

MIL-R-83485/1(USAF)

8 September 1976

## MILITARY SPECIFICATION SHEET

RUBBER, FLUOROCARBON ELASTOMER, IMPROVED PERFORMANCE AT  
LOW TEMPERATURES, O-RINGS, SIZES AND TOLERANCES

This specification is approved for use by all Departments  
and Agencies of the Department of Defense.

The complete requirements for procuring the o-ring described  
herein shall consist of this document and the issue in effect  
of Specification MIL-R-83485 (USAF).

Purpose. The purpose of this specification sheet is to set up a  
standardized part numbering system for o-rings procured to  
MIL-R-83485(USAF).

Intended Use. These o-rings are recommended for use in packing  
glands as specified in MIL-G-5514.

Part Numbers. When this document is used for procurement of o-rings,  
part numbers shall consist of the following:

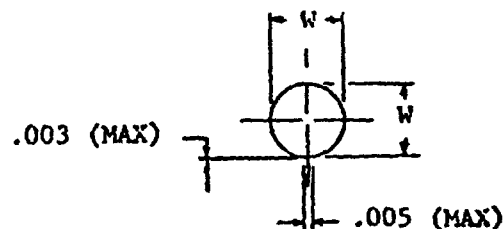
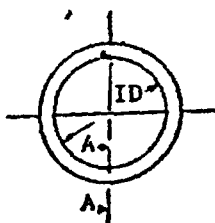
1. The letter M and the specification sheet number.
2. A dash followed by the appropriate dash number from  
Table I or Table II.

## Example 1

M83485/1-214

## Example 2

M83485/1-340



FSC 5330

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Table I  
O-Ring Sizes

DASH NO.	ACTUAL SIZE			
	W		ID	
001	.040	$\pm .003$	.029	$\pm .004$
002	.050		.042	↓
003	.060		.056	↓
004	.070	$\pm .003$	.070	$\pm .005$
005	↓	↓	.101	↓
006	↓	↓	.114	↓
007	↓	↓	.145	↓
008	↓	↓	.176	↓
009	↓	↓	.208	↓
010	↓	↓	.239	↓
011	↓	↓	.301	↓
012	↓	↓	.364	↓
013	↓	↓	.426	↓
014	↓	↓	.489	↓
015	↓	↓	.551	$\pm .007$
016	↓	↓	.614	$\pm .009$
017	↓	↓	.676	↓
018	↓	↓	.739	↓
019	↓	↓	.801	↓
020	↓	↓	.864	↓
021	↓	↓	.926	↓
022	↓	↓	.989	$\pm .010$
023	↓	↓	1.051	↓
024	↓	↓	1.114	↓
025	↓	↓	1.176	$\pm .011$
026	↓	↓	1.239	↓
027	↓	↓	1.301	↓
028	↓	↓	1.364	$\pm .013$
029	↓	↓	1.489	↓
030	↓	↓	1.614	↓
031	↓	↓	1.739	$\pm .015$
032	↓	↓	1.864	↓
033	↓	↓	1.989	$\pm .018$
034	↓	↓	2.114	↓
035	↓	↓	2.239	↓
036	↓	↓	2.364	↓
037	↓	↓	2.489	↓
038	↓	↓	2.614	$\pm .020$
039	↓	↓	2.739	↓
040	↓	↓	2.864	↓

DASH NO.	ACTUAL SIZE			
	W		ID	
041	.070	$\pm .003$	2.989	$\pm .024$
042	↓	↓	3.239	↓
043	↓	↓	3.489	↓
044	↓	↓	3.739	$\pm .027$
045	↓	↓	3.989	↓
046	↓	↓	4.239	$\pm .030$
047	↓	↓	4.489	↓
048	↓	↓	4.739	↓
049	↓	↓	4.989	$\pm .037$
050	↓	↓	5.239	↓
102	.103	$\pm .003$	.049	$\pm .005$
103	↓	↓	.081	↓
104	↓	↓	.112	↓
105	↓	↓	.143	↓
106	↓	↓	.174	↓
107	↓	↓	.206	↓
108	↓	↓	.237	↓
109	↓	↓	.299	↓
110	↓	↓	.362	↓
111	↓	↓	.424	↓
112	↓	↓	.487	↓
113	↓	↓	.549	$\pm .007$
114	↓	↓	.612	$\pm .009$
115	↓	↓	.674	↓
116	↓	↓	.737	↓
117	↓	↓	.799	$\pm .010$
118	↓	↓	.862	↓
119	↓	↓	.924	↓
120	↓	↓	.987	↓
121	↓	↓	1.049	↓
122	↓	↓	1.112	↓
123	↓	↓	1.174	$\pm .012$
124	↓	↓	1.237	↓
125	↓	↓	1.299	↓
126	↓	↓	1.362	↓
127	↓	↓	1.424	↓
128	↓	↓	1.487	↓
129	↓	↓	1.549	$\pm .015$
130	↓	↓	1.612	↓

