

Information About *Dow Corning*[®] 730 Solvent Resistant Sealant

<p>Type</p> <p>One-part, general-purpose fluorosilicone rubber</p> <p>Physical Form</p> <p>Nonslumping paste</p> <p>Cure</p> <p>Acetoxy; on exposure to atmospheric moisture; gives off a small amount of acetic acid</p> <p>Special Properties</p> <p>Resists swelling upon exposure to fuels, oils and solvents over a wide temperature range</p> <p>Primary Uses</p> <p>Bonding, sealing and caulking applications where resistance to fuels, oils and solvents is required</p>

DESCRIPTION

Dow Corning[®] 730 Solvent Resistant Sealant is a ready-to-use, solventless, nonslumping fluorosilicone rubber paste that reacts with moisture in the air to form a tough, rubbery solid. It is a fluid-resistant material that is ideally suited for use in many applications where resistance to fumes, splash, and sometimes even total immersion in fuels, oils and solvents is needed.

Dow Corning 730 Solvent Resistant Sealant features good resistance to weathering, vibration, moisture, ozone, and temperature extremes. It retains its flexibility over a wide temperature range from -85 to 500°F (-65 to 260°C).

Dow Corning 730 Solvent Resistant Sealant can be applied overhead or on vertical surfaces without fear of sagging, slumping or running off.

USES

Dow Corning 730 Solvent Resistant Sealant is used primarily for bonding, sealing and caulking applications

where resistance to the swelling effects of fuels, oils and solvents is needed. It can be used for assembling and/or repairing the fuel lines and tanks of cars, small engines, aircraft and rockets. Other potential applications include:

- Sealing seams on various liquid storage tanks
- Sealing aerospace and automotive fuel lines and tanks
- Providing temporary patch for rubber linings exposed to corrosive conditions
- Sealing pipe joints on lines carrying corrosive chemicals and solvents
- Providing formed-in-place gaskets for sealing chemical compressors
- Providing formed-in-place gaskets where irregular shapes and harsh conditions reject ordinary seals
- Bonding or sealing components exposed to moisture, vibration, shock, certain fuels, oils and solvents for long periods of time

TYPICAL PROPERTIES

These values are not intended for use in preparing specifications.

As Supplied

	Color	White
CTM ¹ 0097	Specific Gravity at 77°F (25°C)	1.40
CTM 0364	Extrusion Rate, 1/8-inch orifice at 90 psi, g/minute	250
CTM 0098	Skin-Over Time, minutes	10
CTM 0095	Tack-Free Time, minutes	25

Physical Properties – As Cured 7 Days at 77°F (25°C) and 50% RH

CTM 0099	Durometer Hardness, Shore A, points	40
CTM 0137A	Tensile Strength, psi	300
CTM 0137A	Elongation, percent	200
CTM 1112	Tear Strength, ppi	27
CTM 0293	Peel Strength, Aluminum Alloy Alclad 2024T3, with <i>Dow Corning</i> [®] 1200 RTV Prime Coat, ppi	15

Electrical Properties – As Cured 7 Days at 77°F (25°C) and 50% RH

	Arc Resistance, seconds	124
CTM 0114	Dielectric Strength, volts/mil	331
CTM 1139	Dielectric Constant, 100 kHz	5.5
CTM 1139	Dissipation Factor, 100 kHz	0.0043
CTM 0313	Volume Resistivity, ohm cm	2.1 x 10 ¹³
	Repairability	Excellent

¹CTMs (Corporate Test Methods) correspond to standard ASTM tests in most instances. Copies of CTMs are available upon request.

Specification Writers: Please obtain a copy of the Dow Corning Sales Specification for this product and use it as a basis for your specifications. It may be obtained from any Dow Corning Sales Office, or from Dow Corning Customer Service in Midland, MI. Call (517) 496-6000.

Table I: Typical Fluid Resistance Values¹
These values are not intended for use in preparing specifications.

