and	MIL-C-17415
Air, creased 180°	-20	94	No cracks	Nylon	1.0				Webbing, Inflatable Boat,	Type 1
Air, blocking	180	0.5	No blocking	Chloroprene	2.5				and Miscellaneous Use	
Oxygen, accelerated aging	158	96	Break strength, 10% loss Max.	Composite	5.0					
Air, breaking strength	Ambient	-	Warp, 180 lbs; Fill, 165 lbs	Chloroprene	3.0			8305	Cloth, Coated, and	MIL-C-17415
Air, creased 180°	-20	94	No cracks	Nylon	2.5				Webbing, Inflatable Boat	Type 2,
Air, blocking	180	0.5	No blocking	Chloroprene	3.0					Class A
Oxygen, accelerated aging	158	96	Break. strength, 10% loss Max.	Composite	8.5					
Air, breaking strength	Ambient	-	Warp, 180 lbs; Fill, 165 lbs	Chloroprene	1.5			8305	Cloth, Coated, and	MIL-C-17415
Air, creased 180°	-20	94	No cracks	Nylon	2.5				Webbing, Inflatable Boat	Type 2,
Air, blocking	180	0.5	No blocking	Chloroprene	2.8					Class B
Oxygen, accelerated aging	158	96	Break. strength, 10% loss Max.	Composite	6.8					
Air, breaking strength	Ambient	-	Warp, 45 lbs; Fill, 45 lbs	Chloroprene	1.0			8305	Cloth, Coated, and	MIL-C-17415
Air, creased 180°	-20	94	No cracks	Cotton bias	2.1				Webbing, Inflatable Boat	Type 3
Air, blocking	180	0.5	No blocking	Chloroprene	4.5					
Oxygen, accelerated aging	158	96	Break. strength, 10% loss Max.	Composite	7.6					
Air, creased 180°	-20	94	No cracks	Natural	2.0			8305	Cloth, Coated, and	MIL-C-17415
Air, blocking	180	0.5	No blocking	Cotton	4.5				Webbing, Inflatable Boat	Type 4
Oxygen, accelerated aging	158	96	Break. strength, 15% loss Max.	Natural	8.5					Class A
				Composite	15.0					
Air, creased 180°	-20	94	No cracks	Chloroprene	2.0			8305	Cloth, Coated, and	MIL-C-17415
Air, blocking	180	0.5	No blocking	Cotton bias	4.5				Webbing, Inflatable Boat	Type 4
Oxygen, accelerated aging	158	96	Break. strength, 10% loss Max.	Chloroprene	3.5					Class B
				Composite	10.0					
Air, breaking strength	Ambient	-	Warp, 360 lbs; Fill, 360 lbs	Chloroprene	1.5			8305	Cloth, Coated, and	MIL-C-17415
Air, creased 180°	-20	94	No cracks	Nylon	5.4				Webbing, Inflatable Boat	Type 5
Air, blocking	180	0.5	No blocking	Chloroprene	16.5					
Oxygen, accelerated aging	158	96	Break. strength, 10% loss Max.	Composite	23.4					

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD²	THICK, INCH				
Air, creased 180°	-20	94	No cracks	Chloroprene	6.0			8305	Cloth, Coated, and	MIL-C-17415
Air, blocking	180	0.5	No blocking	Nylon					Webbing, Inflatable Boat	Type 6
				Nylon pile	9.5	2¼-3				
				Nylon						
				Chloroprene	6.0					
				Composite	21.5					
Air, breaking strength	Ambient	-	Warp, 165 lbs; Fill, 160 lbs	Natural	11.5			8305	Cloth, Coated, and	MIL-C-17415
Air, creased 180°	-20	94	No cracks	Cotton	7.0				Webbing, Inflatable Boat	Type 7
Air, blocking	180	0.5	No blocking	Natural	11.5					Class A
Oxygen, accelerated aging	158	96	Break. strength, 15% loss Max.	Composite	30.0					
Air, breaking strength	Ambient	-	Warp, 165 lbs; Fill, 160 lbs	Chloroprene	12.5			8305	Cloth, Coated, and	MIL-C-17415
Air, creased 180°	-20	94	No cracks	Cotton	7.0				Webbing, Inflatable Boat	Type 7
Air, blocking	180	0.5	No blocking	Chloroprene	12.5					Class B
Oxygen, accelerated aging	158	96	Break. strength, 10% loss Max.	Composite	32.0					
Air, breaking strength	Ambient	-	Warp, 50 lbs; Fill, 50 lbs	Natural	2.0			8305	Cloth, Coated, and	MIL-C-17415
Air, creased 180°	-20	94	No cracks	Nylon bias	1.0				Webbing, Inflatable Boat	Type 8
Air, blocking	180	0.5	No blocking	Natural	3.5					Class A
Oxygen, accelerated aging	158	96	Break. strength, 15% loss Max.	Composite	6.5					
Air, breaking strength	Ambient	-	Warp, 50 lbs; Fill, 50 lbs	Chloroprene	2.0			8305	Cloth, Coated, and	MIL-C-17415
Air, creased 180°	-20	94	No cracks	Nylon bias	1.0				Webbing, Inflatable Boat	Type 8
Air, blocking	180	0.5	No blocking	Chloroprene	3.5					Class B
Oxygen, accelerated aging	158	96	Break. strength, 10% loss Max.	Composite	6.5					
Air, breaking strength	Ambient	-	Warp, 360 lbs; Fill, 360 lbs	Chloroprene	12.5			8305	Cloth, Coated, and	MIL-C-17415
Air, creased 180°	-20	94	No cracks	Nylon	5.4				Webbing, Inflatable Boat	Type 9
Air, blocking	180	0.5	No blocking	Chloroprene	12.5					Class A
Oxygen, accelerated aging	158	96	Break. strength, 10% loss Max.	Composite	30.4					
Air, breaking strength	Ambient	-	Warp, 360 lbs; Fill, 360 lbs	Natural	14.0			8305	Cloth, Coated, and	MIL-C-17415
Air, creased 180°	-20	94	No cracks	Nylon	5.4				Webbing, Inflatable Boat	Type 9
Air, blocking	180	0.5	No blocking	Natural	14.0					Class B
Oxygen, accelerated aging	158	96	Break. strength, 15% loss Max.	Composite	33.4					
Air, creased 180°	-20	94	No cracks	Chloroprene	1.5			8305	Cloth, Coated, and	MIL-C-17415
Air, blocking	180	0.5	No blocking	Nylon	1.0				Webbing, Inflatable Boat	Type 10
				Chloroprene	8.5					
				Nylon						
				Nylon pile	9.5	2¼-3				
				Nylon						
				Chloroprene	8.5					
				Nylon	1.0					
				Chloroprene	1.5					
				Composite	31.5					

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SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	CONSTRUCTION			QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD^2	THICK, INCH				
Air, creased 180° Air, blocking	-20 180	94 0.5	No cracks No blocking	Chloroprene Nylon Chloroprene Nylon Nylon pile Nylon Chloroprene Nylon Chloroprene Composite	5.0 2.0 6.0 9.5 6.0 2.0 5.0 35.5	 2¼-3		8305	Cloth, Coated, and Webbing, Inflatable Boat	MIL-C-17415 Type 11
Air, creased 180° Air, blocking	-20 180	94 0.5	No cracks No blocking	Chloroprene Nylon Chloroprene Nylon Nylon pile Nylon Chloroprene Nylon Chloroprene Composite	16.8 1.0 8.3 8.2 8.3 1.0 1.5 45.1	 2-2¼		8305	Cloth, Coated, and Webbing, Inflatable Boat	MIL-C-17415 Type 12
Air, breaking strength Air, creased 180° Air, blocking Oxygen, accelerated aging	Ambient -20 180 158	- 94 0.5 96	Warp, 225 lbs; Fill, 225 lbs No cracks No blocking Break. strength, 10% loss Max.	Chloroprene Nylon Chloroprene Composite	4.5 3.1 4.5 12.1			8305	Cloth, Coated, and Webbing, Inflatable Boat	MIL-C-17415 Type 13
Air, breaking strength Air, creased 180° Air, blocking	Ambient -40 200	- 96 0.5	Warp, 180 lbs; Fill, 170 lbs No cracks No blocking	Nylon Chloroprene Composite	3.1 4.2 7.3			8305	Cloth, Coated; and Tape, Coated Cloth - Chloroprene on Nylon, Pneumatic Life Preserver	MIL-C-19002 Type I
Air, tearing strength Air, blocking	Ambient 200	- 0.5	Warp, 1600 gm; Fill, 1600 gm No blocking	Cotton Chloroprene Composite	5.9 4.9 10.8			8305	Cloth, Coated, Vapor Permeable, Water Impermeable	MIL-C-19208
Air, breaking strength Air, creased 180° Air, blocking	Ambient -40 160	- 96 24	65 lbs. minimum No cracks No blocking	Polyethylene Nat. or syn. Polyethylene Composite	 6.5		Yes	8305	Cloth, Coated (For Aircraft Protectors)	MIL-C-19524

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SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	CONSTRUCTION			QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD^2	THICK, INCH				
Air, breaking strength	Ambient	-	Warp, 225 lbs; Fill, 210 lbs	Chloroprene	1.70			8305	Cloth, Laminated, ZS2G-1 Type Airship Envelope	MIL-C-19555
Air, blocking	200	0.5	No blocking	Polyester	4.35					
Air, oven aging	158	96	Warp, 210 lbs; Fill, 190 lbs	Chloroprene	3.50					
Weatherometer, break, strength	135	500	Warp, 210 lbs; Fill, 190 lbs	Polyester	3.50					
				Chloroprene	1.00					
				Hypalon	1.50					
				Composite	15.40					
Air, breaking strength	Ambient	-	Warp, 110 lbs; Fill, 95 lbs	Nylon	2.0			8305	Cloth, Coated (Nylon Taffeta)	MIL-C-19699
Air, cantilever bending	-40	1	Flexible	Chloroprene	2.7					
Air, oven aging	160	200	Flexible	Composite	4.7					
Air, breaking strength	Ambient	-	Warp, 225 lbs; Fill, 210 lbs	Nylon	3.5			8305	Cloth, Coated Nylon Twill, (Low Count)	MIL-C-19759 Type I
Air, cantilever bending	-40	1	Flexible	Chloroprene	4.0					
Air, oven aging	160	120	Flexible, no tackiness	Composite	7.5					
Air, breaking strength	Ambient	-	Warp, 225 lbs; Fill, 210 lbs	Chloroprene	1.5			8305	Cloth, Coated Nylon Twill, (Low Count)	MIL-C-19759 Type II
Air, cantilever bending	-40	1	Flexible	Nylon	3.5					
Air, oven aging	160	120	Flexible, no tackiness	Chloroprene	4.0					
				Composite	9.0					
Air, breaking strength	Ambient	-	Warp, 120 lbs; Fill, 100 lbs	Chloroprene				8305	Cloth, Coated, Nylon, Waterproof	MIL-C-20696 Type I, Class 1
Air, cantilever stiffness	-40	4	Flexible	Nylon	2.3	0.007				
Oxygen, accelerated aging	158	168	Not stiff, brittle or tacky	Chloroprene						
MIL-L-6082, petroleum oil	Ambient	1	No leakage	Composite	8.0					
TT-S-735, 40% aromatic	Ambient	0.08	Shall not crack on creasing							
Air, breaking strength	Ambient	-	Warp, 120 lbs; Fill, 100 lbs	PVC				8305	Cloth, Coated, Nylon, Waterproof	MIL-C-20696 Type I, Class 2
Air, cantilever stiffness	10	4	Flexible	Nylon	2.3	0.007				
MIL-L-6082, petroleum oil	Ambient	1	No leakage	PVC						
TT-S-735, 40% aromatic	Ambient	0.08	Shall not crack on creasing	Composite	9.0					
Air, breaking strength	Ambient	-	Warp, 120 lbs; Fill, 100 lbs	Chloroprene				8305	Cloth, Coated, Nylon, Waterproof	MIL-C-20696 Type I, Class 3
Air, cantilever stiffness	-40	4	Flexible	Nylon	2.3	0.007				
Oxygen, accelerated aging	158	168	Not stiff, brittle or tacky	Chloroprene						
MIL-L-6082, petroleum oil	Ambient	1	No leakage	Composite	10.5					
TT-S-735, 40% aromatic	Ambient	0.08	Shall not crack on creasing							
Flame	-	-	Flame, 10 sec. Max; Char 3.5 in. Max.							

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SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	CONSTRUCTION			QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD^2	THICK, INCH				
Air, breaking strength	Ambient	-	Warp, 325 lbs; Fill, 260 lbs	Chloroprene				8305	Cloth, Coated, Nylon, Waterproof	MIL-C-20696 Type II, Class 1
Air, cantilever stiffness	-40	4	Flexible	Nylon	5.5	0.015				
Oxygen, accelerated aging	168	168	Not stiff, brittle or tacky	Chloroprene						
MIL-L-6082, petroleum oil	Ambient	1	No leakage	Composite	16.0					
TT-S-735, 40% aromatic	Ambient	0.08	Shall not crack on creasing							
Air, breaking strength	Ambient	-	Warp, 325 lbs; Fill, 260 lbs	PVC				8305	Cloth, Coated, Nylon, Waterproof	MIL-C-20696 Type II, Class 2
Air, cantilever stiffness	10	4	Flexible	Nylon	5.5	0.015				
MIL-L-6082, petroleum oil	Ambient	1	No leakage	PVC						
TT-S-735, 40% aromatic	Ambient	0.08	Shall not crack on creasing	Composite	18.0					
Air, breaking strength	Ambient	-	Warp, 325 lbs; Fill, 260 lbs	Chloroprene				8305	Cloth, Coated, Nylon Waterproof	MIL-C-20696 Type II, Class 3
Air, cantilever stiffness	-40	4	Flexible.	Nylon	5.5	0.015				
Oxygen, accelerated aging	158	168	Not stiff, brittle or tacky	Chloroprene						
MIL-L-6082, petroleum oil	Ambient	1	No leakage	Composite	18.0					
TT-S-735, 40% aromatic	Ambient	0.08	Shall not crack on creasing							
Flame	-	-	Flame, 10 sec. Max; Char 3.5							
Air breaking strength	Ambient	-	Warp 325 lbs; Fill 275 lbs	Nitrile/ Butadiene	7.25			8305	Cloth, Coated, Nylon Waterproof	MIL-C-20696 Type III Class 5
Air, creased 180°	-65	4	No cracks							
Air, blocking	200	0.5	No blocking	Natural	2.0					
Air, oven aging	200	168	Not stiff, brittle or tacky	Composite	6.7					
Air, breaking strength	Ambient	-	Warp, 300 lbs; Fill, 300 lbs	Natural	4.2			8305	Cloth, Coated, Raft Bottom	MIL-C-21109 Type II
Air, creased 180°	-65	4	No cracks	Nylon	6.0					
Air, blocking	200	0.5	No blocking	Natural	4.2					
Air, oven aging	200	168	Not stiff, brittle or tacky	Composite	14.4					
Air, tearing strength	Ambient	-	Warp, 130 lbs	Chloroprene				8305	Cloth, Laminated ZPG2 and ZPG2W Type Airship Envelope	MIL-C-21189
Air, blocking	200	0.5	No blocking	Polyester						
Air, oven aging	158	96	Tear strength, 5% loss Max.	Chloroprene						
Weatherometer, tear strength	135	500	5% loss, Max.	Polyester						
				Chloroprene						
				Hypalon						
				Composite	16.5					
Air, breaking strength	Ambient	-	Warp, 90 lbs; Fill, 70 lbs	Aluminum	3.0			8305	Cloth, Coated (Neoprene, Asbestos, Glass, Cotton, Aluminized)	MIL-C-21890
Air, creased 180°	-20	1	No cracks	Glass	11.8					
Air, blocking	180	0.5	No blocking	Chloroprene	4.2					
Flame	-	-	Flame, 2.0 sec. Max; Char 1.5 in Max.	Composite	19.0					

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SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	CONSTRUCTION			QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD²	THICK, INCH				
Air, creased 180°	-65	4	No cracks	Natural	1.5			8305	Cloth, Laminated, Rubber on Nylon, Inflatable Floor	MIL-C-22427
Air, blocking	200	0.5	No blocking	Nylon	1.0					
Air, oven aging	158	168	Not stiff, brittle or tacky	Natural	9.5					
				Nylon						
				Nylon pile	7.0	1.0				
				Nylon						
				Natural	9.5					
				Nylon	1.0					
				Natural	1.5					
				Composite	31.0					
Air, breaking strength	Ambient	-	Warp, 180 lbs; Fill. 160 lbs	Hypalon	4.9			8305	Cloth, Coated, Fire, Water, Mildew and Weather Resistant	MIL-C-22524 Class 1
Air, creased 180°	-20	4	No cracks	Nylon	2.3					
Air, blocking	180	0.5	No blocking	Hypalon	4.8					
Ozone, 100 PPM	77	50	No cracks	Composite	12.0					
Air, breaking strength	Ambient	-	Warp, 300 lbs; Fill, 260 lbs	Hypalon	5.5			8305	Cloth, Coated; Fire, Water, Mildew and Weather Resistant	MIL-C-22534 Class 2
Air, creased 180°	-20	4	No cracks	Nylon	3.9					
Air, blocking	180	0.5	No blocking	Hypalon	5.6					
Ozone, 100 PPM	77	50	No cracks	Composite	15.0					
Air, breaking strength	Ambient	-	Warp, 300 lbs; Fill, 300 lbs	Hypalon	6.5			8305	Cloth, Coated; Fire, Water, Mildew and Weather Resistant	MIL-C-22524 Class 3
Air, creased 180°	-20	4	No cracks	Nylon	5.0					
Air, blocking	180	0.5	No blocking	Hypalon	6.5					
Ozone, 100 PPM	77	50	No cracks	Composite	18.0					
Air, breaking strength	Ambient	-	Warp, 130 lbs; Fill 110 lbs	Glass	6.50			8305	Cloth, Coated, Fuel and Flame Resistant	MIL-C-22787 Type I
Air, blocking scale rating	-	-	3	Vinyl						
Air, breaking strength	Ambient	-	Warp, 130 lbs; Fill 110 lbs	Vinyl	6.50			8305	Cloth, Coated, Fuel and Flame Resistant	MIL-C-22787 Type II
Air, blocking scale rating	-	-	3	Modacrylic						
Air, breaking strength	Ambient	-	Warp, 180 lbs; Fill 175 lbs	Glass	5.10			8305	Cloth, Coated, Fuel and Flame Resistant	MIL-C-22787 Type III
Air, blocking scale rating	-	-	3	Vinyl						
Air, breaking strength	Ambient	-	Warp, 130 lbs; Fill 110 lbs	Nylon	12.50			8305	Cloth, Coated, Fuel and Flame Resistant	MIL-C-22787 Type IV
Air, blocking scale rating	-	-	3	Vinyl						
Air, breaking strength	Ambient	-	Warp, 185-300 lbs; Fill 110-250 lbs	Glass	7.0 to 20.5			8305	Cloth, Coated, Fuel and Flame Resistant	MIL-C-22787 Types V,VI,VII
Air, blocking scale rating	-	-	3	Vinyl						

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SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	CONSTRUCTION			OPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD^2	THICK, INCH				
Air, breaking strength Air, creased 180° Air, blocking Air, oven aging Weatherometer, break. strength	Ambient -65 212 200 135	- 4 0.5 168 300	Warp, 300 lbs; Fill, 250 lbs No cracks No blocking Break. strength, 10% loss Max. 25% loss Max.	Natural Nylon Natural Nylon bias Natural Composite	1.5 3.0 4.0 1.6 1.5 11.6			8305	Cloth, Laminated, and Tape, Coated Cloth, Polyisoprene, Natural or Synthetic Rubber on Nylon	MIL-C-23070 Variety C
(Inner liner covered by Grade SB615A1E5 of MIL-R-3065 and MIL-STD-417 Outer cover covered by Grade SC615A1E5 of MIL-R-3065 and MIL-STD-417)				Outer cover-chloroprene Inner cover-nitrile				5430	Tank, Fabric, Collapsible, Liquid Fuel, Cylindrical, 500Gallon Capacity	MIL-T-23119
(Rubber covered by Grade RS-15L of MIL-H-3065 and MIL-STD-417)				SBR coated nylon cloth				5430	Tank, Fabric, Collapsible, Pillow Type, 3,000 Gallon Capacity (For Portable Water)	MIL-T-23268
Air, breaking strength Air, Elongation	Ambient Ambient	- -	Wales 90 lbs; Courses 45 lbs Wales 100%; Courses 250%	Nylon Polychloroprene	19.0			8305	Cloth, Coated and Laminated, Polychloroprene on Nylon, and Tape, Polychloroprene, Unsupported	MIL-C-23926 Type I
Air, breaking strength Air, Elongation	Ambient Ambient	- -	Wales 90 lbs; Courses 45 lbs Wales 100%; Courses 250%	Nylon Polychloroprene	24.0			8305	Cloth, Coated and Laminated, Polychloroprene on Nylon, and Tape, Polychloroprene, Unsupported	MIL-C-23926 Type II
Air, breaking strength Air, Elongation	Ambient Ambient	- -	Wales 90 lbs; Courses 45 lbs Wales 100%; Courses 250%	Nylon	23.0			8305	Cloth, Coated and Laminated, Polychloroprene on Nylon, and Tape, Polychloroprene, Unsupported	MIL-C-23926 Type IV
Air, breaking strength Air, mandrel bend Air, blocking Air, oven aging	Ambient -67 180 158	- 24 0.5 240	Warp, 575 lbs; Fill, 525 lbs No cracks No blocking Break. strength, 10% loss Max.	Chloroprene Nylon Chloroprene Composite	16.2 8.5 16.3 41.0	0.045		8305	Cloth, Coated, Nylon, Chloroprene-Coated	MIL-C-26712
Air, breaking strength Air mandrel bend Air, blocking Flame	Ambient -65 180 -	- 4 2 -	Warp, 150 lbs; Fill, 150 lbs No cracks No blocking Flame, 10 sec. Max.	Aluminum Glass Silicone Composite	6.7 16.0	0.008 0.015	Yes	8305	Cloth, Coated, Glass, Aluminum Face, Silicone Rubber Back	MIL-C-27347

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SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	CONSTRUCTION			QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD²	THICK, INCH				
Air, breaking strength	Ambient	-	Warp, 185 lbs; Fill, 185 lbs	Butyl	6.3	0.003		8305	Cloth, Coated, Butyl, Polyamide, Nonmelt, Fuel and Oxidizer Resistant	MIL-C-38149
Air, creased 180°	-40	4	No cracks	Nylon	3.5	0.009				
Air, blocking	180	0.5	Slight blocking	Butyl	6.2	0.004				
Nitrogen tetroxide fumes	80	1	Leakage, 0.01 mg/in² Max.	Composite	16.0	0.017				
Air, breaking strength	Ambient	-	Warp, 90 lbs; Fill, 80 lbs	PVC	1.0			8305	Cloth, Coated, Nylon, Vinyl Coated	MIL-C-40039
Air, creased 180°	0	0.6	No cracks	Nylon	1.6					
Air, blocking	180	0.5	No blocking	PVC	4.1					
				Composite	6.7					
Air, breaking strength	Ambient	-	Warp, 125 lbs; Fill, 150 lbs	Chloroprene	0.5			8305	Cloth, Laminated, Fabric, Air-Retaining Mattress	MIL-C-40056
Air, creased 180°	-20	96	No cracks	Nylon	0.9					
				Chloroprene	6.0					
				Nylon, Nylon pile, Nylon	8.6	¼-4				
				Chloroprene	6.0					
				Nylon	0.9					
				Chloroprene	0.5					
				Composite	23.4					
Air, breaking strength	Ambient	-	Warp, 295 lbs; Fill, 295 lbs	PVC				8305	Cloth and Strip Laminated, Vinyl-Nylon, High-Strength Flexible	MIL-C-43006 Type I
Air, mandrel bend	-42	4	No cracks	Nylon						
Air, blocking	180	0.5	Slight blocking	PVC						
				Composite	18.4					
Air, breaking strength	Ambient	-	Warp, 90 lbs; Fill, 90 lbs	PVC				8305	Cloth and Strip Laminated, Vinyl-Nylon, High-Strength Flexible	MIL-C-43006 Type II
Air, mandrel bend	-42	4	No cracks	Nylon						
Air, blocking	180	0.5	No blocking	PVC						
				Composite	10.0					
Air, breaking strength	Ambient	-	Warp, 75 lbs; Fill, 75 lbs	PVC				8305	Cloth and Strip Laminated, Vinyl-Nylon, High-Strength Flexible	MIL-C-43006 Type III
Air, mandrel bend	-42	4	No cracks	Nylon						
Air, blocking	180	0.5	No blocking	PVC						
				Composite	6.0					
Air, breaking strength	Ambient	-	Warp, 80 lbs; Fill, 80 lbs	Butyl	1.6			8305	Cloth, Coated, Cotton, Resin Modified Butyl Coated, Acid and Fuel Resistant	MIL-C-43062 (unvulcanized)
Air, cantilever stiffness	-20	4	Flexible	Cotton	4.3					
Air, blocking	180	0.5	No blocking	Butyl	4.6					
JP-4 fuel	Ambient	0.25	Shall not crack or stiffen	Composite	10.5					
Air, breaking strength	Ambient	-	Warp, 300 lbs; Fill, 300 lbs	PVC	8.5			8305	Cloth, Coated, Nylon, Vinyl Coated (For Air-Supported Shelters)	MIL-C-43086
Air, creased 180°	-10	0.5	No cracks	Nylon	5.9					
Air, blocking	170	2	Slight blocking	PVC	5.5					
				Composite	19.9					

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SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	CONSTRUCTION			QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.		TYPE AND ORDER OF COMPONENTS	WEIGHT, OZ/YD2	THICK, INCH				
Air, breaking strength Air, blocking	Ambient 200	- 0.5	Warp, 160 lbs; Fill, 160 lbs Slight blocking	Polyester Chloroprene Composite	13.0			8305	Cloth, Coated Chloroprene Base Coated, Chlorosulphonated Polyethylene Top Coated	MIL-C-43285 Type I
Air, breaking strength Air, blocking	Ambient 200	- 0.5	Warp, 275 lbs; Fill, 275 lbs Slight blocking	Nylon Chloroprene Composite	13.0			8305	Cloth, Coated Chloroprene Base Coated, Chlorosulphonated Polyethylene Top Coated	MIL-C-43285 Type II
Air, breaking strength Air, Blocking Water absorption	Ambient 180 70	- 0.5	Warp, 50 lbs; Fill, 50 lbs Slight blocking 1%	Cotton PVC Chloroprene Composite	12.0			8305	Cloth, Coated, Cotton Vinyl Chloride or Chloroprene Coated	MIL-C-43410
Air, breaking strength Stiffness JP-4 Fuel	Ambient -85 Ambient	- 4 -	Warp, 160 lbs; Fill, 160 lbs Flexible Shall not crack or stiffen	Cotton Polyester Silicone Composite	10.0			8305	Cloth, Coated, Polyester, Silicone Rubber Coated	MIL-C-43656
(Tests on rubber only) Air, original properties (Test on coated fabric) Air, 180° crease	Ambient -20	- 96	T, 1800 psi min; E, 500% min No cracks	Chloroprene coated nylon fabric				5430	Cases: Nylon Neoprene-Coated	MIL-C-52186
Air, breaking strength Air, blocking	Ambient 180	- 0.5	Warp, 245 lbs; Fill, 160 lbs Moderate blocking	Cotton Chloroprene Composite	55.0			8305	Cloth, Coated, Synthetic Rubber (Nitrile and Polychloroprene)	MIL-C-82255 Type II
Air, tensile strength Air, blocking	Ambient 180	- 0.5	Warp, 245 lbs; Fill, 160 lbs Moderate blocking	Cotton Nitrile Composite	43.0			8305	Cloth, Coated, Synthetic Rubber (Nitrile & Polychloroprene)	MIL-C-82255 Type III
Air, tensile strength Air, blocking	Ambient 180	- 0.5	Warp, 90 lbs; Fill, 90 lbs Moderate blocking	Cotton Chloroprene Composite	29.5			8305	Cloth, Coated Synthetic Rubber (Nitrile & Polychloroprene)	MIL-C-82255
Air, breaking strength Air, blocking scale rating Water transmission	Ambient Ambient Ambient	- - -	Warp, 70 lbs; Fill, 65 lbs 2 20 grams/sq. Meter/hr., min	Urethane	6.3			8305	Cloth, Coated, Cotton and Nylon, Polyurethane (Microporous) Coated	MIL-C-83008 Type I
Air, breaking strength Air, blocking scale rating Water transmission	Ambient Ambient Ambient	- - -	Warp, 175 lbs; Fill, 175 lbs 2 9 grams/sq. Meter/hr., min	Urethane	5.0			8305	Cloth, Coated, Cotton and Nylon, Polyurethane (Microporous) Coated	MIL-C-83008 Type II

