

INCH-POUND

MIL-PRF-6855/4A

15 June 2009

SUPERSEDING

MIL-R-6855/4

16 February 1987

## PERFORMANCE SPECIFICATION SHEET

## RUBBER, SYNTHETIC, TUBING

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

The requirement for acquiring the product described herein shall consist of this specification sheet and MIL-PRF-6855.

## REQUIREMENTS:

Part numbers:

Part numbers shall consist of the prefix M, specification number, specification sheet number, and a six-digit dash number assigned using [tables I](#), [IIA](#), [IIB](#), [IIC](#), and [III](#) herein, as show in the following example:

<u><b>M</b></u>	<u><b>6855</b></u>	<u><b>/</b></u>	<u><b>4</b></u>	<u><b>=</b></u>	<u><b>XX</b></u>	<u><b>XXX</b></u>	<u><b>X</b></u>
Prefix for Military Specification	Specification Number		Specification Sheet Number		Two-Digit Classification Number ( <a href="#">table I</a> ).	Three-Digit Size Number ( <a href="#">table IIA</a> , <a href="#">IIB</a> , or <a href="#">IIC</a> ).	One-Digit Length Number ( <a href="#">table III</a> ).

Example: M6855/4-XXXXXX

Dimensional tolerances:

Tolerances for tubing inside diameter and wall thickness shall be in accordance with [tables IIA](#), [IIB](#), and [IIC](#) herein, as applicable. Tolerance for tubing length shall be -0 percent, +3 percent of the specified length.

Surface finish:

All synthetic rubber tubing surfaces shall be smooth and free from pin holes, flash, or any other imperfections which may impair serviceability.

## VERIFICATION:

Inspection and test of synthetic rubber tubing shall be in accordance with MIL-PRF-6855, Section 4, VERIFICATION.

## MIL-PRF-6855/4A

TABLE I. Type, class, grade.

Classification Number	Classification of Requirements		
01		Class 1	Grade 30
02		Class 1	Grade 40
03		Class 1	Grade 50
04		Class 1	Grade 60
05		Class 1	Grade 70
06		Class 1	Grade 80
07	Type A	Class 2	Grade 30
08	Type A	Class 2	Grade 40
09	Type A	Class 2	Grade 50
10	Type A	Class 2	Grade 60
11	Type A	Class 2	Grade 70
12	Type A	Class 2	Grade 80
13	Type B	Class 2	Grade 30
14	Type B	Class 2	Grade 40
15	Type B	Class 2	Grade 50
16	Type B	Class 2	Grade 60
17	Type B	Class 2	Grade 70
18	Type B	Class 2	Grade 80
19		Class 3	Grade 30
20		Class 3	Grade 40
21		Class 3	Grade 50
22		Class 3	Grade 60
23		Class 3	Grade 70
24		Class 3	Grade 80
25	Type A	Class 4	Grade 30
26	Type A	Class 4	Grade 40
27	Type A	Class 4	Grade 50
28	Type A	Class 4	Grade 60
29	Type A	Class 4	Grade 70
30	Type A	Class 4	Grade 80
31	Type B	Class 4	Grade 30
32	Type B	Class 4	Grade 40
33	Type B	Class 4	Grade 50
34	Type B	Class 4	Grade 60
35	Type B	Class 4	Grade 70
36	Type B	Class 4	Grade 80
37		Class 5	Grade 30
38		Class 5	Grade 40
39		Class 5	Grade 50
40		Class 5	Grade 60
41		Class 5	Grade 70
42		Class 5	Grade 80

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TABLE IIA. Light wall tubing sizes.

<b>Tubing Size Number</b>	<b>Minimum Inside Diameter (Inches)</b>	<b>Maximum Inside Diameter (Inches)</b>	<b>Nominal Inside Diameter (Inches)</b>	<b>Minimum Wall Thickness (Inches)</b>	<b>Maximum Wall Thickness (Inches)</b>	<b>Nominal Wall Thickness (Inches)</b>
L02	0.109	0.141	0.125	0.031	0.047	0.039
L04	0.109	0.141	0.125	0.047	0.063	0.055
L06	0.141	0.172	0.156	0.047	0.063	0.055
L08	0.172	0.203	0.188	0.047	0.063	0.055
L10	0.234	0.266	0.250	0.047	0.079	0.063
L12	0.297	0.328	0.312	0.047	0.079	0.063
L14	0.359	0.391	0.375	0.047	0.079	0.063
L16	0.422	0.453	0.438	0.047	0.079	0.063
L18	0.484	0.516	0.500	0.047	0.079	0.063
L20	0.547	0.578	0.562	0.047	0.079	0.063
L22	0.609	0.641	0.625	0.047	0.079	0.063
L24	0.734	0.766	0.750	0.047	0.079	0.063
L26	0.859	0.891	0.875	0.047	0.079	0.063
L28	0.984	1.016	1.000	0.047	0.079	0.063

TABLE IIB. Heavy wall tubing sizes.

