



## DOWSIL™ Q3-1566 Heat Resistant Adhesive/ Sealant

### FEATURES

- One-component adhesive/sealant
- Cures at room temperature when exposed to moisture in the air
- Acetoxycure system
- Non-sag, paste consistency
- Easy to apply
- Good adhesion on many substrates
- Stable and flexible from -50°C (-58°F) to +275°C (+527°F), with short peaks up to +350°C (+662°F)

High temperature resistant silicone sealant

### APPLICATIONS

- Can be used in ovens, cookers and other heating equipment.
- Automotive oil and other coolant sealing applications.

### TYPICAL PROPERTIES

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

CTM <sup>1</sup>	ASTM <sup>2</sup>	Property	Unit	Result
0176		<b>As supplied</b> Appearance Color		Non-slump paste Black
0364	MIL-S- 8802D	Extrusion rate <sup>3</sup>	g/minute	270
0098		Skin-over-time	minutes	5
<b>Mechanical properties, cured 7 days in air at 23°C (73°F) and 50% relative humidity</b>				
0099	D2240	Durometer hardness, Shore A		43
0137A	D412	Tensile strength	MPa	3.6
0137A	D412	Elongation at break	%	340
0022	D792	Specific gravity at 25°C (77°F)		1.06
		Heat resistance (2 days at 235°C/455°F + 2 hours at no cracks 350°C/662°F)		Remain flexible, no cracks

<sup>1</sup>CTM: Corporate Test Method, copies of CTMs are available on request.

<sup>2</sup>ASTM: American Society for Testing and Materials.

<sup>3</sup>Extrusion rate: 3.2 mm orifice at 0.62 MPa.

### 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 on many substrates such as glass, metals and most common engineering plastics. Substrates to which good adhesion is normally not obtained include PTFE, polyethylene, polypropylene and related materials.

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 in a relative humidity of 50% or higher.

#### How to apply

Apply a bead of DOWSIL™ Q3-1566 Heat Resistant Adhesive/ Sealant (see Handling Precautions) to one of the prepared surfaces, then quickly cover with the other substrate to be bonded.

On exposure to moisture, the freshly applied material will "skin-over" in about 5–7 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 sealant will be tackfree in about 18 minutes.

#### **Cure time**

After skin formation, cure continues inward from the surface. In 24 hours (at room temperature and 50% relative humidity) DOWSIL Q3-1566 Heat Resistant Adhesive/ Sealant will cure to a depth of about 3 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 adhesive seal is not affected. This will depend on many factors and should be determined by the user for each specific application.

#### **COMPATIBILITY**

DOWSIL Q3-1566 Heat Resistant Adhesive/ Sealant releases a small amount of acetic acid during cure. This may cause corrosion on some metallic parts or substrates, especially in direct contact or when the cure is carried out in a totally enclosed configuration which would not allow cure by-products to escape.

#### **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 CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.**

#### **STORAGE**

Product should be stored at or below 32°C (90°F) in original, unopened containers.

#### **LIMITATIONS**

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

#### **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](http://www.consumer.dow.com) or consult your local Dow representative.

#### **LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY**

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our

control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

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