

AEROSPACE MATERIAL SPECIFICATION

Submitted for recognition as an American National Standard

SAE AMS 2279

Issued 1-1-86

TOLERANCES Rubber Products

1. SCOPE: This specification covers established inch/pound manufacturing tolerances applicable to non-cellular rubber products ordered to inch/pound 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) Inches	Tolerance, Inch Plus and Minus
Up to 0.031, excl	0.010
0.031 to 0.062, excl	0.012
0.062 to 0.125, excl	0.016
0.125 to 0.187, excl	0.020
0.187 to 0.375, excl	0.031
0.375 to 0.562, excl	0.047
0.562 to 0.750, excl	0.062
0.750 to 1.000, excl	0.094
1.000 and over	0.10T

2.2 Width:

TABLE II

Nominal Width Inches	Tolerance, Inch Plus and Minus
Up to 36, excl	As agreed upon
36 and over	1

SAE Technical Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

AMS documents are protected under United States and international copyright laws. Reproduction of these documents by any means is strictly prohibited without the written consent of the publisher.

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 Inches	Tolerance, Inch Plus and Minus	Ovality, % (See 3.1.1.2)
Up to 0.100, incl (See 3.1.1.1)	0.016	10
Over 0.100 to 0.160, incl	0.020	15
Over 0.160 to 0.250, incl	0.025	15
Over 0.250 to 0.400, incl	0.030	15
Over 0.400 to 0.630, incl	0.040	15
Over 0.630 to 1.000, incl	0.050	15
Over 1.000	As agreed upon	15

3.1.1.1 In general cross-section dimensions under 0.040 in are impractical to extrude.

3.1.1.2 Ovality applies to tubing ordered in straight lengths with wall thickness of 0.063 in. 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" and Over or Equivalent:

TABLE IV

Nominal Dimension Inches	Tolerance, Inch Plus and Minus	Ovality, % (See 3.1.1.2)
Up to 0.100, incl (See 3.1.1.1)	0.013	10
Over 0.100 to 0.160, incl	0.016	15
Over 0.160 to 0.250, incl	0.020	15
Over 0.250 to 0.400, incl	0.025	15
Over 0.400 to 0.630, incl	0.032	15
Over 0.630 to 1.000, incl	0.040	15
Over 1.000	As agreed upon	15

3.2 Post-Cured Compounds:

TABLE V

Nominal Dimension Inches	Tolerance, Inch Plus and Minus	Ovality, % (See 3.1.1.2)
Up to 0.100, incl	0.008	10
Over 0.100 to 0.160, incl	0.013	15
Over 0.160 to 0.250, incl	0.020	15
Over 0.250 to 0.400, incl	0.032	15
Over 0.400 to 0.630, incl	0.050	15
Over 0.630 to 1.000, incl	0.080	15
Over 1.000	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 Inches	Tolerance, Inch Plus and Minus
Up to 4.000, incl	0.080
Over 4.000 to 6.300, incl	0.100
Over 6.300 to 10.000, incl	0.125
Over 10.000 to 16.000, incl	0.160
Over 16.000 to 25.000, incl	0.200
Over 25.000 to 40.000, incl	0.250
Over 40.000 to 63.000, incl	0.315
Over 63.000 to 100.000, incl	0.400
Over 100.000 to 160.000, incl	0.500
Over 160.000	As agreed upon

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

TABLE VII

Nominal Length Inches	Tolerance, Inch Plus and Minus
Up to 4.000, incl	0.063
Over 4.000 to 6.300, incl	0.080
Over 6.300 to 10.000, incl	0.100
Over 10.000 to 16.000, incl	0.125
Over 16.000 to 25.000, incl	0.160
Over 25.000 to 40.000, incl	0.200
Over 40.000 to 63.000, incl	0.250
Over 63.000 to 100.000, incl	0.315
Over 100.000 to 160.000, incl	0.400
Over 160.000	As agreed upon