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HOSE, DUCT AND TUBING

SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, tensile strength Air, 50% compression Air, oven aging ASTM #3 petroleum oil	Ambient -40 158 212	- 5 96 70	Tube 1250 psi min; cover 1000 psi min No cracking Tube & cover max T change: -20% Tube & cover vol change: -5 to +25%	Nitrile tube & cover, fiber reinforcement			Coolant-System Hoses	SAE J20 Part I Class SB
Air, tensile strength Air, 50% compression Air, oven aging ASTM #3 petroleum oil	Ambient -40 158 212	- 5 96 70	Tube 1250 psi min; cover 1000 psi min No cracking Tube & cover max T change: -15% Tube & cover max vol change: +100%	Chloroprene tube & cover, fiber reinforcement			Coolant-System Hoses	SAE J20 Part I Class SC
Air, tensile strength Air, 50% compression Air, oven aging ASTM #3 petroleum oil	Ambient -40 158 212	- 5 96 70	800 psi min No cracking Max % T chg: tube -15; cover -20 Tube & cover max vol change: +100%	Chloroprene tube & cover, fiber reinforcement			Coolant-System Hoses	SAE J20 Part II Class SC
Air, tensile strength Air, 50% compression Air, oven aging	Ambient -40 158	- 5 96	800 to 500 psi No cracking Tube & cover % T chg: -25 to -40	Nat. or SBR tube & cover, fiber reinforcement			Coolant-System Hoses	SAE J20 Part II Class R Grades 1, 1A & 2
Air, burst test Air, 50% compression Air, oven aging ASTM #3 petroleum oil	Ambient -40 158 212	- 5 96 70	3/8" to 3/4" ID: 200 to 125 psi No cracking Max % T chg: tube -15; cover -20 Tube & cover max vol change: +100%	Chloroprene tube & cover, fiber reinforcement			Coolant-System Hoses	SAE J20 Part III Class SC
Air, burst test Air, 50% compression Air, oven aging	Ambient -40 158	- 5 96	3/8" to 3/4" ID; 200 to 125 psi No cracking Tube & cover max T chg: -25%	Nat. or SBR tube & cover, fiber reinforcement			Coolant-System Hoses	SAE J20 Part III Class R Grade 1 & 2
Air, burst test Air, 50% compression Air, oven aging	Ambient -40 250	- 5 70	3/8" to 3/4" ID; 200 to 125 psi No cracking Tube & cover max T chg: -40%	Nat. or SBR tube & cover, fiber reinforcement			Coolant-System Hoses	SAE J20 Part III Class R Grade 1A
Air, burst test Air, 50% compression Air, oven aging ASTM #3 petroleum oil	Ambient -40 158 212	- 5 96 70	3/8" to 2-1/4" ID; 90 to 60 psi No cracking Max % T chg: tube -15; cover -20 Tube & cover max vol change: +100%	Chloroprene tube & cover, fiber reinforcement			Coolant-System Hoses	SAE J20 Part IV Class SC

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, burst test Air, 50% compression Air, oven aging	Ambient -40 158	- 5 96	3/8" to 2-1/4" ID; 90 to 60 psi No cracking Tube & cover max T chg: -25%	Nat. or SBR tube & cover, fiber reinforcement			Coolant-System Hoses	SAE J20 Part IV Class R Grades 1 & 2
Air, burst test Air, 50% compression Air, oven aging	Ambient -40 250	- 5 70	3/8" to 2-1/4" ID; 90 to 60 psi No cracking Tube & cover max T chg: -40%	Nat. or SBR tube & cover, fiber reinforcement			Coolant-System Hoses	SAE J20 Part IV Class R Grade 1A
Air, burst test Air, flexibility Air, oven aging ASTM #3 petroleum oil Ozone, 50 pphm	Ambient -40 212 212 100	- 5 70 70 72	175 psi min No cracking Tube & cover max T chg: -20% % V chg: tube -5 +25; cover +100 max No cracking	Nitrile tube, synthetic, cover, fabric reinforcement			Fuel and Oil Hoses	SAE J30 R1
Air, burst test Air, ASTM D736 Air, oven aging ASTM #3 petroleum oil Ozone, 50 pphm	Ambient -40 212 212 100	- 5 70 70 72	0.115" to 0.773" ID; 700 to 500 psi No cracking Tube & cover max T chg: -20% % V chg: tube -5 +25; cover +100 max No cracking	Nitrile tube, synthetic cover, fabric reinforcement			Fuel and Oil Hoses	SAE J30 R2 Type 1
Air, burst test Air, ASTM D736 Air, oven aging ASTM #3 petroleum oil Ozone, 50 pphm	Ambient -40 212 212 100	- 5 70 70 72	0.115" to 2.039" ID; 700 to 250 psi No cracking Tube & cover max T chg: -20% % V chg: tube -5 +25; cover +100 max No cracking	Nitrile tube, synthetic cover, fabric reinforcement			Fuel and Oil Hoses	SAE J30 R2 Type 2
Air burst test Air, ASTM D736 Air, oven aging ASTM #3 petroleum oil Ozone, 50 pphm	Ambient -40 212 212 100	- 5 70 70 72	0.172" to 0.773" ID; 2000 to 1200 psi No cracking Tube & cover max T chg: -20% % V chg: tube -5 +25; cover +100 max No cracking	Nitrile tube, synthetic cover, fabric reinforcement			Fuel and Oil Hoses	SAE J30 R2 Type 3
Air, burst test Air, flexibility Air, oven aging ASTM #3 petroleum oil Ozone, 50 pphm	Ambient -40 212 212 100	- 5 70 70 72	0.172" to 0.391" ID; 2000 to 900 psi No cracking Tube & cover max T chg: -20% Tube vol chg: -5% to +25% No cracking	Nitrile tube, synthetic cover, fabric reinforcement			Fuel and Oil Hoses	SAE J30 R3

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Air, burst test	Ambient	-	0.172" to 0.531" ID; 1200 to 850 psi	Wire reinforced nitrile tube			Fuel and Oil Hoses	SAE J30 R4 Type 1
Air, flexibility	-40	5	No cracking					
Air, oven aging	212	70	Tube & cover max T chg: -20%					
ASTM #3 petroleum oil	212	70	Tube max vol change: -40%					
Ozone, 50 pphm	100	72	No cracks					
Air, burst test	Ambient	-	0.172" to 0.531" ID; 2000 to 850 psi	Nitrile tube, synthetic cover, fabric reinforcement			Fuel and Oil Hoses	SAE J30 R4 Type 2
Air, flexibility	-40	5	No cracking					
Air, oven aging	212	70	Tube & cover max T chg: -20%					
ASTM #3 petroleum oil	212	70	Tube max vol change: -40%					
Ozone, 50 pphm	100	72	No cracks					
Air, burst test	Ambient	-	250 psi min	Rubber tube & cover, fabric reinforced			Windshield Wiper Hose	SAE J50
Air, flexibility	-20	5	No cracks					
Air, flexibility	158	70	No cracks					
Air, burst test	Ambient	-	1750 psi min	Nitrile tube & cover fabric reinforced			Automotive Air Conditioning Hose	SAE J51 Type A
Air, flexibility	-20	5	No cracks					
Air, flexibility	250	168	No cracks					
ASTM #3 petroleum oil	212	70	Max vol chg: tube -5 to +20%					
Air, burst test	Ambient	-	2500 psi min	Nitrile tube & cover wire reinforced			Automotive Air Conditioning Hose	SAE J51 Type B
Air, flexibility	-20	5	No cracks					
Air, flexibility	250	168	No cracks					
ASTM #3 petroleum oil	212	70	Max vol chg: tube -5 to +20%					
Air, burst test	Ambient	-	1750 psi min	Nitrile tube & cover fabric reinforced			Automotive Air Conditioning Hose	SAE J51 Type A
Air, flexibility	-20	5	No cracks					
Air, flexibility	250	168	No cracks					
ASTM #3 petroleum oil	212	70	Max vol chg: tube -5 to +20%					
Air, burst test	Ambient	-	2500 psi min	Nitrile tube & cover wire reinforced			Automotive Air Conditioning Hose	SAE J51 Type B
Air, flexibility	-20	5	No cracks					
Air, flexibility	250	168	No cracks					
ASTM #3 petroleum oil	212	70	Max vol chg: tube -5 to +20%					
Air, tensile strength	Ambient	-	1200 psi min	Rubber-lined woven jackets			Woven Jacketed Rubber-Lined Fire Hose For Public and Private Fire Department Use	ASTM D 296
Oxygen, @ 300 psi	158	96	Max T change: -40%					

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Air, tensile strength Air, 180° bend Oxygen, aging @ 300 psi 70/30 isooctane/toluene Ozone, 50 pphm	Ambient -42 158 70 104	- 24 48 46 72	Tube 1250 psi; cover 1500 psi No cracking Tensile change: -25% max Volume change: +60% max No cracks	Cotton or syn. fiber reinforced, static wire wound tube NR and chloroprene cover		4720	Hose & Hose Assembly, Rubber, Liquid Fuel, Noncollapsible	MIL-H-370 Type I Tube Type I Cover
Air, tensile strength Air, 180° bend Oxygen, aging @ 300 psi 70/30 isooctane/toluene Ozone, 50 pphm	Ambient -42 158 70 104	- 24 48 46 72	Tube 1250 psi min No cracking Tensile change: -25% Volume change: +60% max No cracks	Nitrile tube, cotton or syn. fiber reinforced, static wire wound; CR		4720	Hose & Hose Assembly, Rubber, Liquid Fuel, Noncollapsible	MIL-H-370 Type II Tube Type I Cover
Air, proof @ 400 psi Oxygen, aging @ 300 psi Air, kinking @ 250 psi	Ambient 158 Ambient	- 46 -	No leakage Tube & cover max T chg: -40% No weakness	Nat. and/or syn. tube & cover, cotton reinforced		4210	Hose & Hose Assembly, Chemical (Industrial Fire)	ZZ-H-421 Types I & II
Air, tensile strength Air, flexibility Air, heat aging Ozone, 50 pphm ASTM #3 petroleum oil Fungus resistance	Ambient -65 212 100 212 84	- 5 70 168 70 90	Tube 1000 psi min; cover 1000 psi min No cracks or breaks Tube & cover max T change: -15% No cracks Tube & cover max vol chg: +100% Proof pressure = ½ orig burst press.	Tube & cover, fabric reinforced chloroprene		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Type I Grade A Class 2
Air, tensile strength Air, flexibility Air, heat aging ASTM #3 petroleum oil	Ambient -40 212 212	- 5 70 70	Tube 1000 psi min; cover 1000 psi min No cracks or breaks Tube & cover max T change: -20% Tube & cover vol change: -5 to +25%	Tube & cover, fabric reinforced nitrile		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Type I Grade B Class 1
Air, tensile strength Air, flexibility Air, heat aging Ozone, 50 pphm ASTM #3 petroleum oil	Ambient -40 212 100 212	- 5 70 168 70	Tube 1000 psi min; cover 1000 psi min No cracks or breaks Tube & cover max T change: -15% No cracks Tube & cover max vol change: +100%	Tube & cover, fabric reinforced chloroprene		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Types I & II Grade B Class 2

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, tensile strength Air, flexibility Air, heat aging Ozone, 50 pphm ASTM #3 petroleum oil Fungus resistance	Ambient -65 212 100 212 84	- 5 70 168 70 90	Tube & cover; 1000 psi min No cracks or breaks Max % T chg: tube -15; cover -20 No cracks Tube & cover max vol change: +100% Proof pressure = ½ orig burst press.	Tube & cover, fabric reinforced chloroprene		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Types III, IV Grade A Class 2
Air, tensile strength Air, flexibility Air, heat aging Ozone, 50 pphm Fungus resistance	Ambient -65 250 100 84	- 5 70 168 90	Tube & cover: 1000 psi min No cracks or breaks Tube & cover max T change: -40% No cracks Proof pressure = ½ orig burst press.	Tube & cover, fabric reinforced butyl		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Types III, IV Grade A Class 4
Air, tensile strength Air, flexibility Air, heat aging Ozone, 50 pphm ASTM #3 petroleum oil	Ambient -40 212 100 212	- 5 70 168 70	Tube & cover: 1000 psi min No cracks or breaks Max % T chg: Tube -15; Cover -20 No cracks Tube & cover max vol change: +100%	Tube & cover, fabric reinforced chloroprene		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Types III, IV Grade B Class 2
Air, tensile strength Air, flexibility Air, heat aging	Ambient -40 212	- 5 70	Tube & cover: 1000 psi min No cracks or breaks Tube & cover max T charge: -25%	Tube & cover, fabric reinforced natural		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Types III, IV Grade B Class 3
Air, tensile strength Air, flexibility Air, heat aging Ozone, 50 pphm	Ambient -40 250 100	- 5 70 168	Tube & cover: 1000 psi min No cracks or breaks Tube & cover max T change: -40% No cracks	Tube & cover, fabric reinforced butyl		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Types III, IV Grade B Class 4
Air, tensile strength Air, flexibility Air, heat aging ASTM #3 petroleum oil Ozone, 50 pphm Fungus resistance	Ambient -65 212 212 100 84	- 5 70 70 168 90	Tube 800 psi min; cover 800 psi min No cracks or breaks Tube & cover max T change: -15% Max % vol chg: tube +43; cover +74 No cracks Proof pressure = ½ orig burst press.	Tube & cover, wire reinforced chloro-prene		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Type V Grade A Class 2

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, tensile strength Air, flexibility Air, heat aging Fungus resistance	Ambient -65 212 84	- 5 70 90	Tube 800 psi min; cover 800 psi min No cracks or breaks Tube & cover max T change: -25% Proof pressure = ½ orig burst press.	Tube & cover, wire reinforced natural		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Type V Grade A Class 3
Air, tensile strength Air, flexibility Air, heat aging ASTM #3 petroleum oil	Ambient -40 212 212	- 5 70 70	Tube 800 psi min; cover 800 psi min No cracks or breaks Tube & cover max T change: -15% Max % vol chg: tube +43; cover +74	Tube & cover, wire reinforced nitrile		7420	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Type V Grade B Class 1
Air, tensile strength Air, flexibility Air, heat aging Ozone, 50 pphm ASTM #3 petroleum oil	Ambient -40 212 100 212	- 5 70 168 70	Tube 800 psi min; cover 800 psi min No cracks or breaks Tube & cover max T change: -15% No cracks Max % vol chg: tube +43; cover +74	Tube & cover, wire reinforced chloro-prene		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Type V Grade B Class 2
Air, tensile strength Air, flexibility Air, heat aging	Ambient -40 212	- 5 70	Tube 800 psi min; cover 800 psi min No cracks or breaks Tube & cover max T change: -25%	Tube & cover, wire reinforced natural		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Type V Grade B Class 3
Air, tensile strength Air, flexibility Air, heat aging Ozone, 50 pphm	Ambient -40 212 100	- 5 70 168	Tube 800 psi min; cover 800 psi min No cracks or breaks Tube & cover max T change: -40% No cracks	Tube & cover, wire reinforced butyl		4720	Hose, Non-Metallic & Hose Preformed (For Coolant Systems of Automotive and Other Liquid-Cooled Engines)	ZZ-H-428 Type V Grade B Class 4
(Tests on rubber lining only) Air, tensile strength Air, elongation Air, set @ 300% elong Oxygen, aging @ 300 psi	 Ambient Ambient Ambient 158	 - - 0.17 96	 1200 psi min 400% min 25% max Tensile change: -40% max	Three ply cotton reinforced syn. rubber lining		4210	Hose, Fire; Cotton, Rubber-Lined	ZZ-H-451
Air, tensile strength Air, elongation	Ambient Ambient	- -	Tube and cover, 2200 psi min Tube 650% min; cover, 500% min	Cotton duck coat-ed with natural or syn. rubber		4720	Sleeves; Dredging	ZZ-S-451

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Air, burst test Air, ASTM D736 Oxygen, aging @ 300 psi	Ambient -40 158	- 5 46	Tube & cover: 600 to 700 psi min No cracks or breaks Tube & cover max T change: -25%	Fabric reinforced natural and/or syn. tube & cover		4720	Hose; Gas (Acetylene-Hydrogen, Air, and Oxygen)	ZZ-H-461
Air, tensile strength Gasoline	Ambient 75	- 48	Rubber tube: 700 psi min Max wt. change: -20%	Nat., nitrile, or chloroprene tube over metal tube; cotton jacket		4720	Hose; Gasoline, Rubber-Metal	ZZ-H-466
Air, burst test Air, 180° bend Oxygen, aging @ 300 psi 60/40 isooctane/aromatic	Ambient -40 158 75	- 24 46 46	¾" to 3" ID; 500 to 325 psi No cracking Tube & cover max T change: -35% Max volume change: +100%	Cotton or nylon reinforced chloroprene tube w/chloroprene cover		4720	Hose; Gasoline, Synthetic-Rubber Wire-Stiffened	ZZ-H-471 Class 1
Air, burst test Air, 180° bend Oxygen, aging @ 300 psi 60/40 isooctane/aromatic	Ambient -40 158 75	- 24 46 46	¾" to 3" ID; 500 to 325 psi No cracking Tube & cover max T change: -35% Max volume change: +20%	Polysulfide tube w/ chloroprene cover, cotton or nylon reinforced		4720	Hose; Gasoline, Synthetic-Rubber Wire-Stiffened	ZZ-H-471 Class 2
Air, burst test Air, 180° bend Oxygen, aging @ 300 psi 60/40 isooctane/aromatic	Ambient -40 158 75	- 24 46 46	¾" to 3" ID; 500 to 325 psi No cracking Tube & cover max T change: -35% Max vol change: +60%	Nitrile tube w/ chloroprene cover, cotton or nylon reinforced		4720	Hose; Gasoline, Synthetic-Rubber Wire-Stiffened	ZZ-H-471 Class 3
Air, tensile strength Oxygen, aging @ 300 psi 60/40 diisobutylene/aromatic	Ambient 158 135	- 46 48	Tube & cover: 1200 psi min Max tensile change: -35% Max volume change: +110%	1) Wire 2) Frictioned cotton 3) Chloroprene 4) Frictioned cotton 5) Embedded wire 6) Frictioned cotton 7) Chloroprene		4720	Hose; Oil & Gasoline, Suction and Discharge, Synthetic-Rubber, Wire Stiffened	ZZ-H-481 Class 1
Air, tensile strength Air, burst pressure Ozone, 50 pphm	Ambient Ambient 212	- - 72	Tube, 750 psi min, Cover, 1200 psi min ¼" to 2", 1000 psi to 600 psi min No cracks	Tube & cover synthetic rubber reinforced fabric		4720	Hose, Rubber, and Hose Assemblies, Rubber Pneumatic (Yarn or Fabric Reinforced)	ZZ-H-500 Class I

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, tensile strength Air, burst pressure	Ambient Ambient	- -	Tube, 750 psi min, Cover, 1200 psi min ¼" to 2", 1000 psi to 600 psi min	Tube & cover synthetic rubber reinforced fabric		4720	Hose, Rubber, and Hose Assemblies, Rubber Pneumatic (Yarn or Fabric Reinforced)	ZZ-H-500 Class II
Air, tensile strength Aging, oxygen	Ambient 212	- 48	Tube & cover, 2,000 psi min Tensile strength, -25% change max	Tube & cover synthetic rubber yarn reinforcement		4720	Hose, Rubber (Sleeves; Dredging)	ZZ-H-515
Air, burst test	Ambient	-	3/16" to 2" ID; 12000 to 1500 psi	Syn. rubber tube & cover, high tensile steel wire reinforced			Hydraulic Hose	SAE J517 100 R1
Air, burst test	Ambient	-	3/16" to 2" ID; 20000 to 4500 psi	Syn. rubber tube & cover, plies of steel wire reinforced			Hydraulic Hose	SAE J517 100 R2
Air, burst test	Ambient	-	3/16" to 1-1/4" ID: 6000 to 1500 psi	Syn. rubber tube & cover, 2 plies of rayon reinforced			Hydraulic Hose	SAE J517 100 R3
Air, burst test	Ambient	-	3/4" to 3" ID; 1200 to 225 psi	Syn. rubber tube & cover, ply or plies or syn. fiber reinforced			Hydraulic Hose	SAE J517 100 R4
Air, burst test	Ambient	-	3/16" to 1-13/16" ID; 12000 to 1400 psi	Sy. rubber tube, syn-rubber impregnated cotton & wire reinforcement			Hydraulic Hose	SAE J517 100 R5
Air, burst test	Ambient	-	3/16" to 5/8" ID; 2000 to 1400 psi	Syn. rubber tube & cover, rayon reinforced			Hydraulic Hose	SAE J517 100 R6
Air, burst test Oxygen, aging @ 300 psi Ethylacetate or acetone 60/40 isooctane/aromatic	Ambient 158 75 75	- 46 48 48	800 psi min Tube & cover max T change: -35% Max vol change: tube +30% Max vol change: cover, +100%	Nat. or syn. rubber tube & cover, cotton or syn. fiber reinforced		4720	Hose & Hose Assembly Nonmetallic, Spray	ZZ-H-521 Grade A Wrapped

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Air, burst test Oxygen, aging @ 300 psi	Ambient 158	- 46	800 psi min Tube & cover max T change: -35%	Nat. and/or syn. rubber tube & cover w/cotton or syn. fiber reinforcement		4720	Hose & Hose Assembly Nonmetallic, Spray	ZZ-H-521 Grade B Braided
Air, tensile strength Oxygen, aging @ 300 psi ASTM #3 oil Ozone, 100 pphm	Ambient 158 212 212	- 46 70 70	Tube 1000 psi min; cover 1200 psi min Tube & cover max T change: -25% Cover, T.S. max change -40% Cover, no cracks	Chloroprene cover w/syn. tube, wire & fiber reinforced		4720	Hose Rubber and Hose Assembly; Rubber, Smooth Bore, Water Suction & Discharge	ZZ-H-561 Grade A Class 1
Air, tensile strength Oxygen, aging @ 300 psi	Ambient 158	- 46	Tube 1000 psi min; cover 1200 psi min Tube & cover max T change: -25%	Syn. rubber tube and cover, wire & fiber reinforced		4720	Hose Rubber and Hose Assembly; Rubber, Smooth Bore, Water Suction & Discharge	ZZ-H-561 Grade B Class 1
Air, tensile strength Oxygen, aging @ 300 psi ASTM #3 oil Ozone, 100 pphm Water extraction	Ambient 158 212 212 212	- 46 70 70 21 hrs	Tube 1000 psi min; cover 1000 psi min Tube & cover max T change -25% Cover, T.S. max change -40% Cover, No cracks 21 milligrams per sq. inch; tube only	Chloroprene cover w/syn. tube, wire & fiber reinforced		4720	Hose, Rubber, and Hose Assemblies, Rubber, Smooth Bore, Water Suction and Discharge	ZZ-H-561 Grade A Class 2
Air, tensile strength Air, 180° bend Water	Ambient Ambient 212	- - 8	Tube & cover: 600 psi min No kinking Tube max T change: -50%	Nat. and/or syn. tube & cover, wire & fiber reinforced		2240	Hose; Tender (Locomotive), Corrugated	ZZ-H-581
Air, burst test Oxygen, aging @ 300 psi Water	Ambient 158 73	- 94 22	1/2" to 1-1/2" ID; 600 to 450 psi Tube & cover max T change: -25% Tube & cover max vol change: +20%	Syn. rubber tube & cover		4720	Hose & Hose Assemblies, Rubber (Yarn & Fabric Reinforced)	ZZ-H-601 Grade 1
Air, burst test Oxygen, aging @ 300 psi Water	Ambient 158 73	- 94 22	1/4" to 4" ID; 600 to 400 psi Tube & cover max T change: -25% Tube & cover max vol change: +20%	Chloroprene cover w/syn. rubber tube, yarn reinforced		4720	Hose, Rubber, Water (Yarn-Reinforced)	ZZ-H-601 Grade 3
Air, burst test Air, mandrel bend Air, oven aging Ozone, 50 pphm	Ambient -67 212 100	- 5 70 168	1300 psi No breaks or cracks Max tensile change: -25% Cover, no cracks	Syn. tube & cover, cotton or syn. fiber reinforced	Yes	4720	Hose, Rubber; Windshield Wiper	ZZ-H-617

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Air, tensile strength Air, oven aging	Ambient 158	- 168	2400 psi min Max tensile change: -25%	Nat. and/or syn. rubber		4720	Tubing, Rubber and Plastic	ZZ-T-831 Type I
Air, tensile strength Air, oven aging	Ambient 158	- 168	1100 psi min Max tensile change: -25%	Syn. rubber		4720	Tubing, Rubber and Plastic	ZZ-T-831 Type II
Air, tensile strength Air, oven aging	Ambient 158	- 168	1200 psi min Max tensile change: -25%	Natural rubber		4720	Tubing, Rubber and Plastic	ZZ-T-831 Type III
Air, tensile strength Air, oven aging	Ambient 158	- 168	3500 psi min Max tensile change: -25%	Liquid latex, dipped		4720	Tubing, Rubber and Plastic	ZZ-T-831 Type IV
Air, tensile strength Air, oven aging	Ambient 158	- 168	3000 psi min Max tensile change: -25%	Natural rubber		4720	Tubing, Rubber and Plastic	ZZ-T-831 Type V
Air, vibration Air, vibration Flame	-65 275 -	6 72 -	No deterioration No deterioration Self burning: 15 sec max	Chloroprene impregnated fabric			Duct, Air, Flexible and Semi-Rigid	NAS 1369 Type A
Air, vibration Air, vibration Flame	-75 500 -	6 72 -	No deterioration No deterioration Self burning: 15 sec max	Silicon impregnated fabric			Duct, Air, Flexible and Semi-Rigid	NAS 1369 Type B
Air, tensile strength Oxygen, aging @300 psi Isooctane	Ambient 158 73	- 48 46	Tube 1600 psi min; cover 1800 psi min Tube & cover max T change: -25% Cover max vol change: +50%	Chloroprene cover syn. tube wire and fabric reinforcements	Yes	4720	Hose Assemblies, Wire-Reinforced Synthetic Rubber, Submarine Rescue Chamber	MIL-H-2217
Air, burst test Oxygen, aging @300 psi	Ambient 158	- 48	1/4" to 1-1/2" ID; 1000 to 550 psi Tube & cover max T change: -25%	Neoprene cover w/neoprene, or SBR or nitrile tube cotton or syn. fiber reinforced		4720	Hose, Pneumatic (Braided or Wrapped)	MIL-H-2699 Classes 1, 2 & 3
Air, burst test Oxygen, aging @300 psi Isooctane	Ambient 158 73	- 46 46	2400 psi min Tube & cover max T change: -25% Cover max vol change: +50%	Chloroprene cover w/SBR or chloroprene tube, cotton reinforced	Yes	4720	Hose Assemblies, Rubber, Diver's Breathing Air and Gas Supply	MIL-H-2815
Air, hardness Air, mandrel bend	Ambient Ambient	- -	90 to 95 No cracks	SBR		4710	Lining, Rubber (Synthetic), For Salt-Water Lines	MIL-L-2824

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Air, burst test Air, flexibility	Ambient -65	- 24	1/8" to 1-3/8" ID; 6000 to 4000 psi No cracking or breaking	Teflon tube wire reinforcement			Hose, Polytetrafluoroethylene, TFE Fluorocarbon Resin Wire Braid Reinforced	AMS 3380
Air, burst test 70/30 isooctane/toluene	Ambient 80	- 22	500 psi min Max % vol chg: tube +50; cover +100	Syn. tube, fabric reinforced, chloroprene cover			Hose, Synthetic Rubber, Aircraft Fueling, Textile Reinforced, Collapsing	AMS 3386
Air, burst test 70/30 isooctane/toluene	Ambient 80	- 22	1-1/2" to 3" ID; 800 to 650 psi Max % vol chg: tube +50; cover +100	Syn. tube, fabric reinforced, chloroprene cover			Hose, Synthetic Rubber, Aircraft Fueling, Textile Reinforced, Noncollapsing	AMS 3387
Air, burst test 70/30 isooctane/toluene	Ambient 80	- 22	2" to 3" ID; 1000 to 750 psi Max % vol chg: tube +50; cover +100	Syn. tube, wire reinforced, chloroprene cover			Hose, Synthetic Rubber, Aircraft Fueling, Single Wire Braid Reinforced, Noncollapsing	AMS 3388
Air, burst test 70/30 isooctane/toluene	Ambient 80	- 22	2" to 3-1/2" ID; 1600 to 1000 psi Max % vol chg: tube +50; cover +100	Syn. tube wire reinforced, chloroprene cover			Hose, Synthetic Rubber, Aircraft Fueling, Double Wire Braid Reinforced, Noncollapsing	AMS 3389
Air, original properties Air, oven aging	Ambient 158	- 166	T, 3500 psi min; E, 800% min Change in T and E, -25% max	Natural		6515	Tubes, Rubber, Penrose, Drainage	MIL-T-36092
Air, tensile strength Air, tensile strength Air, oven aging Sulfuric acid (Sp. gr. 1.27)	Ambient 5 221 151	- 4 96 24	1250 psi min Tensile strength: 3000 psi min Tensile change: -80% max Tensile change: -80% max	PVC		4720	Hose, Sulfuric Acid Resistant (Thermoplastic)	MIL-H-3726
Air, burst test Air, mandrel bend Air, oven aging ASTM #3 petroleum oil	Ambient -65 158 73	- 24 24 46	3/16" to 1/2" ID; 20,000 to 14000 psi No cracks or breaks No deterioration Max % vol chg: Tube +35; cover +75	Syn. rubber tube w/ chloroprene cover, steel double-wire braid reinforced		4930	Hose Assemblies, Grease Gun, High and Low Pressure	MIL-H-3868 Type I Grade A
Air, burst test Air, mandrel bend Air, oven aging ASTM #3 petroleum oil	Ambient -40 158 73	- 24 24 46	3/16" to 1/2" ID; 20,000 to 14000 psi No cracks or breaks No deterioration Max vol chg: tube +35%; cover +75%	Syn. rubber tube w/ chloroprene cover, steel double-wire braid reinforced		4930	Hose Assemblies, Grease Gun, High and Low Pressure	MIL-H-3868 Type I Grade B

