



Technical Data Sheet

DOWSIL™ 748 Non-Corrosive Sealant

FEATURES & BENEFITS

- One component adhesive/sealant
- Cures at room temperature when exposed to moisture in the air
- Alkoxy cure system
- Non sag, paste consistency
- Easy to apply
- Excellent adhesion to many substrates
- Stable and flexible from -55°C (-67°F) to +177°C (350°F)
- Complies with FDA 177.2600
- Meets UL 94 HB Flame Classification
- Non Corrosive
- Low Odor

COMPOSITION

- 100% Silicone Adhesive/Sealant

Neutral cure silicone adhesive/sealant

APPLICATIONS

- General industrial sealing and bonding applications where non-corrosive cure is required
- Complies with FDA 177.2600 and UL 94 HB

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications.

Test*	Property	Unit	Result
	Color		Off-White
As supplied			
CTM 0176	Consistency		Non-Slump Paste
CTM 0364	Extrusion Rate 3.2 mm orifice, 0.62 MPa	g/min	145
CTM 0098	Skin-Over-Time	min	15
CTM 0095	Tack-Free-Time	min	46
CTM 0097	Specific Gravity at 25°C		1.33
As cured – 7 days at 25°C and 50% R.H.			
ASTM D 2240	Hardness, Shore A		35
ASTM D 412	Tensile Strength	MPa	1.9
ASTM D 412	Elongation at Break	%	350
ASTM D 149	Dielectric Strength	kV/mm	18.7
ASTM D 257	Volume Resistivity	Ohm-cm	7.7 x 10 ¹⁴
ASTM D 150	Dielectric Constant at 25°C at 100 Hz at 10 kHz		3.30
			3.21
ASTM D 150	Dissipation Factor at 25°C at 100 Hz at 10 kHz		8.7 x 10 ⁻³
			2.8 x 10 ⁻³
CTM 0293	Adhesion – Peel Strength Adhesion on Aluminum After 3days at 25°C	kN/m	7.0

*CTM: Corporate Test Method

*ASTM: American Society for Testing and Materials

DESCRIPTION

DOWSIL™ 748 Non-Corrosive Sealant is a medium modulus silicone adhesive/sealant designed for applications where noncorrosive cure and durable adhesion is required.

HOW TO USE

Substrate preparation

All surfaces must be clean and dry. Degrease and wash off any contaminants that could impair adhesion. Suitable solvents include isopropyl alcohol, acetone or methyl ethyl ketone.

Unprimed adhesion may be obtained by on many substrates such as glass, metals and most common engineering plastics. Adhesion may be less successful on some low energy plastics such as polyethylene, polypropylene and PTFE.

However, for maximum adhesion, the use of DOWSIL™ 1200 OS Primer is recommended. After solvent cleaning, a thin coat of DOWSIL 1200 OS Primer is applied by dipping, brushing or spraying. Allow primer to dry for 15 to 90 minutes at room temperature and a relative humidity of 50% or higher.

How to apply

DOWSIL 748 Non-Corrosive Sealant is ready to use. Apply a bead of DOWSIL 748 Non-Corrosive Sealant to one of the prepared surfaces, then quickly cover with the other substrate to be bonded. When placing the second surface, use enough pressure to displace the adhesive/sealant.

On exposure to moisture, the freshly applied material will “skin over” in about 15 minutes at room temperature and 50% relative humidity. Any tooling should be completed before this skin forms. The surface is easily tooled with a spatula. The adhesive/sealant will be tack-free in about 45 minutes.

The odor given off during cure is due to the release of an alcohol. The odor will disappear when the cure is complete.

Cure Time

After skin formation, cure continues inward from the surface. In 24 hours at room temperature and 50% relative humidity, DOWSIL 748 Non-Corrosive Sealant will cure to a depth of about 2 mm. Very deep sections, especially when access to atmospheric moisture is restricted, will take longer to cure completely. Cure time is extended at lower humidity levels.

Before handling and packaging bonded components, users are advised to wait a sufficiently long time to ensure that the integrity of the seal is not affected. This will depend on many factors and should be determined by the user for each specific application.

HANDLING

PRECAUTIONS

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT WWW.CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

USABLE LIFE AND STORAGE

When stored at or below 32°C in the original unopened containers, this product has a usable life of 24 months from the date of production.

PACKAGING

This product is available in different standard container sizes.

LIMITATIONS

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

SPECIFICATIONS

FDA Status

When fully cured and washed, DOWSIL 748 Non-Corrosive 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

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

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, www.consumer.dow.com or consult your local Dow representative.

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