



Technical Data Sheet

DOWSIL™ 791 Silicone Weatherproofing Sealant

Neutral, one-part silicone sealant

Features & Benefits

- Ideal for expansion, contraction, perimeter and other movement joints
- Neutral cure – suitable for use on coated glass, galvanized steel, masonry and other porous and non-porous substrates
- Extension/compression movement capability of up to ± 50 percent of the original joint width
- Excellent weatherability, virtually unaffected by sunlight, rain, snow, ozone
- Excellent unprimed adhesion to a wide variety of construction materials and building components
- Ease of application – ready to use as supplied
- Excellent rheology, low string upon gunning

Composition

- One-part, neutral-cure, RTV silicone sealant

Applications

- DOWSIL™ 791 Silicone Weatherproofing Sealant is a specified, premium performance weather sealing product specifically designed for general glazing and weather sealing in curtain wall and building facades.

Typical Properties

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

Test ¹	Property	Unit	Result
Uncured – As Tested at 50% RH and 23°C (73°F)			
ASTM C639	Flow (sag or slump)	inches (mm)	0
ASTM C603	Extrusion Rate	g/minute	140
	Working Time	minutes	20
ASTM C679	Tack-free Time, 77°F, 50% RH	minutes	40
	Curing Time at 77°F (25°C) and 50% RH	days	7–14
	VOC Content ²	g/L	31

1. ASTM – American Society for Testing and Materials.
2. Based on South Coast Air Quality Management District of California. Maximum VOC is listed both inclusive and exclusive of water and exempt compounds.

Typical Properties (Cont.)

Test	Property	Unit	Result
As Cured – After 21 days at 50% RH and 77°F (25°C)			
ASTM D2240	Durometer Hardness, Shore A	points	34
ASTM C794	Peel Strength	lb/in (kg/cm)	30 (5.4)
ASTM C719	Joint Movement Capability	percent	± 50
ASTM C1135	Tensile Adhesion Strength		
	At 25% extension	Psi (MPa)	40 (0.276)
	At 50% extension	Psi (MPa)	60 (0.414)

Description

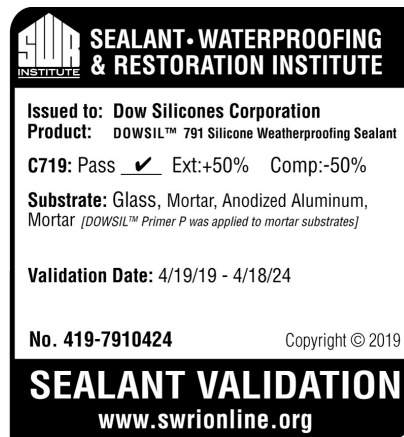
DOWSIL™ 791 Silicone Weatherproofing Sealant is a one-part, neutral-cure, architectural grade sealant. It easily extrudes in any weather and cures at ambient temperature by reaction with moisture in the air to form a durable, flexible silicone rubber seal.

How to Use

Please consult the Dow Americas Technical Manual, Form No. 62-1112, for detailed information on state-of-the-art application methods and joint design. Please contact your local Dow Sales Application Engineer for specific advice.

Preparation

Clean all joints removing all foreign matter and contaminants such as grease, oil, dust, water, frost, surface dirt, old sealants or glazing compounds and protective coatings.



Application Method

Install backing material or joint filler, setting blocks, spacer shims and tapes. Mask areas adjacent to joints to ensure neat sealant lines. Primer is generally not required on non-porous surfaces, but maybe necessary for optimal sealant of certain porous surfaces. A test placement is always recommended. Apply DOWSIL™ 791 Silicone Weatherproofing Sealant in a continuous operation using a positive pressure. (The sealant can be applied using many types of air-operated guns and most types of bulk dispensing equipment. Before a skin forms (typically within 15 minutes), tool the sealant with light pressure to spread the sealant against backing material and the joint surfaces. Remove masking tape as soon as the bead is tooled.

**Approvals/
Specifications**

Meets the requirements of:

- ASTM C920 Type S, Grade NS, Class 50, Use NT, M, G, A

Colors

This product is available in 7 colors: black, gray, bronze, limestone, camel, precast white and white. Custom colors may be ordered to match virtually any substrate.

**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.

**Usable Life and
Storage**

When stored at or below 30°C (86°F) in the original unopened containers, DOWSIL™ 791 Silicone Weatherproofing Sealant has a usable life of 12 months from the date of manufacture. Refer to product packaging for “Use By” date.

**Packaging
Information**

DOWSIL™ 791 Silicone Weatherproofing Sealant is available in 10.3 fl oz (305 mL) disposable plastic cartridges that fit ordinary caulking guns, 20 fl oz (590 mL) sausages.

Limitations

DOWSIL™ 791 Silicone Weatherproofing Sealant is not approved for use as a structural sealant.

DOWSIL™ 791 Silicone Weatherproofing Sealant should not be used:

- In below-grade applications
- When surface temperatures exceed 50°C (122°F)
- On surfaces that are continuously immersed in water
- On building materials that bleed oils, plasticizers or solvents, green or partially vulcanized rubber gaskets or tapes
- On frost-laden or wet surfaces
- In totally confined joints (the sealant requires atmospheric moisture for cure)
- If the sealant is intended to be painted (paints do not typically adhere to most silicone sealants)
- To surfaces in direct contact with food or other food-grade applications

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, consumer.dow.com or consult your local Dow representative.

consumer.dow.com

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.

Dow's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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