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, burst test Air, mandrel bend ASTM #3 petroleum oil	Ambient -65 73	- 24 46	3/16" to 3/4" ID; 1200 to 5000 psi No cracks or breaks Max % vol chg: tube +35; cover +75	Syn. rubber tube w/ chloroprene cover, steel wire braid reinforced		4930	Hose Assemblies, Grease Gun, High and Low Pressure	MIL-H-3868 Type II Grade A
Air, burst test Air, mandrel bend ASTM #3 petroleum oil	Ambient -40 73	- 24 46	3/16" to 3/4" ID; 1200 to 5000 psi No cracks or breaks Max % vol chg: tube +35; cover +75	Syn. rubber tube w/ chloroprene cover, steel, wire braid reinforced		4930	Hose Assemblies, Grease Gun, High and Low Pressure	MIL-H-3868 Type II Grade B
Air, burst test Air, mandrel bend Air, oven aging Ozone, 50 pphm Isooctane	Ambient -65 212 100 Ambient	- 72 70 168 46	900 psi min No breaks or cracks No deterioration Cover, no cracking Max % vol chg: tube +35; cover +50	Syn. rubber tube and rubber cover, cotton or syn. yarn reinforced	Yes	2530	Hose and Hose Assembly, Rubber; Air and Vacuum Brake, Automotive	MIL-H-3992 Type I Class 1 & 2
Air, burst test Air, mandrel bend Air, oven aging Ozone, 50 pphm Isooctane	Ambient -65 212 100 Ambient	- 72 70 168 46	3/16" to 5/8" ID; 10,000 to 6000 psi No breaks or cracks No deterioration Cover, no cracking Max % vol chg: tube +35; cover +50	Syn. rubber tube and rubber cover, steel wire reinforced	Yes	2530	Hose and Hose Assembly, Rubber; Air and Vacuum Brake, Automotive	MIL-H-3992 Type I Class 3
Air, burst test Air, mandrel bend Air, oven aging Isooctane	Ambient -65 212 Ambient	- 72 70 46	3/15" to 5/8" ID; 1000 to 6000 psi No breaks or cracks No deterioration Tube max vol change: +35%	Syn. rubber tube and rubberized cotton cover, steel wire & cotton yarn reinforced	Yes	2530	Hose and Hose Assembly, Rubber; Air and Vacuum Brake, Automotive	MIL-H-3992 Type I Class 4
Air, mandrel bend Air, oven aging Ozone, 50 pphm Isooctane	-65 212 100 Ambient	72 70 168 48	No breaks or cracks No deterioration Cover, no cracks No sep. of tube or cover from plies	Syn. rubber tube and rubber cover, cotton and/or steel wire reinforcement	Yes	2530	Hose and Hose Assembly, Rubber; Air and Vacuum Brake, Automotive	MIL-H-3992 Type II Styles a & b
Air, burst test Air, 180° bend 70/30 isooctane/toluene	Ambient -67 75	- 72 24	1-1/4" to 3" ID; 500 to 375 psi No cracking Max % vol change: tube +35; cover +75	Nitrile tube, chloroprene cover, wire reinforcement		4720	Hose, Rubber, Gasoline, Lightweight	MIL-H-4441
Air, drum wrap 70/30 isooctane/toluene	-65 75	24 72	No cracking Max % vol chg: tube +30; cover +60	1) Tube, syn. rubber 2) Fabric 3) Wire 4) Syn. rubber layer 5) Wire braid 6) Cover, syn. rubber		4720	Hose Assembly, Rubber, Aerial Refueling	MIL-H-4495

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Air, burst test Air, mandrel bend Air, oven aging	Ambient -67 158	- 72 168	3/4" to 1-1/4" ID; 2500 to 1200 psi No cracks or breaks Tube & cover max T change: -25%	Rubber tube & cover, cotton or syn. fiber reinforcement		4210	Hose, Cotton, Rubber Lined, Water, Braided Construction, with couplings	MIL-H-4497
Air, burst test Air, mandrel bend Bromochloromethane	Ambient -67 Ambient	- 72 24	1800 psi min No cracks or breaks Tube max vol change: +60%	Syn. rubber tube & cover, cotton or syn. fiber reinforcement	Yes	4210	Hose, Rubber, Bromo-chloromethane Resistant	MIL-H-4536
Air, burst test Air, mandrel bend Oxygen, aging @ 300 psi	Ambient -65 160	- 48 96	15,000 psi min No cracks or breaks No change in tensile strength	Wire reinforced rubber tube, rubber cover, wire braid reinforced	Yes	1660	Hose Assembly, High Pressure, Breathing Oxygen	MIL-H-4722
Air, burst test Air, mandrel bend Air, oven aging	Ambient -67 158	- 24 168	60 psi min No cracking Tube & cover max T change: -20%	Nat. or syn. rubber tube & cover, wire & fabric reinforced	Yes	8415	Hose, Rubber, Anti-G Suit, Altitude Suit	MIL-H-5581
Air, burst test Air, mandrel bend Air, mandrel bend MIL-H-5606 mineral oil	Ambient -67 158 158	- 72 3 168	1/8" to 5/8" ID; 2000 to 700 psi No cracking No deterioration Tube, vol change: ± 10%	Rubber tube & cover w/fabric reinforcement	Yes	4720	Hose; Aircraft, Low-Pressure, Flexible	MIL-H-5593
Air, burst test ASTM D736 ASTM #1 petroleum oil Ethylene glycol Isooctane and toluene	Ambient -40 252 293 75	- 5 70 70 24	1/4" to 4" ID; 1000 to 300 psi No cracks or breaks Tube, no decrease in volume Tube, max vol change: -10% Max vol change: +85%	Syn. rubber tube, chloroprene cover, frictioning reinforce-ment		4720	Hose; Rubber (Fuel, Oil, Coolant, Water and Alcohol)	MIL-H-6000
Air, burst test Air, mandrel bend Oxygen, aging @ 300 psi	Ambient -65 160	- 48 96	2200 psi min No breaks or cracks Tube max T change: -40%	Innertube, reinforcing material, braided outer surface	Yes	1660	Hose Assemblies, Low-Pressure, For Breathing Oxygen	MIL-H-6017
Air, burst test Air, mandrel bend	Ambient -40	- 24	50 psi min No cracks	Syn. rubber tube, chloroprene cover, wire reinforced		4720	Hose, Rubber, Wire-Wound, Synthetic, Ice Eliminating System	MIL-H-6399
Air, burst test Air, mandrel bend Paint remover	Ambient -55 75	- 5 72	500 psi min No cracks or breaks Tube & cover max vol change: ± 45%	Rubber tube & cover, reinforced		4720	Hose, Rubber, Aircraft Paint Finish Remover	MIL-H-6439

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Air, burst test Air, U bend 70/30 isooctane/toluene	Ambient -67 75	- 72 24	1 1/4" to 4" ID; 800 to 500 psi No cracks or breaks on straightening Max % vol chg: tube +50; cover +100	Syn. rubber tube, chloroprene cover, fabric & static wire reinforcement	Yes	4720	Hose Assemblies, Rubber, Fuel and Water with Reattachable Couplings, Low Temperature	MIL-H-6615
Air, burst test 60/40 isooctane/aromatic Isooctane, gunfire @ 16 psi	Ambient Ambient -20	- 24 -	150 psi min Tube & cover max vol change: +90% Self sealing, 5 minutes	Compounded tube, chloroprene cover, fabric reinforced	Yes	4720	Hose, Aircraft, Self-Sealing, Aromatic Fuel	MIL-H-7061
Air, tensile load Air, extension & retraction Flame 91 octane gasoline SAE #10 engine oil	Ambient -65 - Ambient Ambient	- 24 - 48 48	No damage under 250 lb load No deterioration Self burning, 3 sec max Max volume change: +22% Max volume change: +22%	Retractable hose, metal helical stiffener core		4720	Hose, Air Duct, For Ground Heaters	MIL-H-7365
Air, burst test Air, mandrel bend Isooctane	Ambient -40 Ambient	- 5 48	3/16" to 2" ID; 600 to 350 psi No cracking Max volume change: +35%	Nitrile tube, chloroprene cover asbestos reinforced		4720	Hose, Rubber, Flame-Resistant	MIL-H-7938
Air, burst test Air, mandrel bend MIL-H-5606 mineral oil	Ambient -65 158	- 24 168	3" to 9-5/8" ID; 16,000 to 10,000 psi No cracks or leakage Max ID change: -10%	Syn. rubber tube, chloroprene cover, wire reinforced	Yes	4720	Hose, Hydraulic, High Pressure	MIL-H-8788
(Hose covered in MIL-H-8788)						4720	Hose Assemblies, Rubber, Hydraulic, High Pressure (3,000 psi)	MIL-H-8790
Air, burst test Air, 180° bend MIL-H-5606 mineral oil 50/50 water/alcohol 70/30 isooctane/toluene	Ambient -65 158 158 Ambient	- 24 168 24 72	3" to 33" ID; 12,000 to 800 psi Flexible Max ID change: -10% Tube max T change: -35% Tensile strength: 900 psi min	Rubber tube, cotton braid reinforced syn. rubber cover, cotton & wire braid reinforced	Yes	4720	Hose, Rubber, Hydraulic, Fuel, and Oil Resistant	MIL-H-8794
(Hose covered in MIL-H-8794)						4720	Hose Assemblies, Rubber, Hydraulic, Fuel and Oil Resistant	MIL-H-8795
Air, flexibility Air, cyclic vibration Flame Isooctane MIL-J-5624 jet fuel	-65 160 - Ambient Ambient	12 12 - 8 8	No cracking No deterioration Self burning, 30 sec max No softening or tackiness No softening or tackiness	Syn. rubber w/cotton, linen, fortisan or glass fibers w/wo wire reinforcement, convoluted		1660	Hose, Airduct, Flexible, Aircraft	MIL-H-8796 Class 1

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, flexibility Air, cyclic vibration Flame Isooctane MIL-J-5624 jet fuel	-65 300 - Ambient Ambient	12 12 - 8 8	No cracking No deterioration Self burning, 30 sec max No softening or tackiness No softening or tackiness	Syn. rubber w/cotton, linen, fortisan or glass fibers w/wo wire reinforcement, convoluted		1660	Hose, Airduct, Flexible, Aircraft	MIL-H-8796 Class 2
Air, flexibility Air, cyclic vibration Flame MIL-J-5624 jet fuel	-65 500 - Ambient	12 12 - 8	No cracking No deterioration Self burning, 30 sec max No softening or tackiness	Syn. rubber w/cotton, linen, fortisan or glass fibers w/wo wire reinforcement, convoluted		1660	Hose, Airduct, Flexible, Aircraft	MIL-H-8796 Class 3
Air, flexibility Air, cyclic vibration Flame MIL-J-5624 jet fuel	-75 600 - Ambient	12 12 - 8	No cracking No deterioration Self burning, 30 sec max No softening or tackiness	Syn. rubber w/cotton, linen, fortisan or glass fibers w/wo wire reinforcement, convoluted		1660	Hose, Airduct, Flexible Aircraft	MIL-H-8796 Class 4
Air, burst test Low temp. flexibility Air, oven aging Flame 70/30 isooctane/toluene	Ambient -40 212 - 75	- 0.08 70 - 46	400 psi min Cover, max 5 fold increase in mod. Cover max T change: -40% Cover, self burning, 60 sec max Max % vol chg: tube +30; cover +65	Nitrile tube, chloroprene cover, braided reinforcement		4720	Hose Assembly, Rubber, Utility, Gasoline (1/4-inch Inside Diameter)	MIL-H-10868
Air, burst test Low temp. flexibility Low temp, flexibility 60/40 isooctane/aromatic	Ambient -13 -40 75	- 0.08 0.08 46	200 psig min Tube, max 5 fold increase in mod. Cover, max 5 fold increase in mod. Tube max vol change: +40%	Nitrile tube, chloroprene cover, cotton or syn. fiber reinforced static wire wound		4720	Hose Assemblies, Rubber, Synthetic, Liquid Petroleum Fuels, Dispensing Collapsible	MIL-H-11588 Type I
Air, burst test Low temp. flexibility Low temp. flexibility 60/40 isooctane/aromatic	Ambient -13 -40 75	- 0.08 0.08 46	350 psig min Tube, max 5 fold increase in mod. Cover, max 5 fold increase in mod. Tube, max 5 fold increase in mod.	Nitrile tube, chloroprene cover, cotton or syn. fiber reinforced. static wire wound		4720	Hose Assemblies, Rubber, Synthetic, Liquid Petroleum Fuels, Dispensing Collapsible	MIL-H-11588 Type II
Air, burst test Low temp, flexibility Low temp. flexibility 60/40 isooctane/aromatic	Ambient -13 -40 75	- 0.08 0.08 46	1" to 4" ID; 400 to 600 psi Tube, max 5 fold increase in mod. Cover, max 5 fold increase in mod. Tube max vol change:+40%	Nitrile tube, chloroprene cover, syn. rubber embedded fiber reinforced static wire wound		4720	Hose Assemblies, Rubber, Synthetic, Liquid Petroleum Fuels, Dispensing Collapsible	MIL-H-11588 Types III & IV

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, burst test Air, mandrel bend Ozone, 50 pphm 60/40 isooctane/aromatic	Ambient -67 100 80	- 70 168 48	1/8" to 3/4" ID; 2000 to 500 psi No cracks or breaks No breaks or cracks Max % vol chg: tube +60; cover +110	Nitrile tube, chloroprene cover fabric reinforced	Yes	4720	Hose, Rubber: Fuel and Oil	MIL-H-13444 Type I
Air, burst test Air, mandrel bend Ozone, 50 pphm	Ambient -67 100	- 70 168	1/8" to 3/4" ID; 2000 to 500 psi No cracks or breaks No breaks or cracks	Nitrile tube material & gasoline & oil cover, cotton, & steel wire reinforced	Yes	4720	Hose, Rubber: Fuel and Oil	MIL-H-13444 Type II
Air, burst test Air, mandrel bend MIL-H-6083 petroleum oil Ozone, 50 pphm	Ambient -67 158 100	- 70 168 168	3/16" to 2" ID; 12000 to 1500 psi Cover, no cracks Max % vol chg: tube +30; cover +100 No cracks	Nitrile tube, chloroprene cover, 1 braid wire reinforcement	Yes	4720	Hose, Rubber and Hose Assembly, Rubber (Hydraulic, Flexible)	MIL-H-13531 Type I
Air, burst test Air, mandrel bend MIL-H-6083 petroleum oil Ozone, 50 pphm	Ambient -67 158 100	- 70 168 168	3/26" to 2" ID; 20000 to 4000 psi Cover, no cracks Max % vol chg: tube +30; cover +100 No cracks	Nitrile tube, chloroprene cover, wire braids or braid & spiral plies of wire reinforcement	Yes	4720	Hose, Rubber and Hose Assembly, Rubber (Hydraulic, Flexible)	MIL-H-13531 Types II & III
Air, burst test Air, mandrel bend VV-H-910 brake fluid Ozone, 50 pphm	Ambient -65 121 100	- 72 70 168	1/8" to 1/4" ID; 5000 to 4500 psi No cracks, breaks or leakage Tube vol change: +8% to -3% Cover, no cracks or breaks	SBR or chloroprene tube, chloroprene cover, imbedded cotton reinforcement	Yes	2530	Hose Assembly, Rubber; Hydraulic Brake	MIL-H-13719
Air, Burst test Aging, Ozone, 50 pphm ASTM #3 Oil	Ambient 212 104 212	- 70 70 70	900 psi min No cracks No cracks Tube & cover, vol. change, max 100%	Rubber tube, fabric reinforcement, chloroprene cover			Air Brake Hose	SAE J1402 Types A & B
Air, Burst test Aging Ozone, 50 pphm ASTM #3 Oil	Ambient 212 104 212	- 70 70 70	1/4" to 1/2" hose; 10,000 to 7,000 psi No cracks No cracks Tube & cover, vol change, max 100%	Rubber tube, fabric reinforcement chloroprene cover			Air Brake Hose	SAE J1402 Type C
Air, burst test Aging Ozone, 50 pphm ASTM #3 oil	Ambient 212 104 212	- 70 70 70	3/16" to 5/8" hose; 2,000 to 1,800 psi No cracks No cracks Tube & cover, vol. change, max 100%	Rubber Tube, wire w/wo fabric reinforcement chloroprene cover			Air Brake Hose	SAE J1402 Type D
Air, burst test Aging Ozone, 50 pphm ASTM #3 oil	Ambient 212 104 212	- 70 70 70	3/16" to 5/8" hose; 6,000 to 3,000 psi No cracks No cracks Tube & cover, vol. change, max 100%	Rubber tube, wire w/wo fabric reinforcement, chloroprene cover			Air Brake Hose	SAE J1402 Type E

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Air, burst test Aging Ozone, 50 pphm ASTM #3 oil	Ambient 212 104 212	 70 70 70	1000 psi No cracks No cracks Tube & cover, vol. change, max 100%	Rubber, tube, wire, fabric reinforced, chloroprene cover			Air Brake Hose	SAE J1402 Type F
Air, burst test Oxygen, aging @ 300 psi Isooctane	Ambient 158 73	- 46 46	600 psi min Tube & cover max T change: ± 25% Tube max vol change: +100%	1) Chloroprene tube 2) Frictioned fabric 3) Syn. rubber/wire 4) Frictioned fabric 5) Chloroprene cover		4720	Hose, Rubber, Wire-Reinforced (Oil-and-Gasoline, Suction and Discharge Smooth-Bore)	MIL-H-0015100 Class I
Air, burst test Oxygen, aging @ 300 psi Isooctane	Ambient 158 73	- 46 46	600 psi min Tube & cover max T change: ± 25% Tube max vol change: +50%	1) Nitrile tube 2) Frictioned fabric 3) Syn. rubber/wire 4) Frictioned fabric 5) Chloroprene cover		4720	Hose, Rubber, Wire-Reinforced (Oil-and-Gasoline, Suction and Discharge Smooth-Bore)	MIL-H-0015100 Class II
Air, burst test Oxygen, aging @ 300 psi Oxygen, aging @ 300 psi	Ambient 158 158	- 48 48	500 psi min Max % T chg: Tube (nat) 40, (syn) 20 Max T change: cover, 25%	Chloroprene or nat. rubber tube, chloroprene cover, syn. rubberized fabric reinforcement		4720	Hose, Rubber, Sand-blast	MIL-H-15217
Air, burst test Oxygen, aging @ 300 psi 70/30 isooctane/toluene 70/30 isooctane/toluene	Ambient 158 75 75	- 46 46 46	600 psi min Tube & cover max T change: ± 25% Max % vol chg: tube (NBR) 50, (CR) 100 Max vol change: cover, 100%	1) CR or NBR tube 2) Frictioned fabric 3) Chloroprene cover		4720	Hose and Hose Assemblies, Rubber, Oil-and-Gasoline-Discharge, Smooth-Bore, Light Weight	MIL-H-15523 Types A & B
Air, burst test Air, oven aging Water	Ambient 158 Ambient	- 48 24	1/4" to 4" ID; 600 to 300 psi Tube & cover max T change: ± 25% Tube & cover max vol change: +20%	Chloroprene or SBR tube chloroprene cover fabric reinforced		4720	Hose and Hose Assemblies, Rubber, Wrapped and Braided, Water Service	MIL-H-15923
Air, burst test Air, oven aging	Ambient 194	- 48	8000 psi min Tube & cover max T change: ± 25%	SBR, nitrile or chloroprene tube & cover wire, w/o syn. frictioning, reinforcement		4210	Hose, Fire-Extinguisher (Portable, 15-pound Carbon-Dioxide)	MIL-H-16236
Air, burst test Air, oven aging	Ambient 212	- 70	2000 psi min Tube & cover max T change: ± 15%	1) Chloroprene tube 2) Glass yarn 3) Chloroprene/cloth 4) Glass yarn 5) Chloroprene cover		4940	Hose Assembly, Plastic Paint Spraying, Electric-Heating	MIL-H-16711

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Air, burst pressure Oxygen, aging @ 300 psi 60/40 diisobutylene/aromatic	Ambient 158 140	- 46 48	600 psi Tube & cover max T change: ± 35% Tube & cover max vol change: +110%	1) Chloroprene tube 2) Syn. rubber/ fabric 3) Syn. rubber/duck 4) Syn. rubber / wire 5) Syn. rubber/ fabric 6) Chloroprene cover		4720	Hose, and Hose Assembly, Rubber, Oil & Gasoline Suction & Discharge	MIL-H-17505 Class 1
Air, burst test Oxygen, aging @ 300 psi 60/40 issoctane/aromatic 60/40 isooctane/aromatic	Ambient 158 75 75	- 46 46 46	600 psi min Tube & cover max T change: ± 25% Tube max % vol chg: (CR) +100 Cover max vol change: +100%	Chloroprene or nitrile (NBR) tube, chloroprene (CR) cover, syn. frictionized fabric reinforced		4720	Hose Assemblies, Rubber, Aircraft, Fueling, Collapsible Type	MIL-H-17902
Air, burst test Isooctane and aromatic 60/40 isooctane/aromatic	Ambient Ambient 75	- 24 -	150 psi min Tube & cover max vol change: +90% Gun fire, self sealing, 2 min max	Reinforced inner tube, chloroprene cover		4720	Hose and Hose Assemblies, Aircraft, Self Fueling, Aromatic Fuel	MIL-H-18288
Air, burst test Oxygen, aging @ 300 psi 60/40 isooctane/aromatic 60/40 isooctane/aromatic	Ambient 158 73 73	- 46 46 46	600 psi min Tube & cover max T change: ± 25% Max % vol chg: Tube (CR) 100; (NBR) 50 Max % vol chg: Cover +100	Chloroprene (CR) or nitrile (NBR) tube syn. - frictioned fabric reinforcement, chloroprene cover		4720	Hose, Rubber (Oil-and-Gasoline Discharge), Smooth-Bore, Light Weight, Bouyant Type; 6 Inch Size	MIL-H-19091
Air, burst test Oxygen, aging @ 300 psi	Ambient 158	- 48	1/2" ID; 800 psi Max tensile change: -25%	Chloroprene, nitrile or butyl tube, chloroprene cover, syn. - rubberized fabric reinforcement		4720	Hose Assemblies, Rubber, Paint Spray Equipment	MIL-H-19639
Air, burst test MIL-H-5606 mineral oil	Ambient 158	- 168	1/4" to 1" ID; 16000 to 7500 No leakage @ 7000 psi	Chloroprene cover fabric backing, wire reinforcement		4720	Hose Assemblies, Flexible (Pneumatic), High Pressure Oil Resistant	MIL-H-19992
Tensile Strength ASTM #3 oil Ozone, 100 pphm Flexibility	Ambient 212 Ambient 212 -67	- 70 - 70 72	Tube & Cover, min. 1400 psi Tube & Cover max -30% T.S. change 500 psi min. Cover, no cracks No cracks after bending to V-shape	Chloroprene Cover & synthetic tube fiber reinforcement		4720	Hose and Hose Assembly, Rubber, Smooth Bore, Light-Weight, Sewage Discharge and Oily Waste Discharge	MIL-H-20176 Type I & Type II

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Air, burst test Air, 180° bend Oxygen, aging @ 300 psi 60/40 isooctane/aromatic 60/40 isooctane/aromatic	Ambient -22 158 73 73	- 24 46 46 46	1-1/2" to 2-1/2" ID; 600 to 500 psi No cracking or failure Tube & cover max T change: ± 25% Cover, max vol change: +100% (NBR) tube max vol change: +50%	Nitrile or chloroprene tube, chloroprene cover fabric braid & wire helix reinforcement		4720	Hose Assemblies for Noncollapsible Aviation Fuel	MIL-H-21291
Air, burst test Oxygen, aging @ 300 psi 60/40 isooctane/aromatic 60/40 isooctane/aromatic	Ambient 158 73 73	- 46 46 46	6" to 7" ID; 600 to 500 psi Tube & cover max T change: ± 25% Cover (CR) max vol change: 100% Tube, (NBR), max vol change: 50%	Chloroprene cover & or tube, nitrile tube syn. - frictioned, fabric reinforcement	Yes	4720	Hose and Hose Assemblies, Rubber, Oil-and-Gasoline Discharge, Smooth-Bore, Light Weight, Bouyant Type	MIL-H-22240
Air, burst test Air, mandrel bend Oxygen, aging @ 300 psi 60/40 isooctane/aromatic	Ambient -20 158 73	- 24 46 46	600 psi min No cracking or failure Tube & cover max T change: ± 25% Tube & cover max vol change: +100%	Chloroprene tube, fabric reinforcement, chloroprene cover, static wire wound		4720	Hose Assemblies, Rubber, Aircraft Fueling Collapsible, By Negative Pressure	MIL-H-22279
Air, burst test Air, 90° bend Air, 90° bend ASTM #3 petroleum oil	Ambient -40 150 212	- 24 24 70	600 psi min No cracking or separation No cracking or separation Max vol change: tube 40%; cover 120%	Nitrile tube frictioned fabric & wire helix reinforcement, chloroprene cover		4720 4730	Hose-Line Assembly: 4-inch Fueling, Quick-Coupling Type	MIL-H-22297
Air, pressure test, 200 psia Air, bend test Air, even aging	Ambient -65 130	- 10 10	No failure No damage No damage		Yes	4720	Duct, Pneumatic Start, Flexible	MIL-D-22706
Air, Burst Pressure Oil immersion, MIL-L-17331 17331 Flexibility	Ambient 158 -40	- 76 24	Sizes 1/4 to 2 inches, 20,000 psi to 4,500 psi No leakage No cracks	Tube, synthetic Polyester reinforced cloth Cover, Synthetic	Yes	4720	Hose, Reinforced, Water And Oil Resistant, And End Fittings, Reusable, For Flexible Hose Connections	MIL-H-24135 Classes I, II, III, & IV
ASTM D746 Air, oven aging Water	-80 300 212	- 24 70	No cracking Max T change: -20% Max vol change: ± 5%			4720	Tubing, Rubber, Silicone, For In Flight Feeding	MIL-T-25458
Air, burst test Air, mandrel bend 60/40 isooctane/aromatic	Ambient -67 450	- 24 24	0.110" to 1.406" ID; 12000 to 4000 psi No cracks No leakage at room temp	Tube w/wire braid reinforcement	Yes	4720	Hose Assembly, Tetrafluoroethylene, High Temperature, Medium Pressure	MIL-H-25579

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, burst test Air, bend test Ozone	Ambient -65 100	- 48 1	400 psia min No damage No cracks	Tube w/wo dacron jacket		4720	Duct, Pneumatic, Flexible	MIL-D-26124
Air, bend test Air, oven aging Ozone 120 ppm	-65 158 Ambient	48 48 1	No leakage after exposure No leakage after exposure No leakage after exposure	Rubber tube & cover, fabric and wire reinforced		1660	Hose, Oxygen Pressurization, Ozone Resistant	MIL-T-26385 Resistant
Air, burst test Air, 180° bend 70/30 isooctane/toluene	Ambient -67 75	- 72 24	1-1/4" to 4"; 1000 to 700 psi Max force to unbend: 40 lbs Max % vol chg: tube +30; cover +60	Syn. tube, chloroprene cover fabric reinforcement	Yes	4930	Hose Assembly, Rubber, Fuel, Collapsible, Low Temperature, With Reattachable Couplings	MIL-H-26521
Air, burst test Air, 180° bend Air, oven aging @ 500 psig	Ambient -297 260	- 0.25 48	2200 psig min No loss of strength No loss of strength	Teflon tube wire braid reinforcement	Yes	1660	Hose Assembly, Tetrafluoroethylene, Oxygen	MIL-H-26626
Air, burst test Air, 180° bend	Ambient -65	- 24	12000 psig min No cracking or splitting	Teflon tube, chloroprene or teflon cover wire reinforcement	Yes	1730	Hose Assembly, Polytetrafluoroethylene, Oxygen	MIL-H-26633
Air, burst test Air, 180° bend	Ambient -65	- 24	16000 psig min No cracking or splitting	Polyethylene tube, chloroprene cover, wire reinforced		1730	Hose Assembly, Pneumatic, High Pressure	MIL-H-26666
Air, burst test Air, U bend 70/30 isooctane/toluene	Ambient -67 75	- 72 24	700 psi min No cracking Max % vol chg: tube 30; cover 60	Syn. tube, chloroprene cover fabric & wire helix reinforcement		4930	Hose Assembly, Rubber, Gasoline, Refueling, Low Temperature	MIL-H-26894
Air, burst test Air, mandrel bend Air, burst test	Ambient -67 450	- 24 1	0.12" to 1.41" ID; 12000 to 4080 psi No cracking No leakage @ 1000 psi	Teflon tube, wire braid reinforcement	Yes	4720	Hose, Tetrafluoroethylene, High Temperature, Medium Pressure	MIL-H-27267
Air, burst test Air, U bend 60/40 isooctane/aromatic	Ambient -67 75	- 72 24	1-1/2" to 6" ID; 600 to 400 psi No cracks Max % vol chg: tube 50; cover 100	Nitrile tube, chloroprene cover, braided reinforcement		4930	Hose Assembly, Rubber GRK-6/E32R-1	MIL-H-27508
Air, burst test Air, ASTM D736 60/40 isooctane/aromatic	Ambient -67 75	- 72 24	1-1/2" to 6" ID; 400 to 240 psi No cracking Max % vol chg: tube 50; cover 100	Nitrile tube chloroprene cover wire stiffened woven jacket reinforcement		4930	Hose Assembly, Rubber GRK-7/E32R-1	MIL-H-27516