Fluids	Volume Swell, %	Durometer Hardness, pts change
Methanol	0.7	-3
JP-5	3.8	-2
Diesel	2.6	-4
Isopropanol	0.7	-2
JP-8	4.0	-1
<i>Dow Corning</i> [®] OS 20 Fluid	4.4	-3

¹*Dow Corning* 730 Solvent Resistant Sealant, cured 7 days before immersion, properties obtained after 7 days immersion at room temperature.

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- Providing formed-in-place gaskets for sealing insulators and entrance ports on fluid-filled distribution transformers

LIMITATIONS

Dow Corning 730 Solvent Resistant Sealant is not recommended:

- For continuous underwater immersion where adhesion or structural bonding is required
- On concrete, brick, mortar or other masonry surfaces
- On surfaces to be painted; paints do not adhere well to sealant (paint before applying sealant)
- On materials such as impregnated woods or oil-based caulks that bleed oils
- In totally confined areas; atmospheric moisture is required for cure

- On *Teflon*^{®1}-coated materials, polyethylene, polypropylene or methylmethacrylate (*Plexiglas*^{®2}); sealant will not adhere well
- On or near sensitive metals such as copper, brass, zinc, carbon steel, galvanized iron or magnesium; these metals may be corroded, especially in confined cure conditions, due to the acetic acid released during the cure
- With solvents such as acetone or ketones

Dow Corning neither represents nor tests this material for medical device or pharmaceutical applications.

HOW TO USE

Dow Corning 730 Solvent Resistant Sealant is supplied ready to use. Under pressure, it flows readily from its con-

tainer. The paste-like consistency makes it easy to work; a spatula or wooden paddle can be used for tooling the surface.

Dow Corning 730 Solvent Resistant Sealant cures inward from the surface. At conditions of 75°F (24°C) and 50 percent relative humidity, the sealant forms a skin within 10 minutes. Tooling is not practical after the skin begins forming. Alternate periods of application and tooling may be required.

Cure

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 50 percent relative humidity. Higher humidity reduces cure time slightly.

STORAGE AND SHELF LIFE

When stored at or below 90°F (32°C), *Dow Corning* 730 Solvent Resistant Sealant has a shelf life of 18 months from date of manufacture.

Since moisture in the air will cause the sealant to cure, containers should always be sealed when not in use. Once a container has been opened, a plug of cured sealant may form in the nozzle or tube tip during storage. This is easily removed and does not affect the remaining material.

SHIPPING LIMITATIONS

None.

¹Registered trademark of E.I. du Pont de Nemours Co.

²Registered trademark of Pittsburgh Plate Glass.

Table II: Typical Thermal Stability Properties
These values are not intended for use in preparing specifications.

	Exposure Time, days				
	<u>0</u>	<u>1</u>	<u>3</u>	<u>7</u>	<u>14</u>
Tested at Room Temperature After Exposure at 300°F (149°C)					
Durometer Hardness, Shore A, points	33	–	38	37	38
Tensile Strength, psi	380	–	450	450	450
Elongation, percent	210	–	240	230	230
Tear Strength, ppi	30	–	34	36	31
Tested at Room Temperature After Exposure at 400°F (204°C)					
Durometer Hardness, Shore A, points	–	35	38	–	38
Tensile Strength, psi	–	430	465	–	260
Elongation, percent	–	220	240	–	180
Tear Strength, ppi	–	34	36	–	34

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PACKAGING

Dow Corning 730 Solvent Resistant Sealant is available in 3- and 4.7-fl oz (90- and 141-mL) tubes, 5.75-fl oz (172.5-mL) Semco® cartridges and 4.5-gal (17-L) pails, net weight.

SAFE HANDLING INFORMATION
 PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE FROM YOUR DOW CORNING REPRESENTATIVE, OR DISTRIBUTOR,

OR BY WRITING TO DOW CORNING CUSTOMER SERVICE, OR BY CALLING (517) 496-6000.

LIMITED WARRANTY – PLEASE READ CAREFULLY

Dow Corning believes that the information in this publication is an accurate description of the typical characteristics and/or uses of the product or products, but it is your responsibility to thoroughly test the product in your specific application to determine its performance, efficacy and safety. Suggestions of uses should not be taken as inducements to infringe any particular patent.

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