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AEROSPACE MATERIAL SPECIFICATION

SAE MAM 2279A

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Submitted for recognition as an American National Standard

Superseding MAM 2279

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 "exclusive" applies only to the higher figure of the specified range.

2. SHEET AND STRIP:

2.1 Thickness:

Shall be as shown in Table 1.

TABLE 1 - Thickness Tolerances

Nominal Thickness (T) Millimeters	Tolerance, Millimeters 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:

Shall be as shown in Table 2.

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TABLE 2 - Width Tolerances

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

2.3 Length:

As agreed upon by purchaser and supplier.

3. EXTRUSIONS:

The tolerances in Table 3, Table 4, and Table 5 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: Shall be as shown in Table 3.

TABLE 3 - Tolerances

Nominal Dimension Millimeters	Tolerance, Millimeters 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 millimeter are impractical to extrude.

3.1.1.2 Ovality applies to tubing ordered in straight lengths with wall thickness of 1.60 millimeters 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: Shall be as shown in Table 4.

TABLE 4 - Tolerances

Nominal Dimension Millimeters	Tolerance, Millimeters 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:

Shall be as shown in Table 5.

TABLE 5 - Tolerances

Nominal Dimension Millimeters	Tolerance, Millimeters 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: Shall be as shown in Table 6.

TABLE 6 - Length Tolerances

Nominal Length Millimeters	Tolerance, Millimeters 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: Shall be as shown in Table 7.

TABLE 7 - Length Tolerances

Nominal Length Millimeters	Tolerance, Millimeters 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

3.4 Molded Products:

Shall be as shown in Table 8.