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, Burst Pressure Air, Tensile Strength ASTM #3 oil ozone 50 pphm	Ambient Ambient 212 212	- - 70 70	1600 psi minimum Tube 1000 psi min, cover 1800 psi min Tube T.S. 800 psi min Cover, No Cracks	Tube & Cover, Synthetic Rubber fabric reinforced		4720	Hose Assembly, Rubber, Hydraulic & Pneumatic Jetting (400 psi working pressure)	MIL-H-28523
Air, Burst Pressure ozone resistance 50 pphm	Ambient 212	- 70	2000 psi minimum Cover, No Cracks	Tube,& Cover Synthetic Rubber Wirebraid & fabric reinforcement		4720	Hose Assemblies, Rubber, Wire Reinforced 200 psig Saturated Steam Service (3/4" to 2" I.D.)	MIL-H-28596
Air, Tensile strength Air Aging	Ambient 212	- 168	1200 psi minimum Tensile strength change max - 35%	Natural Rubber		4720	Tubing, Rubber	MIL-T-36966
Air, Burst Pressure	Ambient	-	16,000 to 12,000 psi	Tube, Synthetic Reinforced, two or more layers stainless steel braid		4720	Hose Assembly Tetra-fluoroethylene, High Temperature, High Pressure, Hydraulic and Pneumatic	MIL-H-38360
Air, Burst Pressure	Ambient	-	16,000 psig minimum	Tube, Tetrafluro-ethylene, two or more layers of stainless steel braid		4720	Hose Assembly, Tetra-fluoroethylene, Pneumatic, High Pressure	MIL-H-38390
Flexibility, 180° Bend	-65	-	No cracking	Cover - chloroprene				
Air, @ 25 psi	Ambient	0.05	No deformation or damage			1450	Hose Assembly, Propel-lant Transfer Oxidizer and Fuel	MIL-H-45704 Types I & III
Air, @ 60 psi	Ambient	0.02	No deformation or damage			1450	Hose Assembly, Propellant Transfer Oxidizer and Fuel	MIL-H-45704 Types II & IV
Air, Tensile strength	Ambient	-	3000 psi minimum	Tubing - polyurethane		4720	Tubing, Rubber, Urethane, High Strength and Abrasion Resistant	MIL-T-47046
Hardness, Shore A Dielectric strength	Ambient Ambient	- -	85 ± 5 points 400 volts per mil thickness					

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, Burst Pressure Bend Test 7 inch radius	Ambient -65	- 24	2000 psig, min No cracks	Cover, chloroprene Reinforcement, wire braid		4720	Hose, Fuel, Flame Thrower, M8	MIL-H-51059
Resistance to 80/20 isooctane-Benzene	Ambient	168	-10% max decrease in I.D.					
Air, Burst Test Air, Mandrel Bend Fungus	Ambient -65 82	- 24 2160	75 psi min No cracks Resistant	Chloroprene	Yes	2940	Hose, Preformed: Semi-Flexible, Reinforced	MIL-H-52079
Air, Burst Test Air, S Bend 70/30 Isooctane/toluene Flexibility 180° Bend	Ambient -15 74 -40	- 24 46	500 psi min No cracking Max % vol chg: tube +40; cover +120 No cracks	Nitrile tube, chloroprene cover syn. fabric reinforcement		4720	Hose, Assembly, Rubber: Lightweight, Collapsible 4 Inch	MIL-H-52262
Air, Burst Pressure	Ambient	-	1/4" to 2" 1,500 to 11,000 psi min.	Tube - chloroprene	Yes	4720	Hose and Hose Assembly, Hydraulic Pressure-Type	MIL-H-52471
ASTM #3 Oil Ozone, 50 pphm	212 122	70 168	Vol. change + 100% max No cracks	Reinforcement-steel Wirebraid Cover - chloroprene				
Air, Burst Pressure	Ambient		3/4" to 4" 300 to 1,200 psi min			4720	Hose, Rubber:Oil Suction, Wire-Reinforced	MIL-H-52544
ASTM #3 Oil	250	70	Vol. change cover + 100% max. Tube + 60% max	Tube & Cover, Synthetic Rubber				
Ozone, 50 pphm	122	168	No cracks	Reinforcement - steel wirebraid				
Air, Burst Pressure Air, Tensile Strength ASTM #3 Oil	Ambient Ambient 212	- - 70	3/8" to 1-1/8", 425 to 375 psi min 1000 minimum T.S., -40% max.	Tube, Silicone Reinforcement - Polyester fiber		4720	Hose, Non-Metallic, Silicone, Polyester Reinforced (For Coolant and Heating Systems of Diesel and gasoline Powered Engines	MIL-H-62217
Hardness, Shore A Ozone, 50 pphm	Ambient 122	- 168	50 to 70 No cracking	Tube & Cover synthetic elastomer Reinforcement, polyester braid		1660	Hose Assemblies, Breathing Oxygen and Air, General Specification for	MIL-H-81581

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, Burst Pressure Air, Tensile Strength ASTM #3 Oil Ozone, 50 pphm	Ambient Ambient 75 212	- - 48 72	400 psi minimum Tube: 1500 psi min. Cover: 1800 psi min. T.S. Tube - 40% max. No cracks in cover	Tube: Butadiene-acrylonitrile Reinforcement - two layers of synthetic fabric Cover: Nitrile or chloroprene		4720	Hose Assembly, Rubber (Synthetic) Fuel, Discharge, Lightweight	MIL-H-82127
Air, Burst Pressure Conductivity, at 1,000 volts	Ambient Ambient	- -	Size 4 to 10, 16,000 psi to 12,000 psi, min Tube 12 microamperes, min.	Tube: Tetrafluoroethylene Reinforcement - corrosion resistant steel	Yes	4720	Hose, Tetrafluorethylene, High Temperature, High Pressure (3000 psi), Hydraulic and Pneumatic	MIL-H-83289
Air, Burst Pressure Air, Tensile Strength Hardness, Shore A Fuel JP-7	Ambient Ambient Ambient 70	- - 168	3" 800 psi min: 4" - 700 psi min Tube & Cover 1400 psi min Tube 75 ± 5 Tube & Cover T.S. 1200 psi min	Tube: Fluoroelastomer Reinforcement: Nylon Cloth and Steelwire Helix Cover: Chloroprene		4720	Hose Assembly, Fluoroelastomer Tube, With Reattachable Couplings for JP-7 Service	MIL-H-83373 Type I
Air, Burst Pressure	Ambient	-	Hose size 3 to 32: 6,000 psi to 1,200 psi min			4720	Hose Assembly, Rubber, Lightweight, Medium Pressure, General Specification	MIL-H-83796

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MATS AND FLOOR COVERINGS

SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	CONSTRUCTION AND ELASTOMER COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Oxygen, aging	158	166	No deterioration	Nat. and/or syn. rubber links		7220	Mat, Floor (Link-Type)	ZZ-M-46 Classes 1 & 4
Oxygen, aging	158	166	No deterioration	Plied rubber-fabric links		7220	Mat, Floor (Link-Type)	ZZ-M-46 Class 2
Oxygen, aging	158	166	No deterioration.	Metal reinforced rubber links		7220	Mat, Floor (Link-Type)	ZZ-M-46 Class 3
Oxygen, aging	158	166	No deterioration	PVC links		7220	Mat, Floor (Link-Type)	ZZ-M-46 Class 5
Air, original properties Air, oven aging Air, flexibility	Ambient 212 Ambient	- 166 0.08	T, 400 psi. min; H, 65-90 Tensile change, -25% max. No breaks or cracks	Fabric reinforced nat. or syn. rubber corrugated		7220	Mats; Floor, (Vehicular, Rubber)	KKK-M-0050
Air, original properties Air, flexibility	Ambient Ambient	- 0.08	T, 700 psi. min; elong, 250% min. No breaks or cracks	Syn. or reclaimed rubber; corrugated		7220	Matting; Rubber and Vinyl	ZZ-M-71
Air, original properties Air, oven aging	Ambient 158	- 70	T, 400-900 psi.; elong, 100-250% Max. change: T, -25%; elong, -35%	Not specified			Automotive Rubber Mats	SAE J80
Air, original properties Air, figure 8 bend Flame Sulfuric acid, 20% 15,000 volts	Ambient 32 - 158 Ambient	- - - 46 0.02	T, 1200 psi. min; elong, 250% min. No breaks or cracks Slight flame or flash Max. loss: T, 30%; elong, 25% No puncture, warming or weakness	Fabric reinforced syn. with/without reclaimed rubber; corrugated		7220	Matting; Rubber and Plastic (Special, Dielectric)	ZZ-M-81 Class 1
Air, original properties Air, figure 8 bend Sulfuric acid, 20% 15,000 volts	Ambient 32 158 Ambient	- - 46 0.02	T, 700 psi. min; elong, 250% min. No breaks or cracks Max. loss: T, 30%; elong, 25% No puncture, warming or weakness	Fabric reinforced syn. with/without reclaimed rubber; corrugated		7220	Matting; Rubber and Plastic (Special, Dielectric)	ZZ-M-81 Class 2
Air, original properties Air, figure 8 bend Air, oven volatilization 15,000 volts	Ambient 32 225 Ambient	- - 5 0.02	T, 1600 psi. min; elong, 150% min. No breaks or cracks Volatile matter loss; 0.5% max. No puncture, warming or weakness	Vinyl chloride, vinylidene chloride or vinyl acetate; knurled back		7220	Matting; Rubber and Plastic (Special, Dielectric)	ZZ-M-81 Class 3
Air, original properties 15,000 volts	Ambient Ambient	- -	T, 700 psi. min; elong, 250% min. No puncture, warming or weakness	Fabric reinforced rubber			Rubber Matting For Use Around Electrical Apparatus	ASTM D 178

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	CONSTRUCTION AND ELASTOMER COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Water absorption	70	24	10% max. wt. change	Top layer - synthetic rubber Bottom layer - sponge rubber (chloroprene)		7220	Matting, Floor, Rubber, Sponge Base, Anti-Fatigue	ZZ-M-0085
Air, original properties	Ambient	-	Modulus @ 10% E; 150 psi. min. Hardness, 90 min.	Nat. and/or syn. and/or reclaimed rubber; with/without fabric		7220	Floor-Covering; Rubber, Sheet	ZZ-F-461
Air, original properties Air, oven aging Isooctane Water, absorption	Ambient 194 74 74	- 46 46 22	T, 1500 psi. min; elong, 200% min. Change: T, ±20%; elong, ±30% Volume change; 10% max. Wt. change; 10% max.	Plastic and/or syn. and/or reclaimed rubber; cellular base & solid cover		7220	Mats, Floor, Standing	MIL-M-910
Air, original properties Hardness, Shore A Water absorption	Ambient Ambient 70	- - 24	T.S. 1300 psi. min; elong, 300% min. 65 ±5 points 8% max. wt. increase	Synthetic rubber		7220	Matting, Floor, Rubber Aperture Surface	ZZ-M-001033
Air, original properties Flame Oxygen, aging Sulfuric acid, 20% 15,000 volts	Ambient - 158 158 Ambient	- - 46 46 0.02	T, 1200 psi. min; elong, 300% min. Slight flame or flash Tensile change, -20% max. Tensile change, -30% max. No puncture, warming or weakness	Fabric reinforced syn. and/or reclaimed rubber	Yes	7220	Matting; Floor, Rubber Insulating For High Voltage Application	MIL-M-15562 Application
Air, original properties Air, bend test	Ambient Ambient	- 0.08	T, 500 psi. min; elong, 200% min. No cracking	Fabric reinforced synthetic rubber		7220	Mats, Floor, Synthetic Rubber, Shower Stall, Light Gray	MIL-M-19018

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O-RINGS

SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	PERFORMANCE TESTS REQUIRED	QPL ISSUED	ELASTOMER COMMONLY USED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.							
Air, original properties	Ambient	-	Hardness, 70 ±5; Elong. 200-400%	Fatigue flexing @ 15% stretch @ room temperature for 24 hrs.	No	Nitrile		Rubber "O" Rings For Automotive Seal	SAE J120, Class I
Air, figure 8 bend	-20	5	No cracks						
Air, oven aging	250	70	Elong. change, -50% max.						
ASTM #1 petroleum oil	300	70	Vol. change, ±5%						
ASTM #3 petroleum oil	300	70	Vol. change, +20% max.						
Air, original properties	Ambient	-	Hardness, 70 ±5; Elong. 150-300%	Fatigue flexing @ 15% stretch @ room temperature for 24 hrs.	No	Nitrile		Rubber "O" Rings For Automotive Seal	SAE J120, Class II
Air, figure 8 bend	-40	5	No cracks						
Air, oven aging	212	70	Elong. change, -50% max.						
Isooctane	Ambient	70	Vol. change, -3 to +5%						
70/30 isooctane/toluene	Ambient	70	Vol. change, +30% max.						
Air, original properties	Ambient	-	Hardness, 90 ±5; Elong. 100% Min.	None	No	Nitrile		Hydraulic "O" Ring	SAE J515, Type 1
Air, ASTM D2137 Method A	-30	5	No cracks						
Air, compression set	212	22	25% max.						
ASTM #3 petroleum oil	212	70	Vol. change, -10 to +5%						
Air, original properties	Ambient	-	Hardness, 88 ±5; Elong. 100% Min.	None	No	Butyl		Hydraulic "O" Ring	SAE J515, Type 2
Air, original properties	Ambient	-	Hardness, 70 ±10	Leakage and breakout @ -65°F and +160°F @ 2 and 3000 psig. Chew, abrasion and endurance.	No	Butyl		Packing, O-Ring, Phosphate Ester resistant.	NAS 1613, Class I
Phosphate ester lubricant	158	70	Vol. change, +10% max.						
Air, original properties	Ambient	-	Hardness, 88 ±5	Installation stretch @ -20°F. Crush, extrusion and impulse.	No	Butyl		Packing, O-Ring, Phosphate Ester Resistant.	NAS 1613, Class II
Air, figure eight bend	-65	72	No breaks						
Phosphate ester lubricant	158	70	Vol. change, +10% max.						
Air, original properties	Ambient	-	Hardness, 80 ±5; Elong. 200% Min.	Crush (5600 lb. load, 80% recovery)	No	Nitrile	5330	Rubber, Synthetic: Sheet, Strip and Molded	MIL-R-3533 Grade A
Cooling medium, temp. retraction	-10	-	10% recovery @ 50% elong.						
Air, oven aging	158	168	Elong. 175% min.						
ASTM #1 petroleum oil	158	168	Vol. change, ±8%.						

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SPECIFICATION TEST CONDITIONS									
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	PERFORMANCE TESTS REQUIRED	QPL ISSUED	ELASTOMER COMMONLY USED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Cooling medium, temp. retraction Air, oven aged ASTM #1 petroleum oil	Ambient -20 158 158	- - 168 168	Hardness, 70 ±5; Elong. 300% Min. 10% recovery @ 50% elong. Elong. 275% min. Vol. change, ±8%	Crush (5600 lb. load, 80% recovery.	No	Nitrile	5330	Rubber, Synthetic: Sheet, Strip and Molded.	MIL-R-3533 Grade B
Air, original properties 70/30 isooctane/toluene	Ambient Ambient	- 72	Permanent set, 50% max. Vol. change, +50% max.	Leakage @ -65°F cyclic endurance	Yes	Nitrile	5330	Packing, "O" Ring, Hydrocarbon Fuel Resistant	MIL-P-5315
Air, original properties Air, figure 8 bend Air, oven aged MIL-H-5606 hydraulic fluid	Ambient -65 158 158	- 72 166 166	Hardness, 88 Min; Elong. 100% Min. No breaks Elong. change, -20% max. Vol. change, 0 to +6%	Installation stretch -20°F. Crush (5600 lb. load, 75% recovery) Extrusion. Impulse	Yes	Nitrile	5330	Packing, Preformed Straight Thread Tube Fitting Boss	MIL-P-5510
Air, original properties MIL-H-5606 hydraulic fluid	Ambient 158	- 168	Hardness, 88 min. Vol. change, 0 to +5	Leakage and breakout @ 160°F and 1500 psi. Leakage @ -65°F. Cycling. Corrosion	Yes	Nitrile	5330	Packing, Preformed Petroleum Hydraulic Fluid Resistant 160°F	MIL-P-5516 Class A
Air, original properties Cooling medium, temp. retraction MIL-H-5606 hydraulic fluid	Ambient -45 158	- - 168	Hardness, 68 min. 10% recovery @ 50% elong. Vol. change, 0 to +10	Leakage, breakout, crush, fatigue, cycling and corrosion.	Yes	Nitrile	5330	Packing, Preformed Petroleum Hydraulic Fluid Resistant 160°F	MIL-P-5516 Class B
Air, original properties Air, hammer bend Air, compression set 70/30 isooctane/toluene Isooctane	Ambient -50 257 Ambient Ambient	- 5 70 96 96	Hardness, 75 ±5; Elong. 100% Min. No cracking 75% max. (85% for small rings) Vol. change, +30 to +50 Positive swell	None	No	Nitrile		Rings, Packing Synthetic Rubber Fuel and Low Temperature (70-80)	AMS 7260
Air, original properties Synthetic ester lubricant Air, oven aging Phosphate ester lubricant	Ambient -65 158 158	- 5 168 168	Hardness, 85-95; Elong, 150% Min. No cracking Elong. change, -35% max. Vol. change, 0 to +10%	None	No	Butyl		Rings, Sealing, Butyl Rubber Phosphate Ester, Hydraulic Fluid Resistant (85-95)	AMS 7263
Air, original properties Air, ASTM D746 Air, oven aging ASTM #1 petroleum oil	Ambient -85 500 350	- 10 70 70	Hardness, 75 ±5; Elong, 125% Min. No cracks Elong. change, -55% max. Vol. change, 0 to +15%	None	No	Silicone		Rings, Sealing, Silicone Heat Resistant - Low Compression Set (70-80)	AMS 7267

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SPECIFICATION TEST CONDITIONS									
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	PERFORMANCE TESTS REQUIRED	QPL ISSUED	ELASTOMER COMMONLY USED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Isooctane, bend test Air, oven aging 70/30 isooctane/toluene ASTM #3 petroleum oil	Ambient -40 212 Ambient 302	- 5 70 168 70	Hardness, 70 ±5; Elong, 150% Min. No cracking Elong. change, -40% max. Vol. change, 0 to +40% Vol. change, +15 to +35%	None	No	Nitrile		Rings, Sealing, Synthetic Rubber - Fuel Resistant (65-75)	AMS 7270
Air, original properties Air, hammer bend Air, oven aging 70/30 isooctane/toluene Isooctane	Ambient -60 257 Ambient Ambient	- 5 70 70 70	Hardness, 65 ±5; Elong, 200% min. No cracking Elong. change, -50% max. Vol. change, +40 to +70% Positive swell	Simulated component leakage test.	No	Nitrile		Rings, Sealing, Synthetic Rubber - Fuel and Low Temperature Resistant (60-70)	AMS 7271
Air, original properties Air, temp. retraction Air, oven aging Synthetic ester lubricant 70/30 isooctane/toluene	Ambient -15 250 302 Ambient	- - 70 70 70	Hardness, 70 ±5; Elong, 250% Min. 10% recovery @ 50% elong. Elong. change, -50% max. Vol. change, 0 to +15% Vol. change, 0 to 35%	None	No	Nitrile		Rings, Sealing, Synthetic Rubber-Synthetic Lubricant Resistant NBR Type (65-75)	AMS 7272
Air, original properties Lubricating oil, bend test Air, oven aging ASTM #1 petroleum oil ASTM #3 petroleum oil	Ambient -40 212 302 302	- 5 70 96 70	Hardness, 70 ±5; Elong, 150% Min. No cracking Elong. change, -40% max. Vol. change, 0 to +10% Vol. change, +25 to 45%	None	No	Nitrile		Rings, Sealing, Synthetic Rubber - Oil Resistant (65-75)	AMS 7274
Air, original properties Phosphate ester, bend test Air, oven aging Phosphate ester lubricant	Ambient -65 158 158	- 5 168 168	Hardness, 70-85; Elong, 200% Min. No cracking Elong. change, -35% max. Vol. change, 0 to 15%	Low and high pressure cycling, breakout and leakage. Fatigue, chew & endurance.	No	Butyl		Rings, Sealing, Synthetic Rubber - Phosphate Ester Hydraulic Fluid Resistant (70-85) (Butyl type)	AMS 7277
Air, original properties Cooling medium, temp. retraction Air, oven aging 70/30 isooctane/toluene Synthetic ester lubricant	Ambient +5 500 Ambient 400	- - 70 70 70	Hardness, 75 ±5; Elong, 125% Min. 10% recovery @ 50% elong. Elong. change, -50% max. Vol. change, 0 to +10% Vol. change, 0 to +20%	None	No	Fluorocarbon		Rings, Sealing, Fluorocarbon Rubber, High-Temperature-Fluid Resistant (70-80)	AMS 7279
Air, original properties Cooling medium, temp. retraction Air, oven aging 70/30 isooctane/toluene Synthetic ester lubricant	Ambient +5 500 Ambient 400	- - 70 70 70	Hardness, 90 ±5; Elong. 100% Min. 10% recovery @ 50% elong. Elong. change, -30% max. Vol. change, 0 to +10% Vol. change, 0 to +15%	None	No	Fluorocarbon		Rings, Sealing, Fluorocarbon Rubber, High Temperature Fluid Resistant (85-95) Fluorocarbon Type	AMS 7279

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SPECIFICATION TEST CONDITIONS			SPECIFICATION REQUIREMENTS	PERFORMANCE TESTS REQUIRED	QPL ISSUED	ELASTOMER COMMONLY USED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.							
Air, original properties	Ambient	-	Hardness, 70 ±5; Elong, 250% Min.	None	No	Nitrile	9320	Rubber Sheet, Solid Molded, & Extruded Shapes, Synthetic Oil Resistant	MIL-R-7362 Type I
Cooling medium, temp. retraction	-40	-	10% recovery @ 50% elong.						
Air, oven aging	275	70	Elong. change, -70% max.						
Synthetic ester lubricant	275	70	Vol. change, +2 to +15%						
Air, original properties	Ambient	-	Hardness, 75 ±5; Elong. 150% Min.	None	No	SBR	5330	Gaskets, "O" Rings, For Rockets	MIL-G-17553
Cooling medium, comp. set	-20	96	Set, 70% max.						
Air, oven aging	158	96	Elong. change, -15% max.						
Water	158	96	Vol. change, +8% max.						
Air, original properties	Ambient	-	Hardness, 65 ±10; Elong, 250% Min.	None	No	Nitrile	5330	Gaskets, Cylinder Liner Seal O-Ring, Synthetic Rubber	MIL-G-21569 Class I
Air, oven aging	194	336	Tensile retention, 75% Min.						
ASTM #2 petroleum oil	194	336	Vol. change, 0 to +10%						
Water	194	336	Tensile retention, 75% Min.						
Air, original properties	Ambient	-	Hardness, 65 ±10, Elong, 120% Min.	None	No	Silicone	5330	Gaskets, Cylinder Liner Seal O-Ring, Synthetic Rubber	MIL-G-21569 Class II
Air, oven aging	194	336	Tensile retention, 75% Min.						
ASTM #2 petroleum oil	194	336	Vol. change, 0 to +15%						
Water	194	336	Tensile retention, 65% Min.						
Air, original properties	Ambient	-	Hardness, 60-75; Elong, 300% Min.	None	No	Nitrile	5330	Gaskets, Heat Exchanger, Various Cross Section Rings, Synthetic Rubber	MIL-G-21610 Type I
Air, oven aging	212	168	Elong. change, -40% max.						
ASTM #1 petroleum oil	230	168	Vol. change, +5% max.						
ASTM #3 petroleum oil	230	168	Vol. change, +25% max.						
Water	212	168	Vol. change, +10% max.						
Steam, 50 psig	-	24	Vol. change, +10% max.						
Air, original properties	Ambient	-	Hardness, 60-75; Elong. 150 Min.	None	No	Silicone	5330	Gaskets, Heat Exchanger, Various Cross Section Rings, Synthetic Rubber	MIL-G-21610 Type II
Air, oven aging	300	168	Elong. change, -20% max.						
ASTM #1 petroleum oil	300	168	Vol. change, +15% max.						
Air, original properties	Ambient	-	Hardness, 70 ±5; Elong. 150% Min.	None	No	Fluorocarbon	5330	Gasket and Packing Material Petroleum and Phosphate Ester Fluid Resistant	MIL-G-23652 Type I
Air, oven aging	212	70	Elong. change, -15% max.						
ASTM #3 petroleum oil	212	70	Vol. change, -0 to +5%						
Synthetic ester lubricant	212	70	Vol. change, -0 to +8%						
Air, original properties	Ambient	-	Hardness, 90 ±5; Elong. 100% Min.	None	No	Fluorocarbon	5330	Gasket and Packing Material Petroleum and Phosphate Ester Fluid Resistant	MIL-G-23652 Type II
Air, oven aging	212	70	Elong. change, -15% max.						
ASTM #3 petroleum oil	212	70	Vol. change, -0 to +5%						
Synthetic ester lubricant	212	70	Vol. change, -0 to +8%						

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SPECIFICATION TEST CONDITIONS									
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	PERFORMANCE TESTS REQUIRED	QPL ISSUED	ELASTOMER COMMONLY USED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	Hardness, 65±5; Elong, 300% Min.	None	No	Not known	5330	Gasket and Packing Material, Oil Resistant Rubber Access Hull Applications	MIL-G-23983
Air, oven aged	194	46	Elong. Change, -20% max.						
ASTM #1 petroleum oil	212	70	Vol. change, 0 to +5%						
Water	212	168	Vol. change, 0 to +10%						
Ozone, 100 pphm	100	168	No cracks						
Air, original properties	Ambient	-	Hardness, 68 Min; Elong. 180% Min.	Leakage, break-out, cycling fatigue and crush.	Yes	Nitrile	5330	Packing, Preformed, Petroleum Hydraulic Fluid Resistant, 275°F	MIL-P-25732
Cooling medium, temp. retraction	-49	-	10% recovery @50% elong.						
MIL-H-5606 hydraulic fluid	275	72	Vol. change, 0 to +15%						
Air, original properties	Ambient	-	Hardness, 75±5; Elong. 175% Min.	None	No	Fluorocarbon	5330-9320	Rubber, Fluorocarbon Elastomer, High-Temperature, Fluid-Resistant	MIL-R-25897 Type I Class 1
Air, oven aging	600	70	Elong. change, -45% Max.						
Stauffer Blend 770	400	72	Vol. change, +1 to +10%						
Synthetic ester lubricant	392	72	Vol. change, +1 to +15%						
70/30 isooctane/toluene	Ambient	72	Vol. change, 0 to +5%						
Air, original properties	Ambient	-	Hardness, 90±5; Elong. 120% Min.	None	No	Fluorocarbon	5330-9320	Rubber, Fluorocarbon Elastomer, High-Temperature, Fluid-Resistant	MIL-R-25897 Type I Class 2
Air, oven aging	600	70	Elong, change, -50% Max.						
Stauffer Blend 770	400	72	Vol. change, +1 to +10%						
Synthetic ester lubricant	392	72	Vol. change, +1 to +15%						
70/30 isooctane/toluene	Ambient	70	Vol. change, 0 to +5%						
Air, original properties	Ambient	-	T.S. 1400 psi Min; Elg. 125% min.			Fluorocarbon	5330	Rubber, Fluorocarbon Elastomer, High Temperature Fluid and Compression Set Resistant	MIL-R-83,248 Type I Class 1
Air, Hardness Shore A	Ambient		75±5						
Air, oven aging	528	70	T.S. - 35% max.						
Stauffer Blend 7700	357	70	T.S. - 30% Max; Elong. -20% Max. Vol. change, +20% Max.						
Air, original properties	Ambient	-	Hardness 75±3 Elong. 125% Min.			Nitrile	5330	Packing Preformed, Petroleum Hydraulic Fluid Resistant, Improved Performance of 275°F	MIL-P-83461
Air, oven aging	275	70	Compression 60% Max.						
Hydraulic Fluid MIL-H-5606	275	70	Vol. change, 10 to 20%						

