



## Technical Data Sheet

### **DOWSIL™ 733 Glass & Metal Sealant**

#### **Features & Benefits**

- Unprimed adhesion to cleaned substrates including glass, metals and plastics
- Good resistance to weathering, vibration, moisture, ozone and extreme temperatures
- Sustained flexibility at temperatures from -57 to 177°C (-70 to 350°F); intermittent to 204°C (400°F)
- Available in a variety of colors including clear, white, black and aluminum

#### **Composition**

- One-part silicone rubber, nonslumping paste

#### **Applications**

DOWSIL™ 733 Glass & Metal Sealant is used for OEM bonding and sealing applications, including:

- Appliances
- Heavy equipment
- Marine equipment
- Recreational vehicles

#### **Typical Properties**

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

Test	Property	Unit	Result
<b>As Supplied</b>			
	Standard Colors		Clear, white, black and aluminum
	Specific Gravity at 25°C (77°F)		1.03
	Extrusion Rate (3.18 mm Orifice, 90 psi Air Pressure)	g/min	350
	Flow Rate (Sag or Slump on 3.18 x 101.6 mm Bead)	mm	Nil
	Tack-Free Time at 25°C (77°F) and 50% RH	minutes	15
	Cure Time at 25°C (77°F) and 50% RH, (3.18 mm Thickness)	hours	24
<b>Physical Properties<sup>1</sup> – As Cured 3 Days at 25°C (77°F) and 50% RH</b>			
ASTM <sup>2</sup> D 2240	Durometer Hardness, Shore A	points	25
ASTM D 412	Tensile Strength, Die C	Mpa (psi)	2.3 (335)
ASTM D 412	Elongation, Die C	percent	500

1. Measured on 1.91 mm-thick (0.075 inch) slabs.
2. ASTM: American Society for Testing and Materials.

## Typical Properties (Cont.)

Test	Property	Unit	Result
<b>Physical Properties – As Cured 2 Days at 25°C (77°F) and 50% RH</b>			
Adhesion, 180° Peel Strength			
	Stainless Steel	pli	20
	Matte Finish Steel	pli	20
	Aluminum	pli	21

### Description

DOWSIL™ 733 Glass & Metal Sealant is a paste-like, one-component material that cures to a tough, rubbery solid upon exposure to moisture in the air. Because it does not flow, this sealant can be applied overhead or on sidewall joints and surfaces without sagging, slumping or running off.

DOWSIL™ 733 Glass & Metal Sealant is specially formulated to provide good adhesion to various substrates.

### Listings/ Specifications

- Recognized under UL 94 HB Complies with FDA.
- Regulation 21 CFR 177.2600 for incidental contact with food.

### How to Use

#### Estimating

For estimating sealant requirements, multiply gallons by 128 fluid ounces and divide by the cartridge size. Example: 11 gallons required x 128 fluid ounces = 1408 divided by a 10.1 fluid ounce cartridge = 139 cartridges required.

#### Application

DOWSIL™ 733 Glass & Metal Sealant is supplied in ready-to-use form. It extrudes readily from its container under pressure. The paste like consistency makes it easy to work; a spatula or paddle can be used to tool the surface.

#### Bonding

Thoroughly clean and degrease metal and plastic surfaces using a DOWSIL™ OS (ozone-safe) fluid or other suitable solvent. Rubber surfaces should be roughened with sandpaper, then wiped with acetone. Follow precautions given on the solvent container label.

Apply DOWSIL™ 733 Glass & Metal Sealant to the prepared surface in a uniform thickness. Then, let the unit stand undisturbed at room temperature to cure.

#### Sealing

The use of DOWSIL™ 733 Glass & Metal Sealant in sealing applications follows approximately the same step-by-step procedures outlined for bonding applications. After preparing the surfaces and priming where required, the sealant is applied by forcing it into the joint or seam to obtain full contact between the sealant and the surface.

## **How to Use (Cont.)**

### **Tack-free Time**

Cure progresses inward from the surface.

At conditions of at least 25°C (77°F) and 50 percent relative humidity, a tack-free skin forms within 10 to 15 minutes.

Tooling should be completed within 5 to 10 minutes of application. Alternate 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 and 50 percent relative humidity. Less humidity increases cure time slightly.

In applications where DOWSIL™ 733 Glass & Metal 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. Every application involving confinement during cure should be thoroughly tested before use.

Curing time increases with the thickness of the sealant. A 1/2 inch cross section, for example, may require 7 to 14 days for complete solidification at standard conditions. However, the cure will have penetrated the outer 1/8 inch in about 24 hours.

An odor caused by the liberation of acetic acid is given off during cure. This odor disappears as the cure progresses and is not detectable after cure is complete.

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

## **Usable Life and 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, [dow.com](http://dow.com) or consult your local Dow representative.

## **Disposal Considerations**

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

## **Product Stewardship**

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

## **Customer Notice**

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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