<b>Tubing Size Number</b>	<b>Minimum Inside Diameter (Inches)</b>	<b>Maximum Inside Diameter (Inches)</b>	<b>Nominal Inside Diameter (Inches)</b>	<b>Minimum Wall Thickness (Inches)</b>	<b>Maximum Wall Thickness (Inches)</b>	<b>Nominal Wall Thickness (Inches)</b>
H02	0.109	0.141	0.125	0.094	0.110	0.102
H04	0.141	0.172	0.156	0.094	0.110	0.102
H06	0.172	0.203	0.188	0.094	0.110	0.102
H08	0.234	0.266	0.250	0.109	0.141	0.125
H10	0.297	0.328	0.312	0.109	0.141	0.125
H12	0.359	0.391	0.375	0.078	0.109	0.094
H14	0.359	0.391	0.375	0.109	0.141	0.125
H16	0.422	0.453	0.438	0.109	0.141	0.125
H18	0.484	0.516	0.500	0.109	0.141	0.125
H20	0.547	0.578	0.562	0.109	0.141	0.125
H22	0.609	0.641	0.625	0.109	0.141	0.125
H24	0.734	0.766	0.750	0.109	0.141	0.125
H26	0.859	0.891	0.875	0.109	0.141	0.125
H28	0.984	1.016	1.000	0.109	0.141	0.125
H30	1.234	1.266	1.250	0.109	0.141	0.125
H32	1.484	1.516	1.500	0.133	0.179	0.156
H34	1.734	1.766	1.750	0.133	0.179	0.156

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TABLE IIC. Extra heavy wall tubing sizes.

Tubing Size Number	Minimum Inside Diameter (Inches)	Maximum Inside Diameter (Inches)	Nominal Inside Diameter (Inches)	Minimum Wall Thickness (Inches)	Maximum Wall Thickness (Inches)	Nominal Wall Thickness (Inches)
E02	0.109	0.141	0.125	0.156	0.219	0.188
E04	0.141	0.172	0.156	0.156	0.219	0.188
E06	0.172	0.203	0.188	0.156	0.219	0.188
E08	0.234	0.266	0.250	0.156	0.219	0.188
E10	0.297	0.328	0.312	0.156	0.219	0.188
E12	0.359	0.391	0.375	0.219	0.281	0.250
E14	0.422	0.453	0.438	0.219	0.281	0.250
E16	0.484	0.516	0.500	0.156	0.219	0.188
E18	0.484	0.516	0.500	0.219	0.281	0.250

TABLE III. Tubing length – L.	
Tubing Length Number	L (Inches)
3	72.000
5	144.000
7	300.000
9	1800.000

Metric Conversion Chart <sup>1/</sup>							
Inch	mm	Inch	mm	Inch	mm	Inch	mm
0.031	0.79	0.179	4.55	0.484	12.29	1.000	25.40
0.039	0.99	0.188	4.78	0.500	12.70	1.016	25.81
0.047	1.19	0.203	5.16	0.516	13.11	1.234	31.34
0.055	1.40	0.219	5.56	0.547	13.89	1.250	31.75
0.063	1.60	0.234	5.94	0.562	14.27	1.266	32.16
0.078	1.98	0.250	6.35	0.578	14.68	1.484	37.69
0.079	2.01	0.281	7.14	0.609	15.47	1.500	38.10
0.094	2.39	0.297	7.54	0.625	15.88	1.516	38.51
0.102	2.59	0.312	7.92	0.641	16.28	1.734	44.04
0.109	2.77	0.328	8.33	0.734	18.64	1.750	44.45
0.110	2.79	0.359	9.12	0.750	19.05	1.766	44.86
0.125	3.18	0.375	9.53	0.766	19.46	72.000	1828.80
0.133	3.38	0.391	9.93	0.859	21.82	144.000	3657.60
0.141	3.58	0.422	10.72	0.875	22.23	300.000	7620.00
0.156	3.96	0.438	11.13	0.891	22.63	1800.000	45720.00
0.172	4.37	0.453	11.51	0.984	24.99		
NOTE: <sup>1/</sup> See general note 2.							

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GENERAL NOTES TO TABLES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Use of this specification sheet for US Army Communications-Electronics Command is restricted to Class 4 and Class 5 synthetic rubber sheets.

CHANGES FROM PREVIOUS ISSUE: Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:

Army – MR  
Navy – SH  
Air Force – 11  
DLA – CC

Preparing Activity:

Navy – SH  
(Project 4720-2008-020)

Review Activities:

Army – AR, AT, AV, CE, CR, MI  
Navy – AS, OS, YD  
Air Force – 71, 99  
DLA – GS, IS

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.