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PACKINGS AND GASKETS

SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	COMPOSITION	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, 180° bend Steam	Ambient 417	- 24	No cracks No cracks, distortion or hardening	Nat. or syn. rubber, 13%; brass wire-asbestos cloth, 50%		5330	Packing Material, Asbestos, Metallic Cloth and Tape	HH-P-31 Type II
Air, tensile	212	1	1/32" or over, 3500 psi. min.; 1/64", 1200 psi. min.	70% asbestos, 10% nat. or syn. rubber		5330	Packing; Asbestos, Sheet, Compressed	HH-P-46
Air, 180° bend Steam	Ambient 410	- 24	No cracks No cracks, distortion or hardening	Nat. or syn. rubber, 15%; brass wire-asbestos cloth, 50%		5330	Gaskets, Asbestos, Metallic Cloth	HH-G-76 Types I and II
Air, compressibility ASTM #3 petroleum oil 70/30 Isooctane/toluene	212 330 80	1 5 5	Recovery, 15 to 40% Thickness increase, 0 to 70% Thickness increase, 0 to 45%	Nat. or syn. rubber and asbestos or other mineral fibers (15 grades)			Nonmetallic Gaskets for General Automotive Purposes	SAE J90 Type I
Air, compressibility ASTM #3 petroleum oil Issoctane	Ambient 212 80	- 70 22	Recovery, 70 to 75% Vol. change, -2 to +50% Vol. change, -5 to +35%	Nat. or syn. rubber and cork (11 grades)			Nonmetallic Gaskets for General Automotive Purposes	SAE J90 Type II
Air, compressibility ASTM #3 petroleum oil 70/30 Isooctane/toluene Water	Ambient 80 80 80	- 22 22 22	Recovery, 20 to 55% Thickness increase, 5 to 30% Thickness increase, 5 to 30% Thickness increase, 15 to 50%	Nat. or syn. rubber and cellulose or other organic fibers (24 grades)			Nonmetallic Gaskets for General Automotive Purposes	SAE J90 Type III
Air, original properties Air, 180° bend Air, compression set Air, oven aging	Ambient -13 158 158	- - 22 166	Elong. 400% min., hardness 50 No cracks 25% max. Elongation change, -30% max.	Nat. or syn. rubber		5330	Gasket; Rubber, Molded or Extruded, for Concrete Non-Pressure Sewer Pipe	HH-G-160
Air, original properties Air, compression set Air, oven aging Water	Ambient 158 158 158	- 22 96 158	Tensile, 1200 psi. mim; elong. 350% min. 25% max. Elongation change, -20% max. Weight increase, 10% max.	Nat. or syn. rubber			Joints for Circular Concrete Sewer and Culvert Pipe, Using Flexible, Water-tight Rubber Type Gaskets	ASTM C443/
Air, original properties	Ambient	-	Hardness, 50-80	Nitrile or polyacrylate			Lathe Cut Seals	SAE J654
Air, original properties Air, compression set Air, compression set Air, oven aging Ozone 100 pphm	Ambient -35 194 194 104	- 94 46 46 70	Tensile, 1000 psi. min.; elong. 300% min. 75% max. 30% max. Elongation change, -30% max. No cracks	Syn. rubber		5330	Rubber Material, 45 Durometer Hardness	MIL-R-900

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	COMPOSITION	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, ASTM D746 Air, compression set Air, compression set Isooctane 70/30 Isooctane/toluene	-20 -20 194 74 74	94 94 46 46 46	No cracks 60% max. 40% max. Volume change, 10 min. Volume change, 70% max.	Syn. rubber		5330	Gasket Material, Synthetic Rubber (For Bolted Steel Tanks)	MIL-G-1086 Type I,
Air, ASTM D746 Air, compression st Air, compression set Isooctane 70/30 Isooctane/toluene	-20 -20 194 74 74	94 94 46 46 46	No cracks 60% max. 50% max. Volume change, 10 min. Volume change, 70% max.	Syn. rubber		5330	Gasket Material, Synthetic Rubber (For Bolted Steel Tanks)	MIL-G-1086 Type II
Air, original properties Air, flexibility Air, compression set Air, oven aging	Ambient -20 158 158	- 16 94 94	Tensile, 1000 psi. min.; elong, 300% min. Flexible 75% max. Elongation change, -35% max.	Chloroprene, SBR, Butyl or Nitrile		5330-	Gasket Materials, Synthetic Rubber, 50 & 60 Durometer Hardness	MIL-G-1149 Type I
Air, original properties Air, flexibility Air, compression set Air, oven aging	Ambient -20 158 158	- 16 94 94	Tensile, 1000 psi. min; elong. 250% min. Flexible 75% max. Elongation change, -35% max.	Chloroprene, SBR, Butyl or Nitrile		5330-9320	Gasket Materials, Synthetic Rubber, 50 & 60 Durometer Hardness	MIL-G-1149 Type II
Air, compressibility ASTM #3 petroleum oil 70/30 Isooctane/toluene	Ambient 300 80	- 5 5	Recovery, 15 to 40% Thickness increase, 0 to 70% Thickness increase, 0 to 45%	Nat. or syn. rubber and asbestos or other mineral fibers (16 grades)			Nonmetallic Gasket Material for General Automotive and Aeronautical Purposes	ASTM F104 Type I
Air, compressibility Air, mandrel bend ASTM #3 petroleum oil Isooctane	Ambient 212 212 80	- 70 70 22	Recovery, 70 to 75% No cracks Volume change, -2 to +50% Volume change, -5 to +35%	Nat. or syn. rubber and cork (11 grades)			Nonmetallic Gasket Material for General Automotive and Aeronautical Purposes	ASTM F104 Type 2
Air, compressibility Air, mandrel bend ASTM #3 petroleum oil Isooctane	Ambient 212 212 80	- 70 70 22	Recovery, 75% min. No cracks Volume change, -10 to +50% Volume change, -10 to +25%	Nat. or syn. cellular rubber and cork (3 grades)			Nonmetallic Gasket Material for General Automotive and Aeronautical Purposes	ASTM F104 Type 2
Air, compressibility ASTM #3 petroleum oil 70/30 Isooctane/toluene Water	Ambient 80 80 80	- 22 22 22	Recovery, 20 to 55% Thickness increase, 5 to 30% Thickness increase, 5 to 30% Thickness increase, 15 to 90%	Nat. or syn. rubber and cellulose or other organic fibers (18 grades)			Nonmetallic Gasket Material for General Automotive and Aeronautical Purposes	ASTM F104 Type 3

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	COMPOSITION	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Ari, original properties Air, oven aging Air, compression set	Ambient 158 158	- 94 22	Tensile, 700 psi. min.; elong. 150% min. Tensile change, -25% max. 75% max.	Nat. or syn. rubber			Sheet Rubber Packing	ASTM D1330/ Grade I
Air, original properties Air, oven aging Air, compression set	Ambient 158 158	- 94 22	Tensile, 400 psi. min.; elong. 150% min. Tensile change, -25% max. 75% max.	Nat. or syn. rubber			Sheet Rubber Packing	ASTM D1330/ Grade II
Air, compression set Cooling medium, ASTM D746 Water ASTM #3 petroleum oil	158 -13 212 212	22 - 480 70	16% max. No cracks Volume change, 12% max. Volume change, -1 to +15%	Nat. or syn. rubber			Rubber Ring for Asbestos-Cement Pipe	ASTM D1869/
Air, compression set Air, compression set ASTM #3 petroleum oil Benzene	194 -20 158 74	46 94 94 22	40% max. 35% max. Volume change, 25% max. No delamination	Syn. rubber		5330	Rubber Sheet, Strip, Extruded, and Molded Shapes, Synthetic, Oil Resistant	MIL-R-2765
Air, original properties	Ambient	-	Hardness, 80 max.	40% Syn. rubber, 30% graphite		5330	Rubber Sheet, Solid, Unvulcanized, High Graphite, Gasket Use, Symbol 2352	MIL-R-2778
(Test performed on rubber compound only) TT-S-735 40% aromatic	74	24	Volume change, 100% max.	Syn. rubber, cotton sheeting		5330	Joing Sealing Packing	MIL-J-2829
MIL-L-15017 lubricating oil	210	1000	Satisfactory performance @ 1650 psi.	12% syn. rubber, 40% cotton fabric	Yes	5330	Packing Assembly Hydraulic Conical and V Types	MIL-P-2911 Type I
MIL-L-15017 lubricating oil	212	1000	Satisfactory performance @ 1650 psi.	12% Syn. rubber, 40% cotton, asbestos or wire asbestos fabric	Yes	5330	Packing Assembly, Hydraulic Conical and V Types	MIL-P-2911 Type II
Air, original property Air, impact dropping weight Air, oven aging Lubricating Oil Ethylene glycol	Ambient -40 212 300 300	- 24 70 72 72	T.S. 1500 psi. min. No cracks or deformation Breaking strength, 100 lbs. min Volume change, 0 to 15% Volume change, 0 to 25%	Syn. rubber		5325	Grommets-Rubber, Hot-Oil and Coolant Resistant	MIL-G-3036
Air, oven aging Lubricating Oil Gasoline	200 250 Ambient	15 5 5	Mandrel bend, no cracks Thickness increase, 40% max. Thickness increase, 40% max.	Nat. or syn. rubber or asbestos fibers			Gasket, Oil Resisting	AMS 3230

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	COMPOSITION	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, oven aging	212	15	Mandrel bend, no cracks	Syn. rubber and asbestos fibers			Gasket, Oil Resisting	AMS 3231
Lubricating oil	300	5	Thickness increase, 20% max.					
Gasoline	80	5	Thickness increase, 25% max.					
Air, compressibility	Ambient	-	25% max.	Syn. rubber and asbestos fibers			Asbestos and Synthetic Rubber Sheet, Hot Oil Resistant	AMS 3232
Air, oven aging	212	16	Mandrel bend, no cracks					
ASTM #1 petroleum oil	300	5	Thickness increase, 0 to 10%					
Isooctane	80	5	Thickness increase, 0 to 10%					
Air, compression set	158	22	70% max.	Syn. rubber and cork			Synthetic Rubber and Cork Composition. General Purpose Soft	AMS 3250
Cooling medium, ASTM D746	-40	-	No cracks					
Air, oven aging	212	70	Mandrel bend, no cracks					
ASTM #1 petroleum oil	212	24	Volume change, ±15%					
Isooctane	80	24	Volume change, -5 to 25%					
Air, comrpession set	158	22	80% max.	Syn. rubber and cork			Synthetic Rubber and Cork Composition. General Purpose Medium	AMS 3251
Cooling medium, ASTM D746	-40	-	No cracks					
Air, oven aging	212	70	Mandrel bend, no cracks					
ASTM #1 petroleum oil	212	24	Volume change, ±15%					
Isooctane	80	24	Volume change, -5 to +25%					
Air, compression set	158	22	80% max.	Syn. rubber and cork			Synthetic Rubber and Cork Composition. General Purpose Firm	AMS 3252
Cooling medium, ASTM D746	-40	-	No crakcs					
Air, oven aging	212	70	Mandrel bend, no cracks					
ASTM #1 petroleum oil	212	24	Volume change, ±10%					
Isooctane	80	24	Volume change, -5 to +25%					
Air, hydrostatic pressure	Ambient	-	180 pis. min.	Syn. rubber	Yes	1355	Diaphrams, Synthetic-Rubber	MIL-D-3377 Type I
Air, oven aging	158	96	Hydrostatic pressure, 180 psi. min.					
SAE #30 paraffin oil	80	24	Weight change, ±1%					
Air, hydrostatic pressure	Ambient	-	300 psi. min.	Syn. rubber and cotton fabric	Yes	1355	Diaphrams, Synthetic-Rubber	MIL-D-3377 Type II
Air, oven aging	158	96	Hydrostatic pressure, 210 psi. min.					
SAE #30 paraffin oil	80	24	Weight change, -1 to +3%					
Air, compression set	158	22	10% max.	Syn. rubber		5330	Rubber, Synthetic; Sheet, Strip and Molded	MIL-R-3433 Type II
Air, ASTM D736 bent loop	-17	5	No cracks					
ASTM #1 petroleum oil	168	70	Volume change, ±10%					
(Tests performed on rubber compound only)								
Air, compressed set	158	22	40% max.	Syn. rubber with or without fabric		1560	Fittings, Tank, Power-plant Fluid, Removable, General Specification For	MIL-F-5577 Type I
ASTM #1 petroleum oil	215	70	Volume change, -20 to +10%					
Ozone, 100 PPM	100	1/2	No cracks					

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	COMPOSITION	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
(Tests performed on rubber compound only) Air, compression set ASTM #1 petroleum oil Ozone, 100 PPM	 212 275 100	 22 70 1/2	 70% max. Volume change, -20 to +10% No cracks	Syn. rubber with or without rubber		1560	Fittings, Tank Power-plant fluid, Removable, General Specification For	MIL-F-1577 Type II
Air, compression set Air, compressibility ASTM #1 petroleum oil TT-S-735 40% aromatic	158 140 212 74	22 5 70 24	80% max. 10% min. Volume change, ±15% Volume change, +20% max.	Syn. rubber and cork		5330	Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets	MIL-C-6183 Type I, C1, 1, Gr. A (40-55) Gr. B (55-70)
Air, compression set Air, compressibility ASTM #1 petroleum oil TT-S-735 40% aromatic	158 -40 212 74	22 5 70 24	55% max. 25% min. Volume change, ±15% Volume change, +20% max.	Syn. rubber and cork		5330	Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets	MIL-C-6183 Type I, C1, 1, GR. C (70-85)
Air, comrepssion set Air, compressibility ASTM #1 petroleum oil TT-S-735 40% aromatic	158 -40 212 74	22 5 70 24	80% max. 25% min. Volume change, 0 to +10% Volume change, +60% max.	Syn. rubber and cork		5330	Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets	MIL-C-6183 Type I, C1, 2, GR. A (40-55) GR. B (55-70)
Air, compression set Air, compressibility ASTM #1 petroleum oil TT-S-735 40% aromatic	158 -40 212 74	22 5 70 24	55% max. 25% min. Volume change, 0 to +10% Volume change, +60% max.	Syn. rubber and cork		5330	Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets	MIL-C-6183 Type I, C1, 2 GR. C (70-85)
Air, compression set Air, compressibility ASTM #1 petroleum oil TT-S-735 40% aromatic	158 -40 212 74	22 5 70 24	80% max. 15% min. Volume chnage, ± 15% Volume change, +25% max.	Syn. rubber and cork		5330	Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets	MIL-C-6183 Type II, C1.1, GR. A (40-55) GR. B (55-70)
Air, cmopression set Air, compressibility ASTM #1 petroleum oil TT-S-735 40% aromatic	158 -40 212 74	22 4 70 24	55% max. 15% min. Volume change, ± 15% Volume change, +25% max.	Syn. rubber and cork		5330	Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets	MIL-C-6183 Type II, C1.1, GR. C (70-85)
Air, compression set Air, compressibility ASTM #1 petroleum oil TT-S-735 40% aromatic	158 -40 212 774	22 5 70 24	80%max. 30% min. Volume change, - to +10% Volume change, +60% max.	Syn. rubber and cork		5330	Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets	MIL-C-6183 Type II, C1.2, GR. A (40-55) GR. B (55-70)
Air, compression set Air, compressibility ASTM #1 petroleum oil TT-S-735 40% aromatic	158 -40 212 74	22 5 70 24	55% max. 30% min. Volume change, 0 to +10% Volume change, +60% max.	Syn. rubber and cork		5330	Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets	MIL-C-6183 Type II, C1.2, GR. C (70-85)

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	COMPOSITION	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, compressibility Air, compressibility 70/30 Isooctane/toluene	Ambient Ambient 74	- - 22	12 ± 5% Recovery, 45% min. Thickness change, 0 to 20%	Nat. or syn. rubber, asbestos fibers		5330	Asbestos Sheet, Compressed, For Fuel, Lubricant, Coolant, Water, and High-Temperature Resistant Gaskets	MIL-A-7021 Class 1
Air, Compressibility Air, compressibility Water	Ambient Ambient 212	- - 70	12 ± 5% Recovery, 45% min. Thickness change, 0 to +10%	Nat. or syn. rubber, asbestos fibers		5330	Asbestos Sheet, Compressed, For Fuel Lubircant, Coolant, Water and High Temperature Resistant Gaskets	MIL-A-7021 Class 2
Air, compression set Air, compression set Isooctane ASTM #1 petroleum oil Isooctane	Ambient 212 80 212 80	- 70 5 70 5	15% max. 10% max. Compression set, 20% max. Thickness change, 0 to 10% Thickness change, 0 to 15%	18 Cr-8 Ni screen between rubberlike gasket material			Gaskets, Type XX Engine Accessory Drive. Corrosion Resistant Steel Screen Reinforced Controlled Performance	AMS 7283
Air, original properties	Ambient		T.S. 1200 psi. min., elong. 150% min.	Synthetic rubber		5330	Rubber Synthetic Solid Sheet Strip and Fabricated Parts Synthetic Oil	MIL-R-7362 Type II
MIL-H-5606 Hydraulic fluid and nitrogen, endurance	-65 to 200	-	10% max. air leakage after cycling	Nat. or syn. rubber		5330	Packings, Gaskets, and Fillers, Preformed Rubber or Synthetic Rubber (for Recoil Mechanism)	MIL-P-11501
Air, original properties Air, oven aging Cooling medium, ASTM D1053	Ambient 437 -40	- 70 -	Tensile, 500 psi, min.; elong. 75% min. Elongation change, -30% max. Flexible	Syn. rubber		5330	Packing, Preformed; Pneumatic Hose Couplings, Universal	MIL-P-11719
Air, compressibility Air, mandrel bend ASTM #3 petroleum oil 70/30 Isooctane/toluene	Ambient -40 302 78	- 6 5 5	Recovery, 15 to 40% No breaks or cracks Thickness increase 0 to +70% Thickness increase 0 to +45%	Nat. or syn. rubber, asbestos or other mineral fibers (15 grades)		5330	Gasket Material, Non-Metallic	MIL-G-12803 Type I
Air, compressibility Air, mandrel bend ASTM #3 petroleum oil Isooctane	Ambient -40 212 78	- 6 70 22	Recovery, 75% min. No breaks or cracks Volume change, -2 to +50% Volume change, -5 to +15%	Nat. or syn. rubber and cork (9 grades)		5330	Gasket Material, Non-Metallic	MIL-G-12803 Type II

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	COMPOSITION	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, compressibility	Ambient	-	Recovery, 20 to 55%	Nat. or syn. rubber, cellulose or other organic fabric (24 grades)		5330	Gasket Material, Non-Metallic	MIL-G-12803 Type III
ASTM #3 petroleum oil	78	22	Thickness increase, +5 to +30%					
70/30 Isooctane/toluene	78	22	Thickness increase, +5 to +30%					
Water	78	22	Thickness increase, +15 to +90%					
Air, original properties	Ambient	-	Tensile, 1000 psi. min.; elong, 400% min.	Nat. or syn. rubber		4240	Gaskets, Rubber	MIL-G-13210
Air, compression set	158	22	25% max.					
Air, original properties	Ambient	-	Tensile, 1200 psi, min., elong, 300% min	Syn. rubber		5330	Rubber Sheet: Synthetic, Medium Soft General-Purpose Gasket Material (For Extreme Climatic Conditions)	MIL-P-14328
Air, compression set	-65	94	60% max.					
Air, compression set	194	46	40% max.					
Water	74	24	Volume change, -2 to +5%					
(Tests performed on rubber compound only)								
Air, original properties	Ambient	-	Tensile, 1500 psi. min.; elong, 300% min.	Syn. rubber with 6 to 10 plies of cotton duck		5330	Packing (Wiper Ring). Synthetic Rubber, Cloth Insertion	MIL-P-14574
Air, compression set	158	22	50% max.					
ASTM #3 petroleum oil	212	70	Volume change, 0 to 120%					
(Tests performed on rubber compound only)								
Air, original properties	Ambient	-	Tensile, 1800 psi. min.; elong, 300% min.	Chloroprene		5330	Rubber, Shaft Covering Material, (For Marine Propeller Shafts)	MIL-S-15058 Type II
Air, oven aging	158	96	Tensile change, ±20%					
Water	212	96	Volume change, 15% max.					
(Tests performed on rubber compound only)								
Air, original properties	Ambient	-	Tensile, 1200 psi. min.; elong, 250 min.	SBR		5330 8030	Rubber, Shaft Covering Material, (For Marine Propeller Shafts)	MIL-S-15058 Type III
Air, oven aging	158	96	Tensile change, ± 20%					
Water	212	96	Volume change, 15% max.					
(Tests performed on rubber compound only)								
Air, original properties	Ambient	-	Tensile, 1200 psi. min.; elong, 250 min.	Nitrile		5330 8030	Rubber, Shaft Covering Material, (For Marine Propeller Shafts)	MIL-S-15058 Type IV
Air, oven aging	158	96	Tensile change, ± 20%					
Water	212	96	Volume change, 15% max.					
Air, original properties	Ambient	-	Tensile, 1500 psi. min.; elong, 400% min.	Class I, Chloroprene; Class III, Nitrile		5330	Rubber Gasket Material 50 Durometer Hardness (Maximum)	MIL-R-15624 Class I, Class III
Air, flexibility	-20	16	Flexible					
Air, compression set	194	46	30% max.					
Air, oven aging	194	46	Elongation change, -30% max.					
Water	74	24	Volume change, 5% max.					
Air, original properties	Ambient	-	Tensile, 1000 psi. min.; elong, 300% min.	SBR		5330	Rubber Gasket Material 50 Durometer Hardness (Maximum)	MIL-R-15624 Class II
Air, flexibility	-20	16	Flexible					
Air, compression set	194	46	30% max.					
Air, oven aging	194	46	Elongation change, -30% max.					
Water	74	24	Volume change, 5% max.					

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	COMPOSITION	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, compression set Air, oven aging Sulfuric acid, 60%	Ambient 194 194 158	- 46 46 168	Tensile, 1200 psi. min.; elong, 300% min. 40% max. Elongation change, -30% max. Volume change, 0 to +8%	Syn. rubber		9320	Parts, Synthetic Rubber, for Use with Batteries or in Battery Compartments of Submarines	MIL-P-15817
Flame (Tests performed on rubber compound only) Air, original properties Air, compression set	- Ambient 194	- - 46	No burning after flame is removed Tensile, 1000 psi. min.; elong, 300% min. 40% max.	Syn. rubber, asbestos cloth (2 ply)		5330	Gaskets, Asbestos Metallic Cover, Rubber Core	MIL-G-17927
ASTM #3 petroleum oil Mineral oil	158 -	70 -	Volume change, -1 to +7% Cycling test, satisfactory performance	Syn. rubber	Yes	5330	Packings, Hydraulic High Pressure (For Hydropneumatic Systems)	MIL-P-19152
Air, original properties Air, compression set ASTM #3 petroleum oil Hardness, Shore A	Ambient 194 158 Ambient	- 46 94 -	Tensile, 2500 psi. min.; elong, 250% min. 40% max. Volume change, +3% max. 75 ± 5	Nitrile		9330	Gaskets, Synthetic Rubber, Oil Resistant, Slide Valve (For 21-Inch Submerged Torpedo Tubes)	MIL-G-19769
Air, compressibility ASTM #3 petroleum oil	Ambient 212	- 70	Recovery, 50% min. Volume change, +45% to +65%	Syn. rubber		5330	Packing, V Ring	MIL-P-19918 V Packing (85-95)
Air, compression set ASTM #3 petroleum oil	212 212	70 70	30% max. Volume change, +30 to +40%	Syn. rubber		5330	Packing, V Ring	MIL-P-19918 Filler Ring (55-65)
(Tests performed on rubber compound only) Air, original properties Air, compression set Air, compression set Benszene	Ambient -35 194 74	- 94 46 22	Tensile, 1000 psi. min.; elong, 300% min. 40% max. 30% max. No delamination	Syn. Rubber		5330	Gaskets, Metal Inserted Rubber, Armored Hatch	MIL-G-20078
Air, compression set ASTM #3 petroleum oil	212 212	70 70	60% max. Volume change, 0 to +40%	Syn. rubber		5330	Packing, Vulcanized Asbestos-Metallic (For Small Arms)	MIL-P-20099
MIL-H-19457 hydraulic fluid	180	1000	Satisfactory performance @ 3000 psi.	Syn. rubber with cotton, leather or asbestos	Yes	5330	Packing Assemblies, Hydraulic Concial and V Types, Fire Resistant Type Hydraulic Fluid	MIL-P-21099

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	COMPOSITION	OPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, compression set Water	Ambient 212 194	- 70 70	Tensile, 1600 psi. min.; elong, 70% min. 65% max. Volume change, +25% max.	SBR		5330	Rubber Sheet, Solid, Synthetic, Shipboard Water Evaporator Gasketing	MIL-R-21252
(Tests performed on rubber compound only) MIL-F-17111 hydraulic fluid	150	70	Volume change, -1 to +10%	Syn . rubber		5330	Seals, Plain or Plain Encased, Oil	MIL-S-21558 Grades A & B Class 1
(Tests performed on rubber compound only) MIL-F-17111 hydaaulic fluid	200	70	Volume change, -1 to +10%	Syn. rubbbr		5330	Seals, Plain or Plain Encased, Oil	MIL-S-21558 Grades A & B Class 2
Air, original properties Air, oven aging Oil immersion #2 Oil	Ambient 194 194	- 336 94	T.S. 1800 psi. min.; elongation 250% min. Hardness 60 ± 10 T.S. -25% max. change Compression set 50% max. change T.S. -25% max. change Volume change +10% max.	Syn. rubber		5330	Gasket, Cylinder	MIL-G-21569 Class I
Air, original properties Air, oven aging Oil immersion #2 Oil	Ambient 194 194	- 336 94	T.S. 500 psi. min. Elong. 120% min. Hardness 65 ± 10 T.S. -25% max. change Compression set 50% max. change T.S. -35% max. change Volume change +15 % max.	Syn. rubber		5330	Gasket, Cylinder	MIL-G-21569 Class II
Air, original properties Air, compression set ASTM #3 petroleum oil Steam	Ambient 158 230 280	- 22 168 24	Tensile, 1200 psi. min.; elong, 300% min. 35% max. Volume change, +20% max. Volume change, 10% max.	Nitrile	Yes	5330	Gaskets, Heat Exchanger, Various Cross Section Ring, Synthetic Rubber	MIL-G-21610 Type I
Air, original properties Air, compression set ASTM #1 petroleum oil	Ambient 158 230	- 22 168	Tensile, 600 psi. min.; elong. 150% min. 40% max. Volume change, 15% max.	Silicone	Yes	5330	Gaskets, Heat Exchanger, Various Cross Section Ring, Synthetic Rubber	MIL-G-21610 Type II
Air, original properties Air, aging MIL-H-19457 Hydraulic Fluid Steam	Ambient 280 212 330	- 166 166 166	T.S. 2400 psi. min.; elong, 25% min. Hardness 65 ± 5 T.S. -30% max.; elong, -30% max. Volume change 0 - 10% Volume change +5% max.	Ethylene - Propylene		9320	Gasket & Packing Material Rubber for Use with Polar Fluids, Steam and Air at Moderately High Temperatures	MIL-C-22050 Grade 1

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	COMPOSITION	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T.S. 2400 psi. min.; elong 150% min. Hardness 80 ± 5	Ethylene - Propylene		9320	Gasket & Packing Material, Rubber for Use with Polar Fluids, Steam and Air at Moderately High Temperatures	MIL-C-22050 Grade 2
Air, aging	280	166	T.S. -30% max.; elong, -30% max.					
MIL-H-19457 Hydraulic Fluid	212	166	Volume change 0 -10%					
Steam	330	166	Volume change +5% max.					
Air, original properties	Ambient	-	Tensile, 1600 psi. min.; elong, 150% min.	Syn. rubber		5330	Gasket and Packing Material Petroleum and Phosphate Ester Fluid Resistant	MIL-G-23652 Type I
Air, compression set	212	70	25% max.					
ASTM #3 petroleum oil	212	70	Volume change, 0 to +5%					
MIL-H-19457 hydraulic fluid	212	70	Volume change, 0 to +8%					
Air, original properties	Ambient	-	Tensile, 1700 psi. min.; elong, 100% min.	Syn. rubber		5330	Gasket and Packing Material Petroleum and Phosphate Ester Fluid Resistant	MIL-G-23652 Type II
Air, compression set	212	70	40% max.					
ASTM #3 petroleum oil	212	70	Volume chnage, 0 to +5%					
MIL-H-19457 hydraulic fluid	212	70	Volume change, 0 to +8%					
Air, original properties	Ambient	-	Tensile, 1500 psi. min.; elong, 300% min.	Syn. rubber		5330	Gasket and Packing Material, Oil Resistant Rubber, Access Hull Applications	MIL-G-23983
Air, compression set	194	46	30% max.					
ASTM #1 petroleum oil	212	70	Volume change, 9 to +5%					
Ozone, 100 pphm	100	168	No cracks					
Air, original properties	Ambient	-	Specific gravity 2.15 Melting Point 327°C	Polytetra-Fluoroethylene		5330	Packing Material, Braided TFE (Poly-tetrafluoroethylene	MIL-P-24396
Lubricant Content	Ambient	-	15% petroleum oil					
Rubber conforms to MIL-H-5606				Synthetic rubber		5330	Packing, Preformed Petroleum Hydraulic Fluid Resistant 275°F	MIL-P-25732
Air, original properties	Ambient		T.S. 200 psi. min.; elong, 200% min. Hardness 50 to 70	Tetrafluoroethylene		5330	Gasket Material, Tetrafluorethylene Resin, Glass-Filled Cryogenic Application	MIL-G-38426
Water absorption	Ambient	336	Wt. increase 0.5% max.					
MIL-L-10295, lubricating oil	-65	16	Sealing test, no leak during shutdown	Syn. rubber chrome leather	Yes	5330	Seal, Plain, and Seal, Plain, Encased: Fluid, Radial, Single and Multiple Lip Sealing Member	MIL-S-45005 Class 1
MIL-L-15015, lubricating oil	170	192						
MIL-L-12095, lubricating oil	-65	16	Sealing test, no leak during shutdown	Syn. rubber	Yes	5330	Seal, Plain, and Seal, Plain, Encased: Fluid Radial, Single and Multiple Lip Sealing Member	MIL-S-45005 Class 2
MIL-L-15015, lubricating oil	200	192						

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	COMPOSITION	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
MIL-L-10295, lubricating oil MIL-L-15015, lubricating oil	-65 300	16 192	Sealing test, no leak during shutdown	Syn. rubber	Yes	5330	Seal, Plain, and Seal, Plain, Encased: Fluid Radial, Single and Multiple Lip Sealing Member	MIL-S-45005 Class 3
Rubber conforms to AMS 3222				Chloroprene rubber		5330	Gasket, RF and Pressure	MIL-G-46898
Rubber conforms to ZZ-R-765, Class III, Grade 25				Silicone rubber		5330	Gasket, Shielding, Electronic-oriented Wires Embedded in Silicone Rubber, Pressure Seal	MIL-G-47197
Air, original properties	Ambient	--	T.S. 100 psi.; elong. 500% Hardness 30 to 80	Synthetic rubber		5330	Rubber Synthetic Sheets Strips Molded or Extruded Shapes	MIL-R-6855 Class 1
Air, oven aging Oil immersion	212 212	70 70	T.S. -20% max.; elong. -50% max. Volume change -30 to +10%					
Air, original properties	Ambient	-	T.S. 1200 to 1500 psi.; elong. 300 to 500% Hardness 30 to 60	Synthetic rubber		5330	Rubber Synthetic Sheets Strips Molded or Extruded Shapes	MIL-R-6855 Class 2
Air, oven aging Oil immersion	212 212	70 70	T.S. -20% max.; elong. 40% min. Volume change ± 10%					
Air, original properties	Ambient	-	T.S. 1600 psi. min. Elongation 100% min. Hardness 85 ± 5	Ethylene - Propylene		5330	Rubber, Ethylene - Propylene, Hydrazine Resistant	MIL-R-83412 Type I
Air, oven aging	2 257	70	T.S. -35% max. Elongation -30% max. Hardness +5 points					
Oil immersion, Hydrazine	160	96	T.S. -20% max. Vol. change +3% max.					
Air, original properties	Ambient	-	T.S. 1350 psi. min. Elongation 125% min. Hardness 75 ± 3	Synthetic		5330	Packings , Rubber, Synthetic, Solid, Sheet, Strip and Fabrication Parts Synthetic Oil Resistant	MIL-P-83461
Oil immersion Conforming to MIL-H-5606	275	70	T.S. -50% max. change Elongation -35% max. change Volume change +20% max.					

