



**Dynatex®**

**Technical Datasheet**

**DYNA 49289**

Revised Date: June 2011

**Description**

Dynatex Marine Grade Silicone Sealant is a paste-like, one part component materials which cures to a tough, rubber solid upon exposure to moisture in the air. Because it does not flow due to its own weight, this sealant can be applied overhead or on sidewall joints and surfaces without sagging, slumping or running off. It adheres to clean metal, glass, most types of wood, silicone resins, vulcanized silicone rubber, ceramic, natural and synthetic fibre, and painted and many plastic surfaces.

Dynatex Marine Grade Silicone Sealant has good resistance to weathering, vibration, moisture, ozone and extreme temperatures. It may be applied in sub-zero weather without loss of extrusion of physical property characteristics. Fully cured, Dynatex Marine Grade Silicone Sealant can be used for extended periods at temperatures up to 232°C, and for shorter periods as high as 260°C. Tests have shown that even after two months at 232°C, or up to one week at 260°C, the sealant remains rubbery.

**Applications**

- Sealing windows in oven doors and flues on gas appliances, flanged pipe joints and access doors
- Adhering auto and appliance trim, including metal, fabric ad fabric-backed plastics
- Bonding gaskets in heating and refrigeration units
- Sealing of marine cabins and windows
- Anti-abrasion coating
- Bonding signs and sign letters
- Attaching screw less brackets or nameplates and tacking plastic materials to metal
- Providing formed-in-place gaskets for gear boxes, compressors, pumps.

**Typical Properties**

**Uncured**

Colours	Clear
Specific Gravity @ 25°C	1.04
Extrusion Rate (1/8" Orifice, 90psi)	350 gms/min
Flow Rate (sag or slump on 1/8" x 4" bead)	NIL
Tack Free Time @ 25°C and 50% RH	10 to 20 mins
Cure time at 25°C and 50% RH (1/8"thick)	24 Hours

**Cured-Physical**

ASTM D 676	Durometer Hardness, Shore A,	30 Points
ASTM D 412	Tensile Strength, MPa (psi)	(350)
ASTM D 412	Elongation	500%
ASTM D 746	Brittle Point	-73°C
ASTM D 2137A	Volume Coefficient of Thermal Expansion 0 to 100	9.3 x 10 <sup>-4</sup>
	Thermal Conductivity, cal/(cm) (degree C), (sec)	0.45 x 10 <sup>-3</sup>
	BTU per (ft) (degrees F), (Hr)	0.11

**Cured+-Electrical**

ASTM D 257	Volume Resistivity, ohm-cm	1.5 x 10 <sup>15</sup>
ASTM D 149	Dielectric Strength	550 volts/mil
ASTM D 150	Dielectric Constant,	
	At 60 Hz	2.8
	At 100 Hz	2.8
	At 100 kHz	2.8
ASTM D 150	Dissipation Factor,	
	At 60 Hz	0.0015
	At 100 Hz	0.0015
	At 100 kHz	0.0015

**ACTIVE & INACTIVE METAL TABLE**

<b>Super Active</b> Very Fast Cure	<b>Active</b> Fast Cure	<b>Inactive</b> Slow Cure	<b>Passive</b> Primer Necessary
Brass, Copper, Magnesium	Iron, Steel, Nickel, Aluminium	Stainless Steel, Titanium, Zinc, Anodized Aluminium, Galvanised Steel	Ceramics, Glass, Plastics, Painted Finishes



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**How to Use**

Dynatex Marine Grade Silicone Sealant is supplied in ready-to-use form. It flows readily from its container under pressure. A spatula or wooden paddle can be used to tool the surface.

Cure progresses inward from the surface. At conditions of 25°C and 50 percent relative humidity, a tack-free skins form within 20 minutes. Tooling should be completed within 5 to 10 minutes of application. Alternative periods of application and tooling may be required. If masking tape is used to mask an area it must be removed before the tack-free skin forms.

**Cure Time**

Cure time is affected by relative humidity, degree of confinement and cross-sectional thickness of the sealant. Sections up to 1/8 inch thick become rubbery solids in about 24 hours at room temperature at 20 percent relative humidity. More moisture content reduces cure time slightly. In 24 hours, sections up to 1/8 inch thick cure to a rubber with a Shore A Durometer Hardness of about 25 points. After 3 days at room temperature, this Durometer Hardness levels off to about 30 points.

In applications where Dynatex Marine Grade Silicone Sealant may be partially or totally confined during cure, the time required for proper cure is generally lengthened by the degree of confinement. It is possible that with absolute confinement cure will not be completed. The result is the softening of the sealant at elevated temperatures. Metal to metal bonds should not overlap more than one inch. Every application involving confinement during cure should be thoroughly tested before commercialising.

Curing time increases with the thickness of the sealant. A 1/2 inch cross section, for example, may require 3 or 4 days for complete solidification. However, the cure will have penetrated the outer 1/8 inch in about 24 hours.

Adhere to glass, metal or most woods, Dynatex Marine Grade Silicone Sealant has typical peel strength of 20 pounds per inch, after 72 hours at room temperature.

An odour caused by the liberation of acetic acid is given off during cure. This odour disappears as the cure progresses and is not detectable after cure is complete. Fully cured sealant is non-hazardous.

**Presentation**

Dynatex Marine Grade Silicone Sealant available in a 312g cartridge.

**Storage**

When stored in original unopened container at or below 32°C, Dynatex Marine Grade Silicone Sealant has a shelf life of 12 months from date of shipment.

**Conversions**

- (°C x 1.8)+32 = °F
- N/mm x 5.71 = lb/in
- MPa x 145 = psi
- N/mm<sup>2</sup> x 145 = psi
- N x 0.225 = lb
- N·m x 8.851 = lb·in
- N·mm x 0.738 = lb·ft
- mPa·s = cP

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