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400 Commonwealth Dr., Warrendale, PA 15096

AEROSPACE MATERIAL SPECIFICATION

Submitted for recognition as an American National Standard

SAE MAM 2279

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TOLERANCES, METRIC
Rubber Products

1. SCOPE: This specification covers established metric (SI) manufacturing tolerances applicable to non-cellular rubber products ordered to metric dimensions. These tolerances apply to all conditions, unless otherwise noted. The term "excl" applies only to the higher figure of the specified range.

2. SHEET AND STRIP:

2.1 Thickness:

TABLE I

Nominal Thickness (T) Millimetres	Tolerance, Millimetres Plus and Minus
Up to 0.79, excl	0.25
0.79 to 1.59, excl	0.30
1.59 to 3.18, excl	0.40
3.18 to 4.80, excl	0.51
4.80 to 9.50, excl	0.79
9.50 to 14.30, excl	1.19
14.30 to 19.20, excl	1.59
19.20 to 25.40, excl	2.38
25.40 and over	0.10T

2.2 Width:

TABLE II

Nominal Width Millimetres	Tolerance, Millimetres Plus and Minus
Up to 914, excl	As agreed upon
914 and over	25.4

2.3 Length: As agreed upon by purchaser and vendor.

3. EXTRUSIONS: The tolerances in 3.1 and 3.2 apply to width, height and cross-sectional dimensions of extruded shapes and to any two of OD, ID, and wall thickness of tubing and tubular sections of other shapes.

3.1 Compounds Not Requiring Post-Curing:

3.1.1 Maximum Hardness Under 55 Durometer "A" or Equivalent:

TABLE III

Nominal Dimension Millimetres	Tolerance, Millimetres Plus and Minus	Ovality, % (See 3.1.1.2)
Up to 2.50, incl	0.40	10
Over 2.50 to 4.00, incl	0.50	15
Over 4.00 to 6.30, incl	0.63	15
Over 6.30 to 10.00, incl	0.80	15
Over 10.00 to 16.00, incl	1.00	15
Over 16.00 to 25.00, incl	1.25	15
Over 25.00	As agreed upon	15

3.1.1.1 In general, cross-section dimensions under 1.00 mm are impractical to extrude.

3.1.1.2 Ovality applies to tubing ordered in straight lengths with wall thickness of 1.60 mm and over and shall be computed from the difference between the minor and major axis diameter measurements, taken at the same transverse plane of the tube, expressed as a percentage of the nominal diameter.

3.1.2 Minimum Hardness 55 Durometer "A" or Equivalent:

TABLE IV

Nominal Dimension Millimetres	Tolerance, Millimetres Plus and Minus	Ovality, % (See 3.1.1.2)
Up to 2.50, incl	0.32	10
Over 2.50 to 4.00, incl	0.40	15
Over 4.00 to 6.30, incl	0.50	15
Over 6.30 to 10.00, incl	0.63	15
Over 10.00 to 16.00, incl	0.80	15
Over 16.00 to 25.00, incl	1.00	15
Over 25.00	As agreed upon	15

3.2 Post-Cured Compounds:

TABLE V

Nominal Dimension Millimetres	Tolerance, Millimetres Plus and Minus	Ovality, % (See 3.1.1.2)
Up to 2.50, incl	0.20	10
Over 2.50 to 4.00, incl	0.32	15
Over 4.00 to 6.30, incl	0.50	15
Over 6.30 to 10.00, incl	0.80	15
Over 10.00 to 16.00, incl	1.25	15
Over 16.00 to 25.00, incl	2.00	15
Over 25.00	As agreed upon	15

3.3 Length of Cut Lengths:

3.3.1 Maximum Hardness Under 55 Durometer "A" or Equivalent:

TABLE VI

Nominal Length Millimetres	Tolerance, Millimetres Plus and Minus
Up to 100, incl	2.00
Over 100 to 160, incl	2.50
Over 160 to 250, incl	3.15
Over 250 to 400, incl	4.00
Over 400 to 630, incl	5.00
Over 630 to 1000, incl	6.30
Over 1000 to 1600, incl	8.00
Over 1600 to 2500, incl	10.00
Over 2500 to 4000, incl	12.50
Over 4000	As agreed upon

3.3.2 Minimum Hardness 55 Durometer "A" and Over or Equivalent:

TABLE VII

Nominal Length Millimetres	Tolerance, Millimetres Plus and Minus
Up to 100, incl	1.60
Over 100 to 160, incl	2.00
Over 160 to 250, incl	2.50
Over 250 to 400, incl	3.15
Over 400 to 630, incl	4.00
Over 630 to 1000, incl	5.00
Over 1000 to 1600, incl	6.30
Over 1600 to 2500, incl	8.00
Over 2500 to 4000, incl	10.00
Over 4000	As agreed upon