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WIRE, CABLE AND RELATED ELECTRICAL ITEMS

SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
(Tests on cured patch) Air, original properties	Ambient	-	T, 2000 psi min; E, 600% min	Natural rubber		2640	Patch, Repair, for Inner Tubes and Tubeless Tire Liners	ZZ-P-112
Air, original properties	Ambient	-	T, psi min, tread 1800; sidewall 1000	Natural or synthetic rubber, Rayon or nylon cord		2610	Tires, Pneumatic, Vehicular (Highway)	ZZ-T-381 Type I
Air, original properties	Ambient	-	T, psi min, tread 1700; sidewall 900	Natural or synthetic rubber, Rayon or nylon cord		2610	Tires, Pneumatic, Vehicle and Portable Equipment	ZZ-T-381 Type II
Air, original properties Air, oven aging ASTM #3 petroleum oil	Ambient 158 212	- 70 70	T, 2000 psi min; E, 200% min; H, 65 ± 10 Max change; T, -15%; E, -25%; H, +5 Volume change, 20% max	Type of rubber not specified		2630	Tire, Solid Rubber, and Wheel, Solid Rubber Tire, (Industrial)	ZZ-T-391 Type I
Air, original properties Air, oven aging Ozone, 50 pphm	Ambient 158 100	- 70 168	T, 2000 psi min; E, 200% min; H, 65 ± 10 Max change; T, -15%; E, -25%; H, +5 No cracks under 7X magnification	Type of rubber not specified		2630	Tire, Solid Rubber, and Wheel, Solid Rubber Tire, (Industrial)	ZZ-T-391 Type II
Air, original properties Methanol, ASTM D746 Air, oven aging	Ambient -65 158	- 0.05 70	T, 3800 psi min; E, 400% min; H, 75 ± 20 No cracks Max change; T, -15%; E, -25%; H, +5	Type of rubber not specified		2630	Tire, Solid Rubber, and Wheel, Solid Rubber Tire, (Industrial)	ZZ-T-391 Type III
Air, road service test Air, road service test	Ambient Ambient	- -	Class A; No failure after 1500 miles Class B; No failure after 2500 miles	Tires; natural Tires; natural		2610	Tire, Pneumatic; Inner Tube, Pneumatic Tire; (Bicycle)	ZZ-T-401
Air, original properties	Ambient	-	Tread; T, 1700 psi min; E, 400% min Sidewalls, T, 900 psi min	Tires; natural or synthetic		2610	Tire Pneumatic, Industrial	ZZ-T-410
(Tests on cured materials) Air, tensile strength Cooling medium, ASTM D746 Ozone, 50 pphm	Ambient -65 100	- 0.05 168	2000 to 3300 psi, varying with type No cracks No greater cracking than for control	Natural, SBR, butyl or polybutadiene		2640	Tire, Pneumatic: Retread and Repair Materials	ZZ-T-416
(Repair and retread materials covered in ZZ-T-416. Curing bags and tubes covered in MIL-C-14625)						2640	Tire, Pneumatic: Retreaded and Repaired	ZZ-T-441

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, tensile strength Air, elongation Air, endurance test (C1 B) Air, tension set	Ambient Ambient -64 225	- - 168 5	Psi min; Butyl, 1200; Natural, 2100 % min; Butyl, 450; Natural 550 No cracks or leaks % max; Butyl 35; Natural, 25	Butyl or natural		2610	Inner Tube, Pneumatic Tire	ZZ-I-550
Air, original properties	Ambient	-	Hardness, Type A, 85 to 95	Type A: Natural or synthetic. Type B: PVC		5670	Treads, Metallic and Nonmetallic, Nonskid	RR-T-650
Air, tensile strength Air, elongation Air, tension set	Ambient Ambient 225	- - 5	Psi min; Butyl, 1400; Natural, 2300 % min; Butyl, 500, Natural, 600 % max; Butyl, 30; Natural, 25	Natural or butyl		2610	Tubes, Inner, Vehicle Puncture-Sealing	ZZ-T-766
Air, original properties Air, oven aging Ozone, 50 pphm	Ambient 158 100	- 166 168	T, 1900 psi min; E, 200% min; H, 70 ± 10 T change, 25% max; E change, 35% max No cracks under 7X magnification	Synthetic rubber, type not specified	Yes	2630	Tires, Solid Rubber, and Wheels, Solid Rubber Tired	MIL-T-3100
Air, original properties Cooling medium, ASTM D746	Ambient -65	- 0.05	T, 2100 psi min; E, 550% min No cracks	Type of rubber not specified	Yes	2620	Tubes, Inner, Aircraft Pneumatic Tire	MIL-T-5014
Air, air retention Cooling medium, ASTM D746	Ambient -65	24 0.05	Air pressure loss, 5% max No cracks	Type of rubber not specified		2620	Tires, Pneumatic, Aircraft	MIL-T-5041
Air, original properties Air, original properties Air, original properties Air, original properties	Ambient Ambient Ambient Ambient	- - - -	Camelback; T, 3300 psi min; E, 475% min Cushion; T, 2500 psi min; E, 550% min Padding; T, 2500 psi min; E, 550% min Tread repair; T, 2200 psi min; E, 500% min	Natural		2640	Repair and Treading Materials, Aircraft Pneumatic Tire	MIL-R-7725
Air, original properties	Ambient	-	T.S. Tread 1700 psi min; Sidewall. 900 psi min Elongation 400% sidewall, 300% sidewall	Natural or synthetic rubber		2610	Tires, Pneumatic, Low Speed, Off Highway	ZZ-T-00183
Air, tensile strength Air, elongation Cooling medium, ASTM D746 Air, oven aging Ozone, 50 pphm	Ambient Ambient -40 158 100	- - 0.05 70 168	Bushings, 3500 psi min; Shoes, 2900 psi min Bushings, 500% min; Shoes, 400% min No cracks (bushings, shoes & pads) Change in elong: bushings; -15%, shoes, -25% No cracks under 7X magnification	Type of rubber not specified	Yes	2530	Track Shoe Assemblies, Track Shoe Pads, and Track Shoe Sets, Vehicular: Rubberized	MIL-T-11891
Air, tensile strength Air, elongation Air, test wheel performance Ozone, 50 pphm	Ambient Ambient -64 100	- - 168 720	Tread, 1700 psi min; sidewall, 900 psi min Tread, 400% min; sidewall, 300% min No cracks or breaks Cracking no greater than for control	Natural or synthetic	Yes	2610	Tire, Pneumatic: For Military Ground Vehicles	MIL-T-12459

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, curing @ 85 psig Air, curing @ 85 psig Air, curing @ 130 to 180 psig	310 310 310	6 3 6	Type I, class 1; no damage Type I, class 2; no damage Type II, classes 1 and 2; no damage	Natural or butyl		4910	Curing Bags and Curing Tubes Tire Repair, Recapping & Retreading	MIL-C-14625
Air, original properties	Ambient	-	Tread T.S. 1300 psi run, Sidewall T.S. 900 psi min Elongation, tread 400% min; sidewall 300% min	Natural or synthetic		2610	Tire, Pneumatic, Agricultural	ZZ-T-1619
Air, original properties Air, original properties Air, compression set	Ambient Ambient 158	- - 24	T, 2000 psi min (nat); 1500 psi min (syn) H, 70 ± 3 (outer shell); 55 ± 3 (core) 20% max	Natural or synthetic		2530	Wheels, - Cushion Tread (Semi-Pneumatic) For Mobile Ground Support Equipment	MIL-W-21985
Air, original properties Air, blowout resistance	Ambient 100	- 6	T, E & H, as per approved value No cracking, chunking or blowout	SBR (unvulcanized)		2640	Tread Rubber; Solid Rubber Tire For Track Laying Vehicles	MIL-T-45301
Rubber properties conforms to MIL-T-3100				Synthetic rubber		2630	Wheels, Solid Rubber Tired, Rebuilt	MIL-W-46759
(Tests on vulcanized bushings) Air, original properties Cooling medium, ASTM D746 Air, oven aging	Ambient -67 158	- 0.05 70	T, 3500 psi min; E, 500% min; H, 55-68 No cracks T, 3000 psi min; E, 425% min	Pin bushing: Natural or nat/syn blend		2530	Rubber Stock, Unvulcanized: For Track Shoes, Pads, and Pin Bushings	MIL-R-46762 Style II
(Tests on vulcanized shoes and pads) Air, original properties Cooling medium, ASTM D746 Air, oven aging Ozone, 50 pphm	Ambient 440 212 100	- 0.05 70 168	T, 2900 psi min; 400% min; H, 63-73 No cracks T, 2500 psi min; E, 300% min No cracks under 7X magnification	Block stock: SBR		2530	Rubber, Stock, Unvulcanized: For Track Shoes, Pads, and Pin Bushings	MIL-R-46762 Style I
No specific properties listed				Natural or synthetic rubber		2610	Tire, Pneumatic: Large Size, Off-the-Road, General Specification For.	MIL-T-52583
Air, original properties	Ambient	-	T.S. 2500 psi min, Elongation 475% min Hardness 62 ± 5	Natural or synthetic rubber		2640	Tread Rubber: Strip Form Stock, for Retreading Pneumatic Tires	MIL-T-62118

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T.S. 2500 psi min Elongation 500% min	Natural or synthetic natural rubber		2610	Tire, Pneumatic: For Truck, Logistical Goer Type, (Tubeless)	MIL-T-62129
Air, original properties	Ambient	-	Tread T.S. 1700 psi min; sidewall T.S. 1300 psi min Elongation 400% min.	Natural or synthetic rubber		2610	Tire: Pneumatic; with Flap, 14.00-20, Run Flat	MIL-T-62157

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WIRE, CABLE AND RELATED ELECTRICAL ITEMS

SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, elongation Air, mandrel bend Air, mandrel bend	Ambient 14 -4	- 5 5	Jkt. min %: PVC, 100; CR, 300 No cracks, Type NM No cracks; Types NNC & UF	Chloroprene or PVC	Chloroprene (CR) or PVC		6145	Cable and Wire, Power, Electrical, Non-metallic-Sheathed	J-C-94 Types NM, NMC, and UF
Air, mandrel bend Oxygen, @ 300 psi Ozone, 50 pphm	-40 160 100	20 240 168	No cracking of elastomer Min T: jacket, 1000 psi No cracking of jacket	SBR	Chloroprene		6145	Cable, Telephone, (W-108-B)	J-C-96
Air, tensile strength Oxygen, aging @ 300 psi ASTM #2 petroleum oil	Ambient 158 250	- 96 18	Min psi: ins. 500; jkt. 1800 Max % T chg: ins. -25; jkt. -30 Max % T chg: jacket -40	Nat and/or SBR	Chloroprene		6145	Cable, Power, Electrical and Wire, Electrical	J-C-103 Types R & RW
Air, tensile strength Oxygen, aging @ 300 psi ASTM #2 petroleum oil	Ambient 176 250	- 168 18	Min psi: ins. 1500; jkt. 1800 Max % T chg: ins -25; jkt -50 Max % T chg: jacket -40	Chlorosulfon-ated polyethylene	Chloroprene		6145	Cable, Power, Electrical and Wire, Electrical	J-C-103 Type RHW-1
Air, tensile strength Oxygen, aging @ 300 psi ASTM #2 petroleum oil	Ambient 176 250	- 168 18	Min psi: ins. 1500; jkt. 1800 Max % T chg: ins. -50; jkt. -50 Max % T chg: jkt. -40	Nat and/or SBR and/or butyl	Chloroprene		6145	Cable, Power, Electrical and Wire, Electrical	J-C-103 Type RH & RHW-2
Air, tensile strength Air, oven aging ASTM #2 petroleum oil	Ambient 260 250	- 168 18	Min psi: ins. 700; jkt. 1800 Max % T chg: ins. -40; jkt. -50 Max % T chg: jkt. -40	Nat and/or SBR and/or butyl	Chloroprene		6145	Cable, Power, Electrical and Wire, Electrical	J-C-103 Type RHH
Air, tensile strength Oxygen, aging @ 300 psi ASTM #2 petroleum oil	Ambient 158 250	- 96 18	Min psi: ins. 3000; jkt. 1800 Max % T chg: ins. -15, jkt. -30 Max % T chg: jkt. -40	Natural	Chloroprene		6145	Cable, Power, Electrical and Wire, Electrical	J-C-103 Type RU, & RUW
Air, tensile strength Oxygen, aging @ 300 psi Oxygen, aging @ 300 psi ASTM #2 petroleum oil	Ambient 176 158 250	- 168 96 18	Min psi: ins. 3000; jkt. 1800 Max % T chg: ins. -20 Max % T chg: jkt. -30 Max % T chg: jkt. -40	Natural	Chloroprene		6145	Cable, Power, Electrical and Wire, Electrical	J-C-103 Type RUH
Air, original properties Air, oven aging	Ambient 277	- 1440	Min T: 800 psi; E 250% Max % E chg: -35	Silicone	Asbestos or glass braid		6145	Cable, Power, Electrical and Wire, Electrical	J-C-103 Type SA
Air, mandrel bend Flame	14 -	5 -	No cracks Self burning 1 min. max	Rubber or plastic	Natural or chloroprene		6145	Cable and Wire, Power, Electrical, (Service-Entrance and Service-Drop)	J-C-115 Types SE & USE

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, mandrel bend Air, mandrel bend	14 250	1 1	No cracks No cracks	Thermoplastic	None		6145	Cable and Wire; Thermoplastic-Insulated, General Purpose, (0 to 600 Volt Service)	J-C-129 Type TW & THW
(Tests on rubber only) Air, original properties Oxygen, aging @ 300 psi ASTM #2 petroleum oil	 Ambient 158 250	 - 96 18	 Min T: 1400 psi; E 250% Max % chg: T, -25; E, -35 Max % chg: T, -40; E, -40		Chloroprene		6145	Cable, Power, Electrical and Wire, Electrical, (Weather-Resistant)	J-C-145 Type I
(Type I covered by Series S or SJ of J-C-580 Type II covered by MIL-C-3432)				Natural, SBR, PVC	Natural, SBR, PVC or chloroprene		6150	Cable Assembly, Power, Electrical, for 125 Volt Equipment	J-C-175
(Tests on rubber only) Air, original properties Air, oven aging	 Ambient 158	 - 96	 Min T: 1200 psi; E 400% Max E chg: -15%	Natural	Not applicable			Natural Rubber Performance Insulation For Wire and Cable, 60C Operation	ASTM D353
Air, tensile strength Air, mandrel bend Air, aging @ 1/3 psi	Ambient -65 160	- 5 48	1500 psi min No cracks Not soft or tacky	PVC	None		6145	Cable, (Wire), Two-Conductor, Parallel	MIL-C-442 Types I, II & III Class 1
Air, tensile strength Air, mandrel bend Air, aging @ 1/3 psi	Ambient -40 160	- 5 48	1200 psi min No cracks Not soft or tacky	PVC	None		6145	Cable, (Wire), Two-Conductor, Parallel	MIL-C-442 Types I, II & III Class 2
Air, tensile strength Air, mandrel bend Oxygen, aging @ 300 psi	Ambient -65 158	- 5 94	3000 psi min No cracks Tensile strength: 900 psi min	SBR	None		6145	Cable, (Wire), Two-Conductor, Parallel	MIL-C-442 Types I, II, & III Class 3
Air, tensile strength Air, mandrel bend Air, aging @ 300 psi	Ambient -40 158	- 5 94	1200 psi min No cracks Tensile strength: 900 psi min	SBR	None		6145	Cable, (Wire), Two-Conductor, Parallel	MIL-C-442 Types IV, V & VI Class 2
(Tests on rubber only) Air, original properties Air, oven aging @ 80 psi	 Ambient 260	 - 20	 Min T: 1500 psi; E 400% Max E chg: -50%	Natural	Not applicable			Natural Rubber Heat-Resisting Insulation For Wire and Cable, 75C Operation	ASTM D469
(Tests on rubber only) Air, original properties Oxygen, aging @ 300 psi	 Ambient 158	 - 96	 Min T: 3500 psi; E 500% Min T: 2500 psi; E 400%	Not applicable	Natural			Natural Rubber Jacket For Wire and Cable	ASTM D532

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, mandrel bend Air, oven aging Kerosene SAE #30 oil	-30 250 Ambient 250	24 48 18 -40	No cracking of jkt. No cracking of jkt. No damage to ins. No cracking of jkt.	Natural	Synthetic			High Tension Ignition Cable	SAE J557 Types HTLR, HTHR & HTS
Air, corona 20,000 volts	Ambient	2	No failure	Natural	Braid			High Tension Ignition Cable	SAE J557 Type HTB
Air, mandrel bend Air, oven aging Kerosene	-30 250 Ambient	24 48 18	No cracking No cracking No damage to insulation	PVC	None			High Tension Ignition Cable	SAE J557 Type HTT
Air, original properties Kerosene & SAE 10 W oil	Ambient 122	- 20	Min T: 2300 psi; E 125% Max OD chg: +15%	PVC	None			Low Tension Cable	SAE J558 Types GPT, HDT, & SGT
SAE 30 and gasoline Kerosene & SAE 10 W oil	Ambient 122	24 20	Max OD chg: +15% (Natural) Max OD chg: +15% (PVC)	Natural or PVC	Braid			Low Tension Cable	SAE J558 Types GPB, HDB, & HDB-X
Gasoline and SAE 30 oil	Ambient	24	Max OD chg: +15%	Natural or synthetic	None			Low Tension Cable	SAE J558 Type SGR
Air, elongation Air, mandrel bend Oxygen, aging @ 300 psi ASTM #2 petroleum oil	Ambient -20 158 250	- 4 96 18	Min: ins. 250%; jkt. 300% No cracking of jkt. Max E chg: ins. & jkt. -30% Max E chg: jkt. -40%	Not specified	Not specified			Seven Conductor Jacketed Cable For Truck and Trailer Connections	SAE J559
(Tests on rubber only) Air, original properties Air, oven aging Ozone, 10000 to 15000 pphm	Ambient 158	- 168 3	Min T: 450 psi; E 250% Min T: 400 psi; E 200% No cracks	Natural or synthetic	Not applicable			Ozone-Resisting Insulation For Wire and Cable	ASTM D574
Air, original properties Air, original properties Air, original properties Oxygen, aging @ 300 psi Air, oven aging Air, oven aging	Ambient Ambient Ambient 158 212 158	- - - 96 168 168	Min: C1 2; T 500 psi, E 200% Min: C1 11; T 1600 psi, E 200% Min: C1 13; T 1200 psi, E 250% C1 2; Max E chg: -35% C1 11; Max E chg: -50% C1 13; Max E chg: -40%	Natural or SBR (C1 2), PVC (C1 11), Chloroprene (C1 13)	Braid or none		6145	Cord, Flexible, and Wire, Fixture, (Electrical 0 to 600 Volt Service)	J-C-580 Types C, K, P, P-2, PD, PO, PO-2, PW & PW-2

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, original properties Air, original properties Oxygen, aging @ 300 psi Air, oven aging Air, oven aging	Ambient Ambient Ambient 158 212 178	- - - 96 168 1440	Min: C1 2; T 500 psi, E 200% Min: C1 11; T 1600 psi, E 200% Min: C1 12; T 1500 psi, E 100% C1 2; Max E chg: -35% C1 11; Max E chg: -50% C1 12; Max E chg: -30%	Natural or SBR (C1 2), PVC (C1 11), PVC (C1 12)	Braid or none		6145	Cord, Flexible, And Wire, Fixture, (Electrical 0 to 600 Volt Service)	J-C-580 Types ET, SPT-2, TF, TFF, SPT-3, HC, & HPD
Air, original properties Air, original properties Air, original properties Air, original properties Oxygen, aging @ 300 psi Oxygen, aging @ 300 psi Oxygen, aging @ 300 psi	Ambient Ambient Ambient Ambient 158 158 178	- - - - 96 96 168	Min: C1 2; T 500 psi, E 200% Min: C1 5; T 3000 psi, E 650% Min: C1 7; T 700 psi, E 300% Min: C1 9; T 3000 psi, E 650% C1 2; Max E chg: -35% C1 5; Max E chg: -25% C1 7, 9; Max E chg: -50%	Natural or SBR (C1 2, 7) Natural (C1 5, 9)	None or braid		6145	Cord, Flexible, And Wire, Fixture, (Electrical 0 to 600 Volt Service)	J-C-580 Types RF-2, FF-2, RFH-2, & FFH-2
Air, original properties Air, oven aging	Ambient 410	- 1440	Min: T: 500 psi; E 100% Max : E chg: -75%	Silicone (C1 22)	Braid		6145	Cord, Flexible, And Wire, Fixture, (Electrical 0 to 600 Volt Service)	J-C-580 Types SF-2 & SFF-2
Air, original properties Air, original properties Air, original properties Oxygen, aging @ 300 psi Oxygen, aging @ 300 psi Air, oven aging	Ambient Ambient Ambient 158 158 248	- - - 96 96 240	Min: C1 3; T 600 psi, E 250% Min: C1 4; T 1500 psi, E 350% Min: C1 17; T 1200 psi, E 250% C1 3; Max E chg: -35% C1 4; Max E chg: -30% C1 17; Max E chg: -40%	Nat or SBR (C1 3, 4) chloro-prene (C1 17)	Braid or none		6145	Cord, Flexible, And Wire, Fixtures, (Electrical 0 to 600 Volt Service)	J-C-580 Types HPN, SP-3, E
Air, original properties Air, original properties Air, original properties Oxygen, aging @ 300 psi Air, oven aging Air, oven aging	Ambient Ambient Ambient 158 212 178	- - - 96 168 1440	Min: C1 3; T 600 psi, E 250% Min: C1 11; T 1600 psi, E 200% Min: C1 12; T 1500 psi, E 100% C1 3; Max E chg: -35% C1 11; Max E chg: -50% C1 12; Max E chg: -30%	Nat or SBR (C1 3) PVC (C1 11)	PVC (C1 11, 12)		6145	Cord, Flexible, And Wire, Fixtures, (Electrical 0 to 600 Volt Service)	J-C-580 Types SVT, SRDT, & SJT
Air, original properties Air, original properties Air, original properties Air, original properties Oxygen, aging @ 300 psi Oxygen, aging @ 300 psi Oxygen, aging @300 psi	Ambient Ambient Ambient Ambient 158 158 158	- - - - 96 96 96	Min: C1 3; T 600 psi, E 250% Min: C1 5; T 3000 psi, E 650% Min: C1 6; T 1500 psi, E 300% Min: C1 15; T 15000 psi, E 300% C1 3; Max E chg: -35% C1 5; Max E chg: -25% C1 6; Max E chg: -30%	Nat or SBR (C1 3) Nat (C1 5)	Nat or SBR (C1 6) Chloroprene (C1 15)		6145	Cord, Flexible, And Wire, Fixtures, (Electrical 0 to 600 Volt Service)	J-C-580 Types EO, SRD, S, SO, SV

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	Min: C1 2; T 500 psi, E 200%	Nat or SBR (C1 2) FVC (C1 11)	Nat or SBR (C1 6, 10) Chloroprene (C1 16)		6145	Cord, Flexible, and Wire, Fixtures, (Electrical 0 to 600 Volt Service)	J-C-580 Types AFS, HS, HSJ
Air, original properties	Ambient	-	Min: C1 6, T 1500 psi, E 300%						
Air, original properties	Ambient	-	Min: C1 10, T 1500 psi, E 300%						
Air, original properties	Ambient	-	Min: C1 11; T 1600 psi, E 200%						
Air, original properties	Ambient	-	Min: C1 16; T 1500 psi, E 300%						
Oxygen, aging @ 300 psi	158	96	C1 2; Max E chg: -35%						
Oxygen, aging @ 300 psi	158	96	C1 6, 16; Max E chg: -30%						
Oxygen, aging @ 300 psi	178	168	C1 10; Max E chg: -50%						
Air, oven aging	212	168	C1 11; Max E chg: -50%						
Air, original properties	Ambient	-	Min: C1 3, 8; T 600 psi, E 250%	Nat or SBR (C1 3, 8) Nat (C1 5, 9)	Nat or SBR (C1 6, 10) Chloroprene (C1 15, 16)		6145	Cord, Flexible, and Wire, Fixtures, (Electrical 0 to 600 Volt Service)	J-C-580 Types SJ and SJO
Air, original properties	Ambient	-	Min: C1 5, 9; T 3000 psi, E 650%						
Air, original properties	Ambient	-	Min: C1 6, 10, 15, 16; T 1500 psi						
Air, original properties	Ambient	-	Min: C1 6, 10, 15, 16; E 300%						
Oxygen, aging @ 300 psi	158	96	C1 3; Max E chg: -35%						
Oxygen, aging @ 300 psi	158	96	C1 5; Max E chg: -25%						
Oxygen, aging @ 300 psi	158	96	C1 6, 15, 16; Max E chg: -30%						
Oxygen, aging @ 300 psi	178	168	C1 9, 10; Max E chg: -50%						
Air, original properties	Ambient	-	Min: C1 4; T 1500 psi, E 350%	Nat or SBR (C1 4) Chloroprene (C1 14)	Nat or SBR (C1 4) Chloroprene (C1 14)		6145	Cord, Flexible, and Wire, Fixtures, (Electrical 0 to 600 Volt Service)	J-C-580 Type SP-2
Air, original properties	Ambient	-	Min: C1 14, T 1500 psi, E 300%						
Oxygen, aging @ 300 psi	158	96	C1 4; Max E chg: -25%						
Oxygen, aging @ 300 psi	158	168	C1 14; Max E chg: -30%						
Air, tensile strength	Ambient	-	Min psi: 1800	PVC Tubing		Yes	5970	Insulation, Electrical, Synthetic - Resin Composition,	MIL-I-631 Form U Type F, Grade A
Air, ASTM D746	-30	1	No failure						
Air, mandrel bend	212	200	No cracking						
ASTM #3 petroleum oil	122	200	Max vol chg: +15%						
Air, tensile strength	Ambient	-	Min psi: 1450	PVC Tubing		Yes		Insulation, Electrical Synthetic - Resin Composition, Nonrigid	MIL-I-631 Form U Type F, Grade B
Air, ASTM D746	-46	1	No failure						
Air, mandrel bend	212	200	No cracking						
ASTM #3 petroleum oil	122	200	Max vol chg: +15%						
Air, tensile strength	Ambient	-	Min psi: 1800	PVC Tubing		Yes	5970	Insulation, Electrical Synthetic - Resin Composition, Nonrigid	MIL-I-631 Form U Grade C
Air, ASTM D746	-10	1	No failure						
Air, mandrel bend	212	200	No cracking						
ASTM #3 petroleum oil	122	200	Max vol chg: +15%						
Air, original properties	Ambient	-	Min ins: T 1800 psi; E 150%	PVC	Nylon w/wo braid			Wire, Electrical, Insulated, Copper Hook-Up and General Purpose (For 105°C Service)	NAS 702 Types U & S
Air, mandrel bend	-67	4	No cracking						
Air, oven aging	235	1440	Max ins. chg: T & E -30%						
MIL-0-6081 jet oil	Ambient	20	No cracking						