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Table I (Con't)  
O-Ring Sizes

DASH NO.	ACTUAL SIZE				DASH NO.	ACTUAL SIZE			
	W		ID			W		ID	
131	.103	±.003	1.674	±.015	171	.103	±.003	7.987	±.045
132	↓	↓	1.737	↓	172	↓	↓	8.237	±.050
133	↓	↓	1.799	↓	173	↓	↓	8.487	↓
134	↓	↓	1.862	↓	174	↓	↓	8.737	↓
135	↓	↓	1.925	±.017	175	↓	↓	8.987	↓
136	↓	↓	1.987	↓	176	↓	↓	9.237	±.055
137	↓	↓	2.050	↓	177	↓	↓	9.487	↓
138	↓	↓	2.112	↓	178	↓	↓	9.737	↓
139	↓	↓	2.175	↓	201	.139	±.004	.171	±.005
140	↓	↓	2.237	↓	202	↓	↓	.234	↓
141	↓	↓	2.300	±.020	203	↓	↓	.296	↓
142	↓	↓	2.362	↓	204	↓	↓	.359	↓
143	↓	↓	2.425	↓	205	↓	↓	.421	↓
144	↓	↓	2.487	↓	206	↓	↓	.484	↓
145	↓	↓	2.550	↓	207	↓	↓	.546	±.007
146	↓	↓	2.612	↓	208	↓	↓	.609	±.009
147	↓	↓	2.675	±.022	209	↓	↓	.671	↓
148	↓	↓	2.737	↓	210	↓	↓	.734	±.010
149	↓	↓	2.800	↓	211	↓	↓	.796	↓
150	↓	↓	2.862	↓	212	↓	↓	.859	↓
151	↓	↓	2.987	±.024	213	↓	↓	.921	↓
152	↓	↓	3.237	↓	214	↓	↓	.984	↓
153	↓	↓	3.487	↓	215	↓	↓	1.046	↓
154	↓	↓	3.737	±.028	216	↓	↓	1.109	±.012
155	↓	↓	3.987	↓	217	↓	↓	1.171	↓
156	↓	↓	4.237	±.030	218	↓	↓	1.234	↓
157	↓	↓	4.487	↓	219	↓	↓	1.296	↓
158	↓	↓	4.737	↓	220	↓	↓	1.359	↓
159	↓	↓	4.987	±.035	221	↓	↓	1.421	↓
160	↓	↓	5.237	↓	222	↓	↓	1.484	±.015
161	↓	↓	5.487	↓	223	↓	↓	1.609	↓
162	↓	↓	5.737	↓	224	↓	↓	1.734	↓
163	↓	↓	5.987	↓	225	.139	±.004	1.859	±.018
164	↓	↓	6.237	±.040	226	↓	↓	1.984	↓
165	↓	↓	6.487	↓	227	↓	↓	2.109	↓
166	↓	↓	6.737	↓	228	↓	↓	2.234	±.020
167	↓	↓	6.987	↓	229	↓	↓	2.359	↓
168	↓	↓	7.237	±.045	230	↓	↓	2.484	↓
169	↓	↓	7.487	↓	231	↓	↓	2.609	↓
170	↓	↓	7.737	↓					

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Table 1 (Con't)  
O-Ring Sizes

DASH NO.	ACTUAL SIZE				DASH NO.	ACTUAL SIZE			
	W		ID			W		ID	
232	.139	$\pm .004$	2.734	$\pm .024$	273	.139	$\pm .004$	9.734	$\pm .055$
233			2.859		274			9.984	
234			2.984		275			10.484	
235			3.109		276			10.984	$\pm .065$
236			3.234		277			11.484	
237			3.359		278			11.984	
238			3.484		279			12.984	
239			3.609	$\pm .028$	280			13.984	
240			3.734		281			14.984	
241			3.859		282			15.955	$\pm .075$
242			3.984		283			16.955	$\pm .080$
243			4.109		284			17.955	$\pm .085$
244			4.234	$\pm .030$					
245			4.359		309	.210	$\pm .005$	.412	$\pm .005$
246			4.484		310			.475	
247			4.609		311			.537	$\pm .007$
248			4.734		312			.600	$\pm .009$
249			4.859	$\pm .035$	313			.662	
250			4.984		314			.725	$\pm .010$
251			5.109		315			.787	
252			5.234		316			.850	
253			5.359		317			.912	
254			5.484		318			.975	$\pm .010$
255			5.609		319			1.037	
256			5.734		320			1.100	$\pm .012$
257			5.859		321			1.162	
258			5.984		322			1.225	
259			6.234	$\pm .040$	323			1.287	
260			6.484		324			1.350	
261			6.734		325			1.475	$\pm .015$
262			6.984		326			1.600	
263			7.234	$\pm .045$	327			1.725	
264			7.484		328			1.850	
265			7.734		329			1.975	$\pm .018$
266			7.984		330			2.100	
267			8.234	$\pm .050$	331			2.225	
268			8.484		332			2.350	
269			8.734		333			2.475	$\pm .020$
270			8.984		334			2.600	
271			9.234	$\pm .055$	335			2.725	
272			9.484		336			2.850	

