Product Information

DOW CORNING

Dow Corning® 748 Non-Corrosive Sealant

FEATURES & BENEFITS

- Can be used in corrosion-sensitive electrical and electronic equipment with no adverse effect
- Easy handling
- UL listed
- Complies with FDA regulation CFR 177.2600 covering indirect food contact

One-component silicone rubber

APPLICATION

- General-purpose bonding and sealing applications where low odor and noncorrosive properties are required

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Test*	Property	Unit	Result
As supplied[1]			
	Consistency		Non-slump paste
	Extrusion Rate 1/8 inch nozzle at 90 psi	g/min	150
	Skin-Over-Time	min	15
	Tack-Free-Time	min	30
	Cure Time, 1/8 inch	hours	36
	Full Cure, 1/8 inch	days	7
	Corrosion Properties		Noncorrosive
As Cured – Physical[2]			
	Physical form		Tough, rubbery solid
	Color		Off-white
	Specific Gravity at 25°C		1.33
	Peel Strength[3]	ppi (kN/M)	25 (4.4)
ASTM D 2240	Durometer Hardness, Shore A		35
ASTM D 412	Tensile Strength	psi (MPa)	275
ASTM D 412	Elongation	%	350

*ASTM: American Society for Testing and Materials
[1]At 77°F (25°C) and 50% RH.
[2]After 7 days at 77°F (25°C) and 50% RH.
[3]1/4-inch steel strip to aluminum.

DESCRIPTION

Dow Corning® 748 Noncorrosive Sealant is a one-component, ready-to-use, nonslumping silicone material that reacts with moisture in the air to cure to a tough, rubbery solid. As a general purpose adhesive/sealant, it features:

- Compliance with FDA Regulation CFR 177.2600 covering indirect food contact
- A noncorrosive cure mechanism that produces no corrosive by-products; can be used in corrosion-sensitive electrical and electronic equipment (on copper and other sensitive metals) with no adverse effect
- Easy handling with no mixing, heating or solvent hazards; easy repair by cutting away old material and replacing with fresh material
- A service-temperature range from -67 to 350°F (-55 to 177°C) for extended periods, and up to 400°F (204°C) for shorter times
- Resistance to harsh environments such as ozone, corona, moisture and weathering

USES

Dow Corning 748 Noncorrosive Sealant is a durable, general-purpose sealant and adhesive for use in a wide range of bonding and sealing applications.

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

AUTHORIZATIONS

FDA Status

When fully cured and washed, *Dow Corning* 748 Noncorrosive Sealant meets the requirements of FDA regulation No. 21 CFR 177.2600, subject to end-user compliance with any applicable total extractives limitations.

UL Status

Dow Corning 748 Noncorrosive Sealant is recognized by Underwriters Laboratories Inc. for service to 356°F (105°C) where elongation is not essential. It also meets UL 94 Flame class, 94 HB. UL File No. E 40195 (N).

TYPICAL PROPERTIES (continued)

Test	Property	Unit	Result
As Cured – Electrical			
ASTM D 149	Dielectric Strength	Volts per mil	475
ASTM D 257	Volume Resistivity	Ohm·cm	7.7×10^{14}
ASTM D 150	Dielectric Constant at 77°F (25°C)		
	at 100 Hz		3.30
	at 10 kHz		3.21
ASTM D 150	Dissipation Factor at 77°F (25°C)		
	at 100 Hz		8.7×10^{-3}
	at 10 kHz		2.8×10^{-3}

HOW TO USE

Dow Corning 748 Noncorrosive Sealant forms a bond to most clean surfaces of metals, glass, silicone or organic resins, and vulcanized silicone rubber. A primer is recommended on some plastics such as acrylic; use *Dow Corning*® 1205 Prime Coat.

Application

Apply *Dow Corning* 748 Noncorrosive Sealant to the prepared surface in a uniform thickness. If this adhesive/sealant is to be used between two surfaces, apply to one surface and allow it to establish uniform contact before putting the other surface in place. When placing the second surface, use enough pressure to displace the adhesive/sealant.

Best adhesion is obtained with a 15-milthick glue line; metal-to-metal bonds should not overlap more than one inch.

Let the unit stand undisturbed at room temperature until it cures sufficiently. The odor given off during cure is due to the liberation of an alcohol. The odor will disappear when the cure is complete.

Tack-Free Time and Tooling

On exposure to moisture in the air, the surface of *Dow Corning* 748 Noncorrosive Sealant will skin over in about 15 minutes at room temperature with 50 percent relative humidity. Any tooling should be completed before this skin forms. The surface is easily tooled with a spatula and will be tackfree in less than 30 minutes.

Cure Time

Curing continues inward from the surface. In 24 hours (at room temperature and about 50 percent relative humidity), *Dow Corning* 748 Noncorrosive Sealant will cure to a depth of 75 mils. In 72 hours, it will cure to about a 1/4-inch thickness with a Durometer hardness of about 20. Sections 1/2-inch deep can take up to two weeks for complete cure.

The relative humidity must be at least 20 percent to effect cure in the times stated. Less moisture will extend the cure time.

If both bonded members are impermeable to moisture, as in the case of two metal plates, cure time will depend on the thickness of *Dow Corning* 748 Noncorrosive Sealant and the area under the joint. The larger the unexposed bond area, the longer the cure time required. For shorter cure time and maximum bond strength, keep the area enclosed by a joint to a minimum. For best results, a

metal-to-metal bond should not overlap more than one inch.

STORAGE AND SHELF LIFE

When stored at or below 90°F (32°C), *Dow Corning* 748 Noncorrosive Sealant has a shelf life of 24 months from date of manufacture.

Since this material cures by reaction with moisture in the air, keep the container tightly sealed when not in use. A plug of cured material may form in the tip of the tube during storage, but is easily removed and does not affect the remaining contents.

SHIPPING LIMITATIONS

None.

PACKAGING

Dow Corning 748 Noncorrosive Sealant is supplied in 3-fl oz (90-mL) tubes, 10.7-fl oz (316-mL) cartridges and 4.5-gal (17-L) pails.

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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