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
(Covered in MIL-I-3930, Type IS-L Insulation and Type JS-L Jacket)				SBR	SBR or natural		6150	Leads, Electrical, Arc-Welding	MIL-L-741
(Tests on rubber only) Air, original properties Air, aging @ 80 psi ASTM #2 petroleum oil	Ambient 260 250	- 20 18	Min: T 1800 psi; E 300% Max chg: T & E -50% Max chg: T & E -40%	Not applicable	Chloroprene			Heavy-Duty Black Polychloroprene Jacket For Wire and Cable	ASTM D752
(Tests on rubber only) Air, original properties Air, aging @ 80 psi ASTM #2 petroleum oil	Ambient 260 250	- 20 18	Min: T 1500 psi; E 250% Max chg: T & E -50% Max chg: T & E -40%	Not applicable	Chloroprene			General Purpose Polychloroprene Jacket For Wire and Cables	ASTM D753
(Tests on rubber only) Air, original properties Air, oven aging @ 80 psi	Ambient 260	- 20	Min: T 700 psi; E 300% Max chg: T & E -50%	Not known	Not applicable			Synthetic Rubber Insulation For Wire and Cable, 75C Operation	ASTM D754
(Tests on rubber only) Air, original properties Oxygen, aging @ 300 psi	Ambient 158	- 96	Min: T 700 psi; E 300% Max chg: T -25%; E -35%	Not known	Not applicable			Synthetic Rubber Insulation for Wire and Cable, 60C Operation	ASTM D755
(Tests on rubber only) Air, original properties Oxygen, aging @ 300 psi	Ambient 158	- 48	Min: T 1800 psi; E 300% Min: T 1400 psi; E 200%	Not applicable	SBR			Styrene-Butadiene (SBR) Synthetic Rubber Jacket For Wire and Cable	ASTM D866
Air, tensile strength Oxygen, aging @ 300 psi Navy symbol 3100 oil	Ambient 176 240	- 168 18	Min T psi: ins 600; jkt 1800 Max % T chg: ins -50 Max % T chg: jkt -35	Synthetic	Chloroprene	Yes	6145	Cable, Cord and Wire Electrical (Shipboard Use)	MIL-C-915 Types: DSS, TSS, SSF, FSS, MSS, CVSF, MCSC, MCGC, DCOP, TCOP, TRF
Air, tensile strength Air, aging @ 80 psi Navy symbol 3100 oil	Ambient 296 240	- 20 18	Min T psi: ins 600; jkt 1800 Max % T chg: ins - 30; jkt -35 Max % T chg: jkt - 35	Butyl	Chloroprene	Yes	6145	Cable, Cord and Wire Electrical (Shipboard Use)	MIL-C-915 Types: DSS, JAS, TSS, FSS, MSS, FCSF, SDU, SHOF, DHOF, THOF, FHOF, TRF, CVSF, T3P

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, tensile strength Air, heat aging @ 80 psi Navy symbol 3100 lub. oil	Ambient 295 240	- 20 18	Min T psi: jkt 1800 Max % T chg: jkt - 35 Max % T chg: jkt - 35	Non-elastomeric	Chloroprene	Yes	6145	Cable, Cord and Wire, Electrical (Shipboard Use)	MIL-C-915 Types: TRXF, MNOP, MCOS, FCOTF-4
Water, @ 75 psi Air, @ 75 psi		4 4	Impervious Impervious	Non-elastomeric	PVC	Yes	6145	Cable, Cord and Wire, Electrical (Shipboard Use)	MIL-C-915 Types: TSP, MHFF, TTOP, MCOS, TTRS
Lubricating oil	240	18	Max % + chg: jkt -35	Natural	Chloroprene	Yes	6145	Cable, Cord and Wire, Electrical (Shipboard Use)	MIL-C-915 Type DLT
Air, tensile strength Oxygen, aging @ 300 psi	Ambient 176	- 168	Min T psi: ins. 600 Max % T chg: ins. -50	Not known	Non-elastomeric	Yes	6145	Cable, Cord and Wire, Electrical (Shipboard Use)	MIL-C-915 Types: DBSP, TBSP, FBSP
Air, tensile strength Air, heat aging @ 80 psi	Ambient 296	- 20	Min T psi: ins. 600 Max % T chg: ins -30	Butyl	Non-elastomeric	Yes	6145	Cable, Cord and Wire, Electrical (Shipboard Use)	MIL-C-915 Types: DBSP, TBSP, FBSP
Air, original properties Air, brittleness ASTM #3 petroleum oil	Ambient -22 158	- 0.05 4	Min: T 2000 psi, E 200% No failure E chg: -20% + 5%	PVC tubing				Non-Rigid Vinyl Chloride Polymer Tubing	ASTM D922 Grade A
Air, original properties Air, brittleness ASTM #3 petroleum oil	Ambient 14 221	- 0.05 4	Min: T 2000 psi; E 200% No failure E chg: -20% + 5%	FVC	None			Non-Rigid Vinyl Chloride Polymer Tubing	ASTM D922 Grade C
(Tests on rubber only) Air, original properties Air, oven aging SAE 20 oil	Ambient 212 158	- 100 4	Min: T 1500 psi; E 100% Max chg: T -20%; E -40% Max chg: T -20%; E -40%	Not applicable	PVC			Poly (Vinylchloride) Jacket for Wire and Cable	ASTM D1047
Air, original properties	Ambient	-	Min: T 1600 psi; E 350%	Synthetic hose				Rubber Insulating Line Hose	ASTM D1050
(Tests on rubber only) Air, original properties Air, aging @ 80 psi Ozone, 25000 to 30000 pphm	Ambient 260 Ambient	- 40 3	Min: T 600 psi; E 350% Max chg: T & E -50% No cracking	Butyl	Not applicable			Ozone-Resisting Butyl Rubber Insulation For Wire and Cable	ASTM D1352

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, mandrel bend Air, oven aging MIL-0-6081 jet oil	Ambient -67 235 Ambient	- 4 1440 20	Min ins: T 1800 psi; E 150% No cracking Max ins chg: T & E -30% No cracking	PVC	Nylon			Wire, Electrical, Insulated, Copper Solid Conductor, Hook-Up and General Purpose (For 105°C Service)	NAS 1391
(Tests on rubber only) Air, original properties Air, aging @ 80 psi	Ambient 260	- 20	Min: T 700 psi; E 300% Max chg: T & E -50%	Not known	Not applicable			Synthetic Rubber Heat-or Moisture-Resisting Insulation For Wire and Cable	ASTM D1520
(Tests on rubber only) Air, original properties Oxygen, aging @ 300 psi	Ambient 158	- 96	Min: T 700 psi; E 300% Max chg: T -25%; E -35%	Not known	Not applicable			Synthetic Rubber Performance, Moisture-Resisting Insulation For Wire and Cable	ASTM D1521
(Tests on rubber only) Air, original properties Air, oven aging	Ambient 250	- 168	Min: T 700 psi; E 300% Max chg: T & E -40%	Not known	Not applicable			Synthetic Rubber Insulation For Wire and Cable, 90C Operation	ASTM D1523
(Tests on rubber only) Air, original properties Oxygen, aging @ 300 psi	Ambient 176	- 168	Min: T 700 psi; E 300% Max chg: T & E -50%	Not known	Not applicable			Synthetic Rubber Heat- And Moisture-Resisting Insulation For Wire and Cable, 75C Operation	ASTM D1679
Air, original properties	Ambient	-	T, 900 psi min; E 250%	Chloroprene Hypolon	SBR Hypolon		1075	Cable and Cable Assemblies, Special Purpose, Electrical, Magnetic Mine Sweeping (Quad Cable)	MIL-C-17694
Air, tensile strength Oxygen, aging @ 300 psi	Ambient 158	- 48	Min T psi: jacket, 800 Max % T chg: jacket, -25	None	SBR			Cable, 1-Conductor Submarine Mine, M6	MIL-C-1892
Air, original properties Air, mandrel bend Air, oven aging	Ambient 14 212	- 1 168	Min: T 1500 psi; E 100% No cracks Max % T & E chg: -35	PVC	None		1390	Wire, Insulated, Submarine Mine Wiring Device	MIL-W-1904 Type TW

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, mandrel bend Air, oven aging ASTM #2 petroleum oil	Ambient 14 212 158	- 1 168 4	Min: T 1500 psi; E 100% No cracking Max % chg: T & E -35% Max % chg: T -20; E -40	PVC	Not applicable			Vinyl Chloride Plastic Insulation For Wire and Cable, 60C Operation	ASTM D2219
Air, original properties Air, mandrel bend Air, oven aging ASTM #2 petroleum oil	Ambient -32 250 158	- 1 168 4	Min: T 2000 psi; E 150% No cracks Max % chg: T -20; E -25 Max % chg: T -20; E -40	PVC	Not applicable			Vinyl Chloride Plastic Insulation For Wire and Cable, 75C Operation	ASTM D2220
(Covered in MIL-I-3930, Type IL, IS-L and JS-L, except that low temperature tests do not apply) Air, mandrel bend	-40	20	Ins & jkt; no cracking	SBR	SBR		6145	Cable, Special Purpose, Electrical WM-46/U	MIL-C-2486
Air, mandrel bend Air, oven aging, 180° bend	-65 250	4 120	No cracking No damage	Nat or syn.	Non-elastomeric		6145	Cable, Electric, Insulated, Low-Tension, Single-Conductor	MIL-C-3078
Air, tensile strength Air, oven aging Flame	Ambient 212 -	- 120 -	Min T psi; ins 1500 Max % T chg: ins -15 Max self burning: ins 1 min	PVC	None		6145	Cable, Telephone Inside Distribution Wiring (WD-15/U, WF-9/U, and WT-3/U)	MIL-W-3093
(Covered in MIL-I-3930 ins IS; jkt JS)				SBR	SBR		6145	Cable and Wire, Electrical (Power and Control; Flexible and Extra Flexible, 300 and 600 volts)	MIL-C-3432 Class G
(Covered in MIL-I-3930 ins IS; jkt JN)				SBR	Chloroprene		6145	Cable and Wire, Electrical (Power and Control; Flexible and Extra Flexible, 300 and 600 volts)	MIL-C-3432 Class O
(Covered in MIL-I-3930 ins IS; jkt JS-L)				SBR	SBR		6145	Cable and Wire, Electrical (Power and Control; Flexible and Extra Flexible 300 to 600 volts)	MIL-C-3432 Class L
(Covered in MIL-I-3930 ins IS; jkt JN-L)				SBR	Chloroprene.		6145	Cable and Wire, Electrical (Power and Control; Flexible and Extra Flexible, 300 to 600 volts)	MIL-C-3432 Class D

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, mandrel bend Air, oven aging Flame	Ambient -13 265 -	- 4 400 -	Min: T 2000 psi; E 250-450% No cracking Max chg: E ± 35% Self burning 15 sec max	PVC sleeving				Polyvinyl Chloride Tubing, Extruded, High Temperature (Electrical Insulation)	AMS 3629
Air, mandrel bend Air, oven aging MIL-L-6082 petroleum oil	-65 450 195	24 125 40	No cracking or breaking No breakdown No cracking or decomposing	Silicone	Silicone	Yes	6145	Cable, Power, Electrical: Ignition, High-Tension	MIL-C-3702 Grade B
Air, mandrel bend Air, oven aging MIL-L-6082 petroleum oil	-65 250 195	24 125 40	No cracking or breaking No breakdown No cracking or decomposition	Chlorosulfo-nated polyethylene	Hypalon	Yes	6145	Cable, Power, Electrical: Ignition, High-Tension	MIL-C-3702 Grade C
Air, mandrel bend Air, oven aging MIL-L-6082 petroleum oil	-65 600 195	24 50 40	No cracking or breaking No breakdown No cracking or decomposition	Silicone	Silicone	Yes	6145	Cable, Power, Electrical: Ignition, High-Tension	MIL-C-3702 Grade D
(Covered in MIL-I-3930)				Elastomeric	Elastomeric		6145	Cord, Electrical (Tinsel)	MIL-C-3849
(Covered in MIL-I-3930)				Elastomeric	Nat, syn or PVC		5995	Cable Assemblies and Cord Assemblies, Electrical (Power, Control, and Audio-Frequency); General Specification for	MIL-C-3885
Air, original properties Air, oven aging	Ambient 212	- 96	Min: ins, T 1800 psi; E 125% Max % E chg: ins -20	PVC	Not applicable		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type IP
Air, tensile strength Oxygen, aging @ 300 psi	Ambient 158	- 95	Min T psi: ins 450 to 600 Max % T chg: ins -25	SBR	Not applicable		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type IS
Air, tensile strength Oxygen, aging @ 300 psi Air, ASTM D746	Ambient 176 -67	- 168 0.08	Min T psi: ins 450 to 600 Max % T chg: ins -50 No cracking	SBR	Not applicable		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type IS-L
Air, tensile strength Oxygen, aging @ 300 psi	Ambient 158	- 95	Min T psi: ins 800 to 1200 Max % T chg: ins -25	Natural	Not applicable		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type IR

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, tensile strength Oxygen, aging @ 300 psi	Ambient 158	- 95	Min T psi: ins 1000 Max % E chg: ins -25	SBR	Not applicable		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type IJ-S
Air, original properties Oxygen, aging @ 300 psi	Ambient 178	- 168	Min: ins, T 25000 psi, E 600% Max % E chg: ins -50	Natural	Not applicable		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type IL-N
Air, original properties Oxygen, aging @ 300 psi	Ambient 158	- 168	Min: ins, T 2500 psi, E 650% Max % E chg: ins -30	Natural	Not applicable		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type IL-RN
Air, original properties Air, oven aging ASTM #2 petroleum oil	Ambient 212 158	- 95 18	Min: jkt; T 1500 psi, E 100% Max % E chg: jkt -40 Max % T chg: jkt -20	Not applicable	PVC		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type JP
Air, original properties Oxygen, aging @ 300 psi Ozone, @ 50 pphm	Ambient 158 100	- 95 168	Min: jkt; T 1600 psi, E 300% Max % E chg: jkt -35 No cracking	Not applicable	SBR		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type JS
Air, original properties Oxygen, aging @ 300 psi Ozone, @ 50 pphm	Ambient 158 100	- 95 168	Min: jkt; T 1500 psi, E 300% Max % E chg: jkt -35 No cracking	Not applicable	SBR		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type JS-L
Air, original properties Oxygen, aging @ 300 psi Ozone, @ 50 pphm	Ambient 158 100	- 95 168	Min: jkt; T 2000 psi, E 350% Max % E chg: jkt -35 No cracking	Not applicable	Natural		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type JR
Air, original properties Oxygen, aging @ 300 psi ASTM #2 petroleum oil Ozone, @ 50 pphm	Ambient 158 158 100	- 95 18 168	Min: jkt; T 1800 psi; E 300% Max % E chg: jkt -25 Max % T chg: -40 No cracking	Not applicable	Chloroprene		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type JN
Air, original properties Air, oven aging ASTM #2 petroleum oil Ozone, @ 50 pphm	Ambient 158 158 100	- 168 18 168	Min: jkt; T 1500 psi; E 300% Max % E chg: -20 Max % T chg: -40 No cracking	Not applicable	Chloroprene		5970	Insulating and Jacketing Compounds, Electrical (For Cables, Cords and Wires)	MIL-I-3930 Type JN-L

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, elongation Air, mandrel bend Air, oven aging MIL-H-5606 hydraulic oil	Ambient -67 239 122	- 1 1440 20	Min elong: ins 75% Ins: no cracks Max % elong chg: ins -30 No cracks after mandrel bend	PVC	Non-elastomeric	Yes	6145	Wire, Electric, Polyvinyl Chloride Insulated, Copper or Copper Alloy	MIL-W-5086 Types: I, II, and III
(Covered in MIL-I-3930, Types IS & JN)				SBR	Chloroprene		6145	Cable, Power, Electrical, Polychloroprene Sheathed, Buna Compound Insulated	MIL-C-5136
Air, mandrel bend	-67	48	No cracking	Syn or nat	Syn or nat	Yes	6145	Cable and Wire, Power, Electric, Portable	MIL-C-5756
Air, tensile strength Air, mandrel bend Oxygen, aging @ 300 psi	Ambient -40 158	- - 94	Min T psi: ins 800; jkt 1200 No cracking Jkt: no tackiness	Nat or syn	Nat or syn	Yes	5995	Cord: Headset-Microphone, CX-1301/AR	MIL-C-6166
Air, mandrel bend Flame	-67 -	4 -	No cracking Self burning 30 sec max	PVC	Non-elastomeric	Yes	6145	Wire, Electric, 600-Volt, Aluminum, Aircraft, General Specification For	MIL-W-7072
Air, mandrel bend Air, oven aging	-67 248	4 96	No cracking No cracking	Braid, plastic or wire	PVC	Yes	6145	Cable, Electric, Aerospace Vehicle, General Specification For	MIL-C-7078
Air, tensile strength Air, ASTM D746	Ambient -90	- -	Min psi: 1800 No failure	PVC tubing		Yes	5970	Insulation Sleeving, Electrical, Flexible	MIL-I-7444
(Cables covered in MIL-C-5756) (Plugs covered in MIL-I-3930)				Syn. or natural (cables) PVC, SBR or Natural (Plugs)		Yes	5935-6150	Cable Assemblies and Attachable Plugs, External Electrical Power, Aircraft	MIL-C-7974
(Tests on receptacle only) Air, ball impact Air, aging	-67 392	24 -	No cracking No cracking	None	Syn	Yes	5935-	Cable Assemblies and Attachable Plugs, External Electrical Power, Aircraft	MIL-C-7974
Air, tensile strength Air, cold bend Air, oven aging MIL-H-5606 hydraulic oil	Ambient -67 450 Ambient	- 4 6 20	Min psi: ins 800 No cracking Min T psi: ins 600 No exudation of insulation	Silicone	Silicone	Yes	6145	Wire, Electrical, Silicone-Insulated, Copper, 600-Volt, 200°C	MIL-W-8777
(Covered in MIL-I-3930)				SBR	SBR		6145-	Cables, Special Purpose, Electrical (Multipair Audio Frequency)	MIL-C-10065

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
(Covered in MIL-I-3930, Types IS & JS)				SBR	SBR		6145	Cables, Special Purpose, Electrical (Miniature)	MIL-C-10392
(Covered in MIL-I-3930)				SBR	SBR		6135	Power and Control Cables, Heavy Duty, Buna S Insulated And Jacketed	MIL-P-10582
(Covered in MIL-I-3930)				SBR	SBR		6145	Cables, Power and Control, Electrical, Shielded, Heavy Duty, Buna S Insulated And Jacketed	MIL-C-10769
Air, mandrel bend Ozone, @ 50 pphm	-40 100	20 168	No cracking Jkt: no cracking	SBR	Chloroprene		6145	Cable, Telephone (W-50-A)	MIL-C-11097
Air, original properties Oxygen, aging @ 300 psi	Ambient 158	- 96	Min: Jkt; T 1200 psi, E 175% Ins, no cracking; jkt, E 100%	Natural	Natural and/or SBR		5995	Cord Assembly, Electrical CX-2151 ( )/U	MIL-C-11997
Air, compression Air, mandrel bend Ozone, 50 pphm	Ambient -40 100	- 20 168	800 lbs min crush load No cracking Jkt: no cracks	SBR	Chloroprene		6145	Cable, Telephone WD-33/U	MIL-C-12423
(Covered in MIL-I-3930)				SBR	Braid		6145	Wire, Electrical (Wire W-124, W-125, and W-128)	MIL-W-13075
(Covered in MIL-I-3930 Types IS & JS)				SBR	SBR		6145	Cable, Special Purpose, Electrical (Cordage CO-212 and Cable, Special Purpose, Electrical WD-32/U	MIL-C-13077
Air, tensile strength Air, mandrel bend Oxygen, aging @ 300 psi	Ambient -40 158	- 168 94	Ins; 1000 psi min No cracking Max % T chg: ins -25	SBR	None		6145	Wire, Electrical (For Instrument Test Leads)	MIL-W-13169
Air, tensile strength Air, @ 400% extension Oxygen, aging @ 300 psi	Ambient -40 158	- 20 96	Min psi: ins 600; jkt 1200 No cracking Min T psi: ins 450; jkt 1000	SBR or natural	SBR and/or nat		6145-5995	Cord, Electrical (Retractile, 2, 3 and 4 Conductor, WD-9/U, WT-2/U, WF-4/U)	MIL-C-13273

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, mandrel bend Air, oven aging ASTM #3 petroleum oil	-65 250 160	24 120 20	No cracking Ins: no breakdown Volume change, 20% max.	Elastomeric	Chloroprene	Yes	6145	Cable, Special Purpose, Electrical: Low-Tension, Heavy Duty Single Conductor and Multiconductor	MIL-C-13486 Types I & II
Air, tensile strength Air, mandrel bend Oxygen, aging @ 300 psi ASTM #2 petroleum oil Ozone, 50 pphm	Ambient -65 158 250 120	- 48 94 18 168	Min psi: ins 2500; jkt 1800 No cracking Min T psi: ins 2000; jkt 1600 Max % T chg: jkt -40 Jkt; no cracks	Natural (60%)	Chloroprene	Yes	6145	Cable, Special Purpose, Electrical: General Specification For	MIL-C-13777 Comp A
Air, tensile strength Air, mandrel bend Oxygen, aging @ 300 psi ASTM #2 petroleum oil Ozone, 50 pphm	Ambient -65 158 250 120	- 48 94 18 168	Min psi: ins 3000; jkt 1800 No cracking Min T psi: ins 2500; jkt 1600 Max % T chg: jkt -40 Jkt; no cracks	Natural (Latex)	Chloroprene	Yes	6145	Cable, Special Purpose, Electrical: General Specification For	MIL-C-13777 Comp B
Air, tensile strength Air, mandrel bend Oxygen, aging @ 300 psi ASTM #2 petroleum oil Ozone, 50 pphm	Ambient -65 158 250 120	- 48 94 18 168	Min spi: ins 600; jkt 1800 No cracking Min T psi: ins 480; jkt 1600 Max % T chg: jkt -40 Jkt; no cracks	SBR	Chloroprene	Yes	6145	Cable, Special Purpose, Electrical: General Specification For	MIL-C-13777 Comp D
Air, tensile strength Air, mandrel bend Oxygen, aging @ 300 psi ASTM #2 petroleum oil Ozone, 50 pphm	Ambient -65 158 250 120	- 48 94 18 168	Min psi: ins 2000; jkt 1800 No cracking Min T psi: ins 1800; jkt 1600 Max % T chg: jkt -40 Jkt; no cracks	Natural rubber (40%)	Chloroprene	Yes	6145	Cable, Special Purpose, Electrical: General Specification For	MIL-C-13777 Comp E
Air, tensile strength Air, mandrel bend Oxygen, aging @ 300 psi ASTM #2 petroleum oil Ozone, 50 pphm	Ambient -65 158 250 120	- 48 94 18 168	Min psi: jkt 1800 No cracking Min T psi: jkt 1600 Max % T chg: jkt -40 Jkt; no cracks	Polyethylene, teflon & fluorinated ethylene propylene	Chloroprene	Yes	6145	Cable, Special Purpose, Electrical: General Specification For	MIL-C-13777 Comps F, G and H
Air, tensile strength Air, tensile strength Air, mandrel bend Oxygen, aging @ 300 psi Oxygen, aging @ 300 psi Oxygen, aging @ 300 psi	Ambient Ambient -40 158 158 158	- - 20 48 48 96	Min psi: ins SBR 450, Nat 3000 Min psi: jkt 1600 No cracks Max % T chg: ins SBR -25 Max % T chg: jkt -20 Max % T chg: ins nat -25	SBR or natural	SBR		6145	Cable, Telephone (Flexible) (Cords and Cordage, Multipair)	MIL-C-13892

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, tensile strength Air, tensile strength Air, ASTM D746 Oxygen, aging @ 300 psi Oxygen, aging @ 300 psi ASTM #2 petroleum oil	Ambient Ambient -65 178 158 250	- - - 168 96 18	Min psi: ins 600 Min psi: jkt SBR 1500, CR 1800 No cracking Max % T chg: ins -50 Max % T chg: jkt SBR 25 CR 10 Max % T chg: jkt CR -40	SBR	SBR or chloro-prene		5935	Cable Assemblies, Power, Electrical, and Extension Lights, Connectors, Adapters, and Dummies	MIL-C-13940
Air, breaking strength	Ambient	-	6400 to 7000 lbs	Polyethylene	PVC		6145	Cable, Special Purpose, (TOW), Electrical, Coaxial, Lead Wrapped, Nylon Covered	MIL-C-15452
(Covered in MIL-C-17 Type I jkt)				Polyethylene	PVC		6145	Cables, Power, Electrical, Submarine, Navy Standard Harbor Defense	MIL-C-15479
Air, tensile strength Oxygen, aging @ 300 psi	Ambient 158	- 48	Ins 2500 psi; jkt 3500 psi Min psi T: ins 2000; jkt 2800	Natural	Natural		6145	Cable, Special Purpose, Electrical (Underwater Use)	MIL-C-16839 Types DMU, DNU
(Covered in MIL-C-915)				Butyl	Chloroprene		6145	Cable, Special Purpose, Electrical (Underwater Use)	MIL-C-16839 Types DPU, MSU, MTU & SPU
(See individual specification sheets for tests and requirements)				Not known (See individual specification sheets for acceptable construction)	PVC		6145	Wire, Electrical, Insulated, High Temperature	MIL-W-16878
Air, mandrel bend	5	20	No cracking	PVC	None		6145	Wire, Electrical, Radio Antenna, 7/12, 7/14, 7/16, 7/18, 7/20, 7/22	MIL-W-17211
Air, crush Flame	482 Ambient	168 96	No cracking of silicone Max self burning 45 sec	Glass fiber sleeving, silicone rubber coated			5970	Insulation Sleeving, Electrical, Flexible Glass Fiber, Silicone Rubber Treated	MIL-I-18057
Air, original properties Oxygen, aging @ 300 psi	Ambient 158	- 168	T, 450 psi min; E, 250% min T, 400 psi min; E, 200% min	Syn rubber	Lead		6145	Cable, Power, Electrical, Rubber Insulated, Lead Sheathed, High Voltage	MIL-C-18869
Air, original properties Air, oven aging	Ambient 500	- 24	Min: jkt; T 800 psi, E 250% No exudation at elastomer	Asbestos	Silicone		6145	Cables, Special Purpose, Electrical, (Nuclear Plant)	MIL-C-19381

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
(Jacket covered in MIL-C-17 Type I)				Polyethylene	PVC		6145	Cables, Power, Electrical Submarine, Navy Harbor Defense	MIL-C-19638
Air, tensile strength Air, oven aging Water	Ambient 158 Ambient	- 96 168	Min: ins 850 psi; jkt 2000 psi Max % T chg: ins -30; jkt -25 % wt chg: ± 20	SBR or syn	Chloroprene		6145	Cable, Telephone; Submarine	MIL-C-19654
Air, elongation Oxygen, aging @ 300 psi MIL-L-15016 mineral oil	Ambient 158 248	- 96 18	Min E: ins 650%; jkt 350% Min E: ins 600%; jkt 300% Max % E chg: jkt -40	Natural w/wo chloroprene	Chloroprene		6145	Cable, Electric, Torpedo, 65 Conductor (For Torpedo Control, Electric Setting)	MIL-C-19787
(Insulation covered in ASTM D734)				PVC	Polyethylene		6145	Cables, Special Purpose, Electrical, For Remote Control Radar Set AN/FPN-28 ( )	MIL-C-19883 Types 4, 5, 6
Air, mandrel bend Steam, aging @ 115 psig Fungus	-32 325 -	20 0.17 -	No damage No damage Resistant	None	Not known		1440	Cable Assemblies, Electrical	MIL-C-21529
Air, ASTM D746 ASTM #3 petroleum oil	5 Ambient	0.08 24	No cracking No cracking	Glass fiber sleeving, PVC coated		Yes	5970	Insulation Sleeving Electrical, Flexible, Glass Fiber, Vinyl Treated	MIL-I-21557
Air, elongation Air, mandrel bend Air, oven aging	Ambient -40 212	- 1 120	Min: jkt 250% (PVC) Jkt; no cracks (PVC) Max % E chg: jkt -20% (PVC)	Polyamide	PVC & Polyamide		6145	Cable, Electrical, Shielded, 600-Volt (For Nonflexing Service)	MIL-C-21609
Air, tensile strength Air, ASTM D746 ASTM #3 petroleum oil	Ambient -67 Ambient	- 0.08 24	Min psi: 1800 No cracking No cracks	PVC tubing		Yes	5970	Insulation Tubing, Electrical Nonrigid, Vinyl, Very Low Temperature Grade	MIL-I-22076
Requirements in accordance with MIL-R-6855				Synthetic rubber			5995	Cable Assembly, Special Purpose, Electrical CX 4832/AR	MIL-C-22442
Air, tensile strength Air, oven aging Air, oven aging SAE 20 oil	Ambient 212 158 158	- 96 166 4	Min psi: ins 800; jkt 1500 Max % chg: jkt -20 Max % T chg: ins -25 Max % T chg: jkt -20	SBR	PVC		1350	Cables, Controlled Mine	MIL-C-22731 Types SUR, MU A-7 and SUA