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Table I (Con't)  
O-Ring Sizes

DASH NO.	ACTUAL SIZE				DASH NO.	ACTUAL SIZE			
	W		ID			W		ID	
337	.210	±.005	2.975	±.024	378	.210	±.005	10.475	±.060
338			3.100	↓	379			10.975	↓
339			3.225		380			11.475	±.065
340			3.350		381			11.975	↓
341			3.475	↓	382			12.975	↓
342			3.600	±.028	383			13.975	±.070
343			3.725	↓	384			14.975	↓
344			3.850		385			15.955	±.075
345			3.975		386			16.955	±.080
346			4.100	↓	387			17.955	±.085
347			4.225	±.030	388			18.955	±.090
348			4.350		389			19.955	±.095
349			4.475	↓	390			20.955	↓
350			4.600		391			21.955	±.100
351			4.725	↓	392			22.940	±.105
352			4.850	↓	393			23.940	±.110
353			4.975	±.037	394			24.940	±.115
354			5.100		395			25.940	±.120
355			5.225	↓					↓
356			5.350		425	.275	±.006	4.475	±.033
357			5.475		426			4.600	↓
358			5.600		427			4.725	
359			5.725		428			4.850	↓
360			5.850		429			4.975	±.037
361			5.975	↓	430			5.100	↓
362			6.225	±.040	431			5.225	
363			6.475	↓	432			5.350	
364			6.725		433			5.475	
365			6.975	↓	434			5.600	
366			7.225	±.045	435			5.725	
367			7.475	↓	436			5.850	
368			7.725	↓	437			5.975	
369			7.975		438			6.225	±.040
370			8.225	±.050	439			6.475	↓
371			8.475	↓	440			6.725	
372			8.725	↓	441			6.975	↓
373			8.975	↓	442			7.225	±.045
374			9.225	±.055	443			7.475	↓
375			9.475	↓	444			7.725	
376			9.725	↓	445			7.975	↓
377			9.975	↓	446			8.475	±.055

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Table I (Con't)  
O-Ring Sizes

DASH NO.	ACTUAL SIZE			
	W		ID	
447	.275	$\pm .006$	8.975	$\pm .055$
448			9.475	↓
449			9.975	↓
450			10.475	$\pm .060$
451			10.975	↓
452			11.475	↓
453			11.975	↓
454			12.475	↓
455			12.975	↓
456			13.475	$\pm .070$
457			13.975	↓
458			14.475	↓
459			14.975	↓
460			15.475	↓
461			15.955	$\pm .075$
462			16.455	↓
463			16.955	$\pm .080$
464			17.455	$\pm .085$
465			17.955	↓
466			18.455	↓
467			18.955	$\pm .090$
468			19.455	↓
469			19.955	$\pm .095$
470			20.955	↓
471			21.955	$\pm .100$
472			22.940	$\pm .105$
473			23.940	$\pm .110$
474	↓	↓	24.940	$\pm .115$
475			25.940	$\pm .120$

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Table II  
STRAIGHT THREAD TUBE FITTING BOSS GASKETS

DASH NO.	TUBE OUTSIDE DIAMETER	W. CROSS-SECTION		I. D.	
901	.094	.056	$\pm .003$	.185	$\pm .005$
902	.125	.064	↓	.239	↓
903	.188	↓		.301	
904	.250	.072		.351	
905	.312	↓		.414	
906	.375	.078		.468	
907	.438	.082		.530	$\pm .007$
908	.500	.087		.644	$\pm .009$
909	.562	.097		.706	↓
910	.625	↓		.755	
911	.688	.116	$\pm .004$	.863	
912	.750	↓	↓	.924	
913	.812			.986	$\pm .010$
914	.875			1.047	↓
916	1.000			1.171	
918	1.125	↓		1.355	$\pm .012$
920	1.250	.118		1.475	$\pm .014$
924	1.500	↓		1.720	↓
928	1.750	↓		2.090	$\pm .018$
932	2.000		2.337	↓	

Custodian:  
Air Force - 11

Preparing activity:  
Air Force - 11

Project Number: 5330-F043





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**NOTICE  
OF VALIDATION**

**MIL-R-83485/1(USAF)  
NOTICE 2  
10 December 1992**

**MILITARY SPECIFICATION**

**RUBBER, FLUOROCARBON ELASTOMER, IMPROVED  
PERFORMANCE AT LOW TEMPERATURES, O-RINGS,  
SIZES AND TOLERANCES**

MIL-R-83485/1(USAF), dated 8 September 1976, has been reviewed and determined to be valid for use in acquisition.

**Custodians:  
Air Force - 11**

**Preparing activity:  
Air Force - 11**

**AMSC N/A**

**FSC 5330**

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