



## STOCKWELL ELASTOMERICS, INC.

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# Specifications Overview\*

### Mil Specifications:

A-A-59588	New commercial description overview for silicone rubber items
ZZR765 Class 1	Extreme low temperature phenyl base silicone
ZZR765 Class 2	General purpose, low compression set methyl-vinyl silicone
ZZR765 Class 3	High flex, high tear strength grades of methyl-vinyl silicone
Mil-R-6130	See ASTM D6576 (below)

### AMS Specifications:

AMS 3301	General purpose, 40 durometer silicone
AMS 3302	General purpose, 50 durometer silicone
AMS 3303	General purpose, 60 durometer silicone
AMS 3304	General purpose, 70 durometer silicone
AMS 3323	Fluorosilicone Sponge, closed cell
AMS 3347	High strength, 50 durometer silicone rubber
AMS 3348	High strength, 30 durometer silicone rubber
AMS 3349	High strength, 70 durometer silicone rubber

### UL Flammability Specifications:

UL 94 HB	Horizontal Burn Test - slow burning on a horizontal swatch
UL 94 V-0	Vertical Burn Test - burning stops within 10 seconds on a vertical swatch, no drips allowed
UL 94 V-1	Vertical Burn Test - burning stops within 30 seconds on a vertical swatch, no drips allowed

### IP Enclosure Specifications:

IP 5X (solids)	First Digit	Complete protection (Dust protected)
IP 6X (solids)	First Digit	Complete protection (Dust proof)
IP X0 (water)	Second Digit	No special protection required
IP X1 (water)	Second Digit	Water dripping/falling vertically (light rain)
IP X2 (water)	Second Digit	Water sprayed at an angle, up to 15° degrees from the vertical (light rain and wind)
IP X3 (water)	Second Digit	Spray water, any direction up to 60° degrees from the vertical (Heavy rain)
IP X4 (water)	Second Digit	Spray water from all directions, limited ingress permitted
IP X5 (water)	Second Digit	Low pressure water jets from all directions, limited ingress permitted (Hose down, non-commercial)
IP X6 (water)	Second Digit	High pressure jets from all directions, limited ingress permitted (Hose down, commercial)
IP X7 (water)	Second Digit	Temporary immersion, 15 cm to 1m (Shallow immersion)

### Examples:

IP 66, IP66	Dust-proof, high pressure jets from all directions
IP 67, IP67	Dust-proof, temporary immersion (shallow, up to 1m)
IP 68, IP68	Dust-proof, permanent immersion, under pressure

## NEMA Enclosure Specifications:

NEMA Type 1	General purpose indoor use, no special protection.
NEMA Type 2	Indoor use, protection against limited amounts of falling water and debris.
NEMA Type 3	Outdoor use, to protect against windblown dust, rain, and sleet. To be unaffected by development of ice.
NEMA Type 3R	Outdoor use, to protect against falling rain. To be unaffected by development of ice.
NEMA Type 3S	Outdoor use, to protect against sleet. To be unaffected by development of ice.
NEMA Type 4	Indoor or outdoor use, to protect against windblown dust and rain, splashing water, and hose down. To be unaffected by development of ice.
NEMA Type 4X	Similar to Type 4, plus protection against corrosion
NEMA Type 6	Indoor or outdoor use, to protect against entry of water during temporary, shallow submersion. To be unaffected by development of ice.

## ASTM Specifications:

ASTM D6576	New designation for cellular materials, replaces Mil-R-6130
ASTM D1056	Type 1 Open cell sponge rubber
ASTM D1056	Type 2 Closed cell sponge rubber
ASTM D1056	Class A Non-oil resistant
ASTM D1056	Class B Oil resistant, low swell
ASTM D1056	Class C Oil resistant, medium swell
ASTM D1056	Class D Extreme temperature resistance
ASTM D1056	Grade 0 Compression Force Deflection less than 2 psi
ASTM D1056	Grade 1 Compression Force Deflection = 2 - 5 psi
ASTM D1056	Grade 2 Compression Force Deflection = 5 - 9 psi
ASTM D1056	Grade 3 Compression Force Deflection = 9-13 psi (for classes A, B, C) 9-15 psi (for class D)
ASTM D1056	Grade 4 Compression Force Deflection = 13-17 psi (for classes A, B, C) 15-22 psi (for class D)
ASTM D1056	Grade 5 Compression Force Deflection = 17-25 psi (for classes A, B, C) 22-30 psi (for class D)
ASTM D1056	Test Suffix A - Heat resistance
ASTM D1056	Test Suffix B - Compression set
ASTM D1056	Test Suffix C - Ozone or weather resistance
ASTM D1056	Test Suffix D - Compression deflection resistance
ASTM D1056	Test Suffix E - Fluid resistance (Fuel B)
ASTM D1056	Test Suffix F - Low temperature resistance
ASTM D1056	Test Suffix G - Tear resistance
ASTM D1056	Test Suffix J - Abrasion resistance
ASTM D1056	Test Suffix K - Adhesion resistance
ASTM D1056	Test Suffix L - Water absorption
ASTM D1056	Test Suffix M - Flammability resistance
ASTM D1056	Test Suffix N - Impact resistance
ASTM D1056	Test Suffix P - Staining resistance
ASTM D1056	Test Suffix R - Resilience
ASTM D1056	Test Suffix T - Tensile and Elongation
ASTM D1056	Test Suffix W - Density
ASTM D1056	Test Suffix Z - Any special requirements

\* Specification Overview is for reference only, refer to the actual specification for details and updated information