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SPECIFICATION TEST CONDITIONS				ELASTOMER COMMONLY USED					
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Water, dielectric strength	-	-	Ins: no failure at 3000 volts	Polyethylene	PVC		6145	Cable, Electrical, Underwater, Seadrome Lighting	MIL-C-22929
(Covered in MIL-C-17, Type VIII)				Teflon or none	Chloroprene		6145	Cable, Coaxial (For Submarine Use)	MIL-C-23020 Types: RG-293/U, RG-294/U, RG-295/U, RG-317/U
(Covered in MIL-C-17, Type IIa)				None	PVC		6145	Cable, Coaxial (For Submarine Use)	MIL-C-23020 Types: RG-14A/U, RG-17A/U
Air, tensile strength	Ambient	-	Min psi: ins 2000, jkt 15000	PVC	PVC		6145	Cable, Electrical, Shielded Pairs	MIL-C-23437
(Covered in MIL-W-76 or MIL-W-16878)				PVC	PVC		1190	Cable Assemblies, Special Weapons, Electrical, General Requirements For	MIL-C-25200
(PVC covered in MIL-I-631, Type F, Grade B)				Polyamide (See individual specification sheets for acceptable construction)	PVC		6145	Cable, Special Purpose Electrical Multiconductor	MIL-C-27072 Grade B and Style 1
Air, elongation Oxygen, aging @ 300 psi ASTM #2 petroleum oil	Ambient 158 250	- 94 18	Min: jkt 300% Min: jkt 250% Max % E chang: JKT-40	Polyamide (See individual specification sheets for acceptable construction)	Chloroprene		6145	Cable, Special Purpose Electrical Multiconductor	MIL-C-27072 Style 3
(Insulation covered in MIL-I-3930, Type IP or IL Jacket covered in MIL-I-3930, Type JP or JN)				Natural or PVC	PVC or chloroprene		6145	Cable, Power, Electrical, Airport Lighting Control	MIL-C-27212
Air, mandrel bend Air, oven aging	-67 322	4 96	Jkt: no cracking Jkt: no cracking	Not specified	PVC		6145	Cable Electrical, Shielded and Unshielded, Aerospace	MIL-C-27500 Symbol 1
(Insulation covered in MIL-W-8777)				Silicone	Not specified		6145	Cable, Electrical, Shielded and Unshielded, Aerospace	MIL-C-27500 Symbol H & F
(Covered in MIL-C-12064)				SBR	Chloroprene		4940	Cable Assemblies, Electrical	MIL-C-45820 Types I & II

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	INSULATION	JACKET	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
(Covered in MIL-C-13486)				Elastomeric	Syn		4940	Cable Assemblies, Electrical	MIL-C-45820 Type III
(Covered in MIL-C-12064)				SBR	Syn		4940	Cable Assemblies, Electrical	MIL-C-45820 Type IV
(Covered in MIL-C-3432)				SBR	SBR or chloroprene		6150	Cable Assemblies Power, Electrical (With Molded on Terminations)	MIL-C-52286
(Insulation covered in MIL-W-76) Air, elongation Air, mandrel bend Air, oven aging	 Ambient -40 212	 - 4 96	 Min: jkt 100% No cracking Max E chg: jkt -35%	PVC	PVC		6145	Cables; Twisted Pairs and Triples, Internal Hookup, Shielded and Unshielded	MIL-C-55021 Symbol P & SP
Air, elongation Air, mandrel bend Air, oven aging	Ambient -67 178	- 24 346	Min: jkt 250% No cracking Max E chg: jkt -10%	Polyethylene	PVC		6145	Cable, Telephone, WM-130 ( )/G	MIL-C-55036
(Jacket ocvered in MIL-I-3930 Type JN-L)				Polyethylene	Chloroprene		6145	Cable, Telephone, WM-130( )/G	MIL-C-55036
Air, elongation Air, mandrel bend Oxygen, aging @ 300 psi	Ambient -40 158	- 20 96	Min: ins 250%; jkt 150% No cracking Min E: ins 175%; jkt 100%	Rubber, type not known	Chloroprene		6145	Cable, Special Purpose, Electrical (Retractile)	MIL-C-55040
Air, tensile strength Air, oven aging	Ambient 178	- 336	Min psi: jkt 2000 Max % T chg: jkt -10	Polyethylene	PVC		6145	Cables, Telephone (Inside)	MIL-C-55134
Air, mandrel bend	-65	48	No cracking	Butadiene or Chloroprene	Chloroprene		6145	Cable, Power, Electrical WT-26( )/U	MIL-C-55483
Air, elongation Air, tension, Low Temp Ozone resistance	Ambient -55 70	- 168	Min: (jkt.) 175% 20% min recovery (jkt) No cracks, (jkt)	Ethylene - Propylene	SBR, or EDDM		6145	Cord, Electrical; Audio, Subminiature (Retractile & Straight)	MIL-C-55668

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MISCELLANEOUS RUBBER ITEMS

SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, hardness Air, oven aging Steam	Ambient 270 400	- 0.5 3	C1 A, 95-100; C1 b, 70-80; C1 C, 60-65 No disintegration or blistering No disintegration (Class A only)	Natural or synthetic		4510	Valves, Pump, Rubber	ZZ-V-51
Air, 90° bend Air, oven aging	-40 158	120 70	No cracks Hardness increase, 0 to +5	Natural or SBR			Rubber Cups for Hydraulic Actuating Cylinders	SAE J60
Air, original properties Air, oven aging Steam, 15 psi	Ambient 158 -	- 168 2	T, 3000 psi min; E, 800% min Tensile change, -25% max T, 2000 psi min	Natural		6510	Bandages; Rubber	ZZ-B-101
Air, breaking strength Air, elasticity	Ambient Ambient	- -	Warp, 20 lbs min; Filling, 45 lbs min Elongation, 120% min	Cotton yarn and rubber strands. Type rubber not specified		6510	Bandages; Cotton, Elastic (Washable)	JJ-B-102 Type II
Air, original properties Air, oven aging	Ambient 158	- 168	T, 1400 psi min; E, 250% min Tensile change, -25% max	Natural, SBR, chloroprene or butyl		3030	Belting; Conveyor (Rubber and Synthetic Rubber)	ZZ-B-206 Types,A, B & D
Preproduction sample must meet procuring activity requirements				Type I - cotton duck and natural Type II - cotton duck and synthetic rubber		3030	Belting, V, Link, Impregnated Cotton Duck and Metal Studs	ZZ-B-220
Air, original properties Air, oven aging	Ambient 158	- 168	T, 600 psi min; E, 300% min T and E change, -25% max	Natural and synthetic		8125	Rings; Jar, Rubber and Synthetic Rubber	ZZ-R-351
Air, original properties Air, oven aging	Ambient 212	- 70	T, 1400 psi min; E, 600% min T change, -30% max; E change, -40% max	Natural		1670	Rings; Parachute Vent, Molded Rubber	ZZ-R-371
Air, original properties Air, 180° crease	Ambient 0	- 1	T, 2000 to 2300 psi; E, 50 to 200% No cracks	PVC		8135	Plastic Film, Flexible, Vinyl Chloride	L-P-375 Type I
Air, original properties Air, 180° crease	Ambient -40	- 1	T, 1600 psi min; E, 50 to 225% No cracks	PVC		8135	Plastic Film, Flexible, Vinyl Chloride	L-P-375 Type II
Air, original properties Air, oven aging	Ambient 158	- 168	T, 2500 psi min; E, 750% min Tensile strength; 2000 psi min	Natural, butyl, SBR or chloroprene		6515	Tourniquets; Rubber and Synthetic Rubber, Tubular	ZZ-T-606

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, hardness	Ambient	-	10 to 95, depending on type	Natural or synthetic		7510	Erasers, Rubber and Rubber Substitute	ZZ-E-661
Air, 90° bend Air, oven aging Brake fluid, VV-H-910	-42 158 158	120 70 120	No cracks Hardness change, 0 to +5 Volume change, 0 to +20%	Natural		2530	Cups, Hydraulic-Brake, Natural Rubber	ZZ-C-746
Air, original properties Air, oven aging Oil immersion, ASTM #3 oil Compression set @ 40% defl.	Ambient 194 122 194	- 96 96 96	T, 1800 psi min; E, 300%; H, 55±5 T, 1440 psi min; E, 225% Vol. change ±10% 45% max set	Acrylics		9320	Rubber for Mounting (Unbonded-Spool & Compression Types)	ZZ-R-768
No physical property requirements				Natural		6640	Bulb, Dropping, Pipet	NNN-B-788
Air, inflation @ 3 psi	Ambient	-	No leakage	Fabric coated with SBR, butyl or chloroprene		6530	Cushions; Ring, Cloth-Inserted	ZZ-C-791
Air, original properties Air, oven aging Air, inflation @ 3 psi	Ambient 158 Ambient	- 166 -	T, 1700 psi min; E, 400% min T change, -20% max; E change, -25% max No leakage	Natural or synthetic		6530	Cushions; Ring, Rubber	ZZ-C-796
Air, original properties Air, oven aging Air, alternating current	Ambient 158 Ambient	- 168 0.05	T, 2500 psi min; E, 500% min Change in T and E, -20% max No breakdown under 20,000 volts	Natural or synthetic			Rubber Insulating Blankets (Without Fabric Reinforcement)	ASTM D1048
Air, original properties Air, oven aging Air, alternating current	Ambient 158 Ambient	- 168 0.05	T, 2500 psi min; E, 600% min Change in T and E, -25% max No breakdown under 10,000 volts	Natural or synthetic			Rubber Insulating Sleeves	ASTM D1051
Air, original properties Air, oven aging	Ambient 158	 168	Breaking force, 45 lbs min; E, 700% min Change in breaking force and E, -25% max	Natural latex		1670	Rubber Band, Parachute Suspension Line	MIL-R-1832 Type I
Air, original properties Air, oven aging	Ambient 158	- 168	Breaking force, 50 lbs min; E, 700% min Change in breaking force and E, -25% max	Chloroprene		1670	Rubber Band, Parachute Suspension Line	MIL-R-1832 Type II
Air, original properties Oxygen, bomb aging ASTM #3 petroleum oil	Ambient 158 Ambient	- 46 46	T, 1400 psi min; E, 250% min Change in T and E, -25% max Volume change, +15% max	Synthetic rubber		9320	Synthetic Rubber Compound, Acid and Oil Resistant (For Lining Battery Compartments on Submarines)	MIL-S-2912

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Cooling medium, ASTM D746 Air, oven aging Air, compression set	Ambient -67 450 212	- - 24 22	T, 250 psi min; E, 100% min No cracks Change in T and E, -25% max 60% max	Silicone			Silicone Rubber Compound, Room Temperature Vulcanizing, 15,000 Centipoises Viscosity (Durometer 35-55)	AMS 3362
Air, original properties Cooling medium, ASTM D746 Air, oven aging Air, compression set	Ambient -67 -50 212	- - 24 22	T, 300 psi min; E, 100% min No cracks Elongation change, -15% max 35% max	Silicone			Silicone Rubber Compound, Room Temperature,Vulcanizing, 50,000 Centipoises Viscosity, Short Pot Life (Durometer 35-55)	AMS 3364
Air, original properties Cooling medium, ASTM D746 Air, oven aging Air, compression set	Ambient -67 450 212	- - 24 22	T, 500 psi min; E, 100% min No cracks Change in T and E, -25% max 70% max	Silicone			Silicone Rubber Compound, Room Temperature Vulcanizing, 1,200,000 Centipoises Viscosity (Durometer 55-70)	AMS 3367
Air, original properties Cooling medium, hand bend Air, oven aging SAE 20 paraffin oil	Ambient 0 158 Ambient	- 0.5 96 24	T, 2000 psi min; E, 250% min; H, 70-85 No cracks Change in T, E and H, 0% max Change in T, E and H, 0% max	PVC	Yes	9330	Plastic Sheet, Polyvinyl Chloride, Plasticized, Elastomeric	MIL-P-3584
Air, original properties Cooling medium, ASTM D746 Air, oven aging ASTM #3 petroleum oil	Ambient -40 250 212	- - 2 8	T, 1800 psi min; E, 300% min No cracks Lengthwise shrinkage, 10% max Lengthwise shrinkage, 10% max	PVC			Plastic Extrusions, Flexible Polyvinyl Chloride	AMS 3630
Air, original properties Cooling medium, ASTM D746 Air, oven gaging ASTM #3, petroleum oil	Ambient -25 265 212	- - 2 8	T, 1800 psi min, E, 250% min No cracks Lengthwise shrinkage, 10% max Lengthwise shrinkage, 10% max	PVC			Plastic Extrusions, Flexible, High Temperature Polyvinyl Chloride	AMS 3631
(Rubber covered by Grades 25, 50, or 60, Class III of (ZZ-R-765)				Silicone	Yes	5930	Boots, Dust and Water Seal (For Toggle and Pushbutton Switches and Rotary-Actuated Parts), General Specification For	MIL-B-5423
(Tests on separator material only) Air, mandrel bend Air, oven aging Petroleum oil, MIL-H-5606	 -65 158 158	 72 168 168	 No cracks T change, -20% max; E change, -30% max Volume change, 0 to +15%	Nitrile rubber separator	Yes	1650	Accumulators, Aircraft Hydropneumatic Pressure	MIL-A-5498 Type I

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
(Tests on 1/2 inch diameter cord) Air, breaking strength Air, elongation Air, load to stretch 100% Air, oven aging	 Ambient Ambient -40 158	 - - 5 168	 400 lbs min 140% min 50% increase, max, over ambient load Change in breaking strength, -40% max	Cotton yarn and natural or cis-1, 4 polyisoprene rubber strands		8305	Cord; Elastic, Exerciser and Shock Absorber For Aeronautical Use	MIL-C-5651 Type I
Air, original properties Air, oven aging	Ambient 212	- 70	T, 700 psi min; E, 200%; H, 50 ± 5 T, 560 psi min, E, 120% H, ± 10 max change	Silicone		5975	Nipple; Electrical Terminal	MIL-N-6748
Oil immersion, ASTM #3 oil Water immersion,	212 212	22 70	Volume change ± 15% Volume change +5%					
Air, original properties Air, low temp. hardness Air, oven aging	Ambient -40 158	- 4 168	T, 3800 psi min; E, 850% min Increase over orig. hardness, 33% max T, 3200 psi min; E, 800% min	Natural		5977	Rubber, Anodic	MIL-R-6891
(Rubber covered in AMS 3215)				Nitrile		5340	Clamps, Tube Support, Loop Type	MIL-C-8603 Type II
(Rubber covered in AMS 3209)				Chloroprene		5340	Clamps, Tube Support, Loop Type	MIL-C-8603 Type III
Air, original properties Air, oven aging	Ambient 500	- 24	H, 45-75; T, 400 psi min H change, +20 max; T change, -5% max	Silicone		5340	Clamps, Tube Support, Loop Type	MIL-C-8603 Type IV
Air, original properties Air, oven aging	Ambient 160	- 72	T, 3000 psi min; E, 700% min Change in T, -25% max	Natural		8465	Bladder, Pneumatic B-5 Life Preserver	MIL-B-8743
Air, original properties Air, impact loading 85/15, paint thinner/xylene	Ambient -20 Ambient	- 5 -	T, 5 lbs/inch width; E, 15% min No cracks under 10 ft-lb load No visible deterioration	Type of material not specified		9330	Film, Elastomeric, Pigmented, For Use In The Manufacture of Aircraft Decalcomanias	MIL-F-8799
Air, original properties 70/30 isooctane/toluene	Ambient Ambient	- 72	T, 1000 psi min; E, 300% min Volume change, +20% max	Nitrile		4920	Repair Material, For Sealing Fuel Tanks	MIL-R-9208
Air, flex test	-65	96	No cracks	Fabric and natural or synthetic rubber		3030	Belt, V; Engine Accessory Drive	MIL-B-11040
Air, resilience Cooling medium, ASTM D746	Ambient -60	- -	65% min No cracks	Natural or chloroprene		5340	Shock Mounts, M-447, M-448, M-449 and Bracket FT-512	MIL-S-12100

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, hardness Air, oven aging	Ambient 158	- 168	75 ± 5 Change in hardness, +10 max	Natural		7510	Eraser, Rubber-Pumice (For Testing Coated Optical Elements)	MIL-E-12397
Air, resilience Air, load deflection	122 -40	- 100	Impact resilience of 65-75% 300% max increase in stiffness	Natural or chloroprene		5340	Mounts, Vibration	MIL-M-12863
Air, hardness Air, 90° bend Air, oven aging Brake fluid, VV-H-910	Ambient -40 212 250	- 22 70 70	50 to 75 No cracking Hardness change, 0 to +5 Volume change, +5 to +20%	SBR		2530	Cup, Hydraulic Brake Cylinder: Synthetic Rubber (For Master, Wheel and Slave Cylinders)	MIL-C-14055
(Tests on rubber only) Air, original properties Air, ASTM D746 Air, oven aging	 Ambient -40 158	 - 168 166	 T, 1500 psi min; E, 300% min No cracks Change in elongation, -35% max	SBR coated nylon		5430	Tanks, Fabric, Collapsible: Water, Nylon, Rubber-Coated	MIL-T-14398
(Rubber covered by Grade RS510F$_2$ of MIL-R-3065)				SBR, glass cloth laminate		1055	Guard, Bellows, Rocket Launcher M21	MIL-G-14524
Air, hardness Air, compression @ 750 psi Air, 300-350 ft lb impacts	Ambient Ambient Ambient	- 0.5 2/min	70 ± 5 No permanent set or cutting No cutting	Natural or synthetic	Yes	1020	Rubber Facing (For Rammer Heads)	MIL-R-16920
Air, original properties Air, compression set Air, oven aging Air, resilience	Ambient 30 194 80	- 96 96 -	T, 1800 psi min; E, 300% min 15% max T change, -20% max; E change, -25% max 70% max	Nitrile		9320	Rubber Special-Shaped Section; For Mountings	MIL-R-17006
Air, original properties Air, compression set Air, oven aging ASTM #3 petroleum oil	Ambient 30 194 Ambient	- 94 46 46	T, 2200 psi min; E, 650% min; H, 38 ± 5 40% max T, 2100 psi min; E, 600% min Volume change, +15% max	Chloroprene or nitrile	Yes	5340	Mounts, Resilient; Portsmouth Bonded Spool Type	MIL-M-17191 Class A
Air, original properties Air, compression set Air, oven aging ASTM #3 petroleum oil	Ambient 30 194 Ambient	- 94 46 46	T, 2500 psi min; E, 600% min; H, 43 ± 5 37% max T, 2400 psi min; E, 550% min Volume change, +15% max	Chloroprene or nitrile	Yes	5340	Mounts, Resilient; Portsmouth Bonded Spool Type	MIL-M-17191 Class B
Air, original properties Air, compression set Air, oven aging ASTM #3 petroleum oil	Ambient 30 194 Ambient	- 94 46 46	T, 2800 psi min; E, 575% min; H, 48 ± 5 34% max T, 2700 psi min; E, 525% min Volume change, +15% max	Chloroprene or nitrile	Yes	5340	Mounts, Resilient; Spool Type	MIL-M-17191 Class C

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SPECIFICATION TEST CONDITIONS								
ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, compression set Air, oven aging ASTM #3 petroleum oil	Ambient 30 194 Ambient	- 94 46 46	T, 2900 psi min; E, 550% min; H, 57 ± 5 30% max T, 2800 psi min; E, 500% min Volume change, +15% max	Chloroprene or nitrile	Yes	5340	Mounts, Resilient; Portsmouth Bonded Spool Type	MIL-M-17191 Class D
Air, original properties Air, compression set Air, oven aging Air, compression set	Ambient 30 194 194	- 94 46 46	T, 2200 psi min; E, 550% min: H, 35 ± 5 20% max T, 2100 psi min; E, 500% min 30% max	Natural	Yes	5340	Mounts, Resilient; Naval Engineering Station Types 6E2000, 6E900, 7E450, 6E150, and 6E100	MIL-M-17508 Type 6E100
Air, original properties Air, compression set Air, oven aging Air, compression set	Ambient 30 194 194	- 94 46 46	T, 3200 psi min; E, 500% min; H, 42 ± 5 20% max T, 2600 psi min; E, 450% min 35% max	Natural	Yes	5340	Mounts, Resilient; Naval Engineering Station Types 6E2000, 6E900, 7E450, 6E150, and 6E100	MIL-M-17508 Type 6E150
Air, original properties Air, compression set Air, oven aging ASTM #3 petroleum oil	Ambient 30 194 158	- 94 46 94	T, 2200 psi min; E, 600% min; H, 38 ± 5 50% max T, 2100% min; E, 550% min Volume change, +15% max	Chloroprene or nitrile	Yes	5340	Mounts, Resilient; Naval Engineering Station Types 6E2000, 6E900, 7E450, 6E150, and 6E100	MIL-M-17508 Type 7E450
Air, original properties Air, compression set Air, oven aging ASTM #3 petroleum oil	Ambient 30 194 158	- 94 46 94	T, 2500 psi min; E, 600% min; H, 43 ± 5 60% min T, 2400 psi min; E, 550% min Volume change, +15% max	Chloroprene or nitrile	Yes	5340	Mounts, Resilient; Naval Engineering Station Types 6E2000, 6E900, 7E450, 6E150, and 6E100	MIL-M-17508 Types 6E2000 and 6E900
Air, original properties Air, oven aging Water	Ambient 212 212	- 70 70	T, 2000 psi min; E, 75% min; H, 80-90 T, 1600 psi min; E, 55% min Volume change, 0 to +15%	Type of rubber not known		4820	Disk, Valve, Non-Metallic (Synthetic Rubber): Insert Type	MIL-D-17650
(Tests on rubber only) Air, original properties Air, oven aging Water	Ambient 158 Ambient	- 96 168	T, 1500 psi; E, 150% min; H, 65 to 90 T and E change, ± 25% max Volume change, +5% max	Type of rubber not known	Yes	3130	Bearing Components, Bonded Synthetic Rubber, Water Lubricated	MIL-B-17901
(Tests on rubber only) Air, oven aging Air, oven aging	158 158	168 168	Set no greater than that of std. sample E no less than that of std. sample	Nylon yarn and natural rubber thread		8305	Webbing, Nylon, Elastic	MIL-W-17965

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties Air, compressed under 25 psi Air, oven aging	Ambient -25 158	- 3 48	T, 1000 psi min; E, 400% min; H, 40 ± 5 No cracks T change, -20% max; H change, +20 max	Type or rubber not known		6650	Eye Guards, Rubber, For Optical Instruments	MIL-E-18648
(Covered in ASTM D1048)				Natural or synthetic		5970	Insulation Blanket, Electrical	MIL-I-19254
Air, original properties Air, compression set Air, oven aging ASTM #3 petroleum oil	Ambient 30 194 Ambient	- 94 46 46	T, 2200 psi min; E, 650% min; H, 38 ± 5 50% max T, 2100 psi min; E, 650% min Volume change, +15% max	Chloroprene or nitrile		5340	Mounts, Resilient, Mare Island Types 11M15, 11M25 and 10M50	MIL-M-19379 Types 11M15 and 11M25
Air, original properties Air, compression set Air, oven aging ASTM #3 petroleum oil	Ambient 30 194 Ambient	- 94 46 46	T, 2800 psi min; E, 575% min; H, 48 ± 5 60% max T, 2700 psi min; E, 525% min Volume change, +15% max	Chloroprene or nitrile		5340	Mounts, Resilient, Mare Island Types 11M15, 11M25 and 10M50	MIL-M-19379 Type 10M50
Air, original properties Air, compression set Air, oven aging	Ambient 30 194	- 94 46	T, 2800 psi min; E, 500% min; H, 50 ± 5 25% max T, 2200 psi min; E, 450% min	Natural	Yes	5340	Mount Resilient; Type 5B5000-H	MIL-M-19863
Air, breaking strength	Ambient	-	Warp, 76.5 lbs min; Filling, 78 lbs min	Natural or synthetic rubber coated fabric		8465	Bladders, Flotation	MIL-B-20278
Air, breaking strength Air, leakage	Ambient 28	- 48	269 lbs min No leakage when bladder inflated	Chloroprene coated nylon cloth		8465	Bladder, Flotation, MK2 Mod 0 and MK2 Mod 1	MIL-B-21160
Air, original properties Air, compression set Air, oven aging	Ambient 30 194	- 94 46	T, 3000 psi min; E, 500% min; H, 45 ± 5 20% max T, 2500 psi min; E, 450% min	Natural	Yes	5340	Mount, Resilient, Type 5M10,000-H	MIL-M-21649
Air, original properties Air, compression set Air, oven aging	Ambient 194 194	- 48 48	T, 1800 psi min; E, 400% min 30% max T and E change, -20% max	Natural or synthetic		5340	Mounts, Resilient, Shear (For Use in Shipping Containers)	MIL-M-22322 Class A
Air, original properties Air, compression set Air, oven aging	Ambient 194 194	- 48 48	T, 1200 psi min; E, 400% min 30% max T and E change, -20% max	Natural or synthetic		5340	Mounts, Resilient, Shear (For Use in Shipping Containers)	MIL-M-22322 Classes B & C

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ENVIRONMENT AND TEST	TEMP., °F	TIME, HRS.	SPECIFICATION REQUIREMENTS	ELASTOMER SPECIFIED OR COMMONLY USED	QPL ISSUED	FSC CLASS	SPECIFICATION TITLE	SPECIFICATION NUMBER
Air, original properties	Ambient	-	T, 1400 psi min; E, 350% min; H, 47-57	Chloroprene		9320	Rubber Tile, Rubber-Air-Air-Lead-Type (RAL)	MIL-R-23074
Air, oven aging	158	166	T and E change, -20% max					
Water	Ambient	46	Volume change, 0 to +12%					
Air, original properties	Ambient		T, 1000 psi min; E, 200% min	Natural or synthetic		2540	Guards, Splash, Wheel	MIL-G-23621
Ozone resistance	104	168	No cracks					
Air, oven aging	212	16	T, 700 psi min					
Low temp	-40	-	No cracks					
Air, hardness	Ambient	-	50 to 75	SBR		2530	Boot, Dust and Moisture Seal: Hydraulic Brake Cylinder, Synthetic Rubber	MIL-B-45326
Hydraulic fluid, MIL-H-13910	-65	70	No leakage					
Air, oven aging, 180° bend	250	24	No cracks; hardness change, -5 to +10					
Ozone, 50 pphm	100	168	No cracks					
Air, shock attenuation	-39	16	Registered shock of 250, max	Natural		5340	Mount, Shipping Container, Resilient; Shock and Vibration Lamping	MIL-M-45907
Air, shock attenuation	159	4	Registered shock of 120, max					
(No physical property requirements)				Natural			Bulb, Aspirator	MIL-B-50015

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ABBREVIATIONS

Break	breaking
Brk	breaking
Cell	cellulose
Chg	change
Cl	class
comp	compression
Cot	cotton
Cr	chromium
CR	chloroprene
D	density
defl	deflection
E	elongation
elong	elongation
GR	grade
H	hardness, Shore A
humid	humidity
in	inch
indent	indentation
ins	insulation
jkt	jacket
lub	lubricating
M	minutes
max	maximum
Mg	milligrams
min	minimum
mm	millimeters
mod	modulus
Nat	natural
NBR	nitrile
Ni	nickel
orig	original
pphm	parts per hundred million
ppm	parts per million
press	pressure
psi	pounds per square inch
psig	pounds per square inch gage
PVC	polyvinyl chloride
Rel	relative
sec	seconds
sep	separation
Syn	synthetic
T	tensile strength
temp	temperature
V	volume
Vol	volume
W	weight
wt	weight

Custodian:

Army-MR

Preparing Activity:

Army-MR

(Project No. 9320-A115)

Review: ME, WC

User: EL, GL, MI

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

OMB Approval
No. 22-R255

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   B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES

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