

S&H TOLERANCES FOR MOLDED PRODUCTS

Standard Dimensional Tolerance Table - Molded Rubber Products
Drawing Designation "A1" High Precision

Size (Millimeters)		Fixed	Closure	Size (Inches)		Fixed	Closure
Above	Incl.			Above	Incl.		
0	10	± .10	± .13	0	.40	± .004	± .005
10	16	± .13	± .16	.40	.63	± .005	± .006
16	25	± .16	± .20	.63	1.00	± .006	± .008
25	40	± .20	± .25	1.00	1.60	± .008	± .010
40	63	± .25	± .32	1.60	2.50	± .010	± .013
63	100	± .32	± .40	2.50	4.00	± .013	± .016
100	160	± .40	± .50	4.00	6.30	± .016	± .020

Standard Dimensional Tolerance Table - Molded Rubber Products
Drawing Designation "A2" Precision

Size (Millimeters)		Fixed	Closure	Size (Inches)		Fixed	Closure
Above	Incl.			Above	Incl.		
0	10	± .16	± .20	0	.40	± .006	± .008
10	16	± .20	± .25	.40	.63	± .008	± .010
16	25	± .25	± .32	.63	1.00	± .010	± .013
25	40	± .32	± .40	1.00	1.60	± .013	± .016
40	63	± .40	± .50	1.60	2.50	± .016	± .020
63	100	± .50	± .63	2.50	4.00	± .020	± .025
100	160	± .63	± .80	4.00	6.30	± .025	± .032
160	& over	.004	.005	6.30	& over	.004	.005
multiply by				multiply by			

Standard Dimensional Tolerance Table - Molded Rubber Products
Drawing Designation "A3" Commercial

Size (Millimeters)		Fixed	Closure	Size (Inches)		Fixed	Closure
Above	Incl.			Above	Incl.		
0	10	± .20	± .32	0	.40	± .008	± .013
10	16	± .25	± .40	.40	.63	± .010	± .016
16	25	± .32	± .50	.63	1.00	± .013	± .020
25	40	± .40	± .63	1.00	1.60	± .016	± .025
40	63	± .50	± .80	1.60	2.50	± .020	± .032
63	100	± .63	± 1.00	2.50	4.00	± .025	± .040
100	160	± .80	± 1.25	4.00	6.30	± .032	± .050
160	& over multiply by	.005	.008	6.30	& over multiply by	.005	.008

S&H TOLERANCES FOR EXTRUDED PRODUCTS

The closer tolerance classes outlined below should not be specified unless required by the final application and they should be restricted to critical dimensions. The closer tolerances demanded, the tighter the control must be exercised during manufacture, resulting in higher costs.

When particular physical properties are required in the products, it is not always possible to provide them in a combination which is capable of fabrication to close tolerances. It is necessary, in these circumstances, that consultation take place between the customer and supplier. In general, softer materials need greater tolerances than harder ones. Where close tolerances are required, a specific technique of measurement should be agreed upon between purchaser and manufacturer.

Tolerances for outside (O.D.) diameters, inside (I.D.) diameters, wall thickness, width, height, and general cross sectional dimensions or extrusions.

S&H Class		1	2	3
Drawing Designation		High Precision	Precision	Commercial
Dimensions (In Millimeters)		E1	E2	E3
Above	Up to			
0	1.5	± 0.15	± 0.25	± 0.40
1.5	2.5	± 0.20	± 0.35	± 0.50
2.5	4.0	± 0.25	± 0.40	± 0.70
4.0	6.3	± 0.35	± 0.50	± 0.80
6.3	10	± 0.40	± 0.70	± 1.00
10	16	± 0.50	± 0.80	± 1.30
16	25	± 0.70	± 1.00	± 1.60
25	40	± 0.80	± 1.30	± 2.00
40	63	± 1.00	± 1.60	± 2.50
63	100	± 1.30	± 2.00	± 3.20

S&H Class		1	2	3
Drawing Designation		High Precision	Precision	Commercial
Dimensions (In Inches)		E1	E2	E3
Above	Up to			
0	0.06	± 0.006	± 0.010	± 0.015
0.06	0.10	± 0.008	± 0.014	± 0.020
0.10	0.16	± 0.010	± 0.016	± 0.027
0.16	0.25	± 0.014	± 0.020	± 0.031
0.25	0.39	± 0.016	± 0.027	± 0.039
0.39	0.63	± 0.020	± 0.031	± 0.051
0.63	0.98	± 0.027	± 0.039	± 0.063
0.98	1.57	± 0.031	± 0.051	± 0.079
1.57	2.48	± 0.039	± 0.063	± 0.098
2.48	3.94	± 0.051	± 0.079	± 0.126

Note: Tolerances on dimensions above 100mm (3.94) should be agreed on by supplier and user. General cross sectional dimensions below 1mm (0.04) are impractical. In general, softer materials and those requiring a post cure need greater tolerances.