

# DOWSIL™ 791 Silicone Weatherproofing Sealant

## Product Description

DOWSIL™ 791 Silicone Weatherproofing Sealant is a one-part, neutral curing, low modulus silicone sealant particularly suitable for general glazing and weather sealing in curtain wall and building facades.

## Features

- Ideal for expansion, connection, perimeter and other movement joints
- Neutral cure
- Low odor
- Conforms to ISO 11600-F&G-25LM
- Resistant to ozone, ultra-violet radiation and temperature extremes
- Joint movement capability  $\pm$  50%

## Applications

- General glazing
- Weather sealing in curtain walls and building facades

## Physical information

	Value
Application temperature	+5°C to +40°C
Specific gravity	1.50 g/ml CTM <sup>1</sup> 97B
Extrusion rate	220 g/min CTM 364C
Skin-over time (23°C or 73°F, 50% R.H.)	20 min CTM 98B
Tack-free time (23°C or 73°F, 50% R.H.)	30 min' CTM 95A
Cure rate (23°C or 73°F, 50% R.H.)	
1 day	2.0 mm
3 days	4.0 mm CTM 663A

2 mm thickness S2 dumbbells (ISO <sup>2</sup> 37/DIN <sup>3</sup> 53 504)	
E-Modulus 100%	0.45 MPa CTM 137A
Tensile strength	1.9 MPa CTM 137A
Elongation at break	700% CTM 137A
12 x 12 x 50 mm size T.A. joint (ISO 8339/DIN 2-8339)	
E-Modulus 100%	0.35 MPa CTM 677
Tensile strength	0.75 MPa CTM 677
Elongation at break	380% CTM 677
Hardness (Shore A)	29 CTM 99E
Elastic recovery	>90% ISO 7389
Joint movement capability	±50 ISO <sup>3</sup> 9047

1. CTM: Corporate Test Method, copies of CTMs are available on request

2. DIN: Deutsche Industrie Norm

3. ISO: International Standardisation Organisation

## Technical Specifications and Standards

- Conforms to SNJF (F&G – 25E)
- ISO 11600-F&G-25LM
- DIN 18540 Class F
- EN 15651 - CE MARK

Regulation or protocol	Conclusion	Version of regulation or protocol
French VOC régulations	A+	Regulation of March and May 2011 (DEVL1101903D and DEVL1104875A)
French CMR components	Pass	Regulation of April and May 2009 (DEVP0908633A and DEVP0910046A)
Italian CAM Edilizia	Pass	Decree 11 January 2017 (GU n.23 del 28-1-2017)
AgBB/ABG	Pass	Anforderungen an bauliche Anlagen bezoglich des Gesundheitsschutzes (ABG), Entwurf 31.08.2017/August 2018 (AgBB)
Belgian Regulation	Pass	Royal decree of May 2014 (C-2014/24239)
EMICODE	EC1 Plus	April 2019
Indoor Air Comfort	Pass	Indoor Air Comfort 6.0 of February 2017
Indoor Air Comfort GOLD	Pass	Indoor Air Comfort GOLD 6.0 of February 2017
Blue Angel (DE-UZ 123)	Pass	DE-UZ 123 for "Low-Emission Sealants for Interior Use", (January 2019)
BREEAM International	Exemplary lvl	BREEAM International New Construction v2.0 (2016)
BREEAM Norway	Pass	BREEAM-NOR New Construction v1.2 (2019)
CDPH	Pass	
M1	Pass	
Byggarubedomningen	Accepted	

## Installation

### Preparatory Work:

Ensure that surfaces to be sealed are clean, dry, sound and free from frost, release agents, old sealants and other contaminants which could impair adhesion. All non-porous surfaces should be cleaned and degreased by wiping with a suitable solvent such as DOWSIL™ R-40 Universal Cleaner, on a clean oil- and lint-free cloth before application of sealant. Porous surfaces such as concrete, brickwork, and mortar must be mechanically cleaned using a steel brush, sanding disc or other mechanical means.

### CAUTION:

When using any solvent, always provide adequate ventilation. Avoid heat, sparks and open flames. Use solvent resistant gloves. Observe and follow all precautions listed on solvent container label

### Masking:

Areas adjacent to the joints should be masked with tape to prevent contamination of the substrates and to ensure a neat sealant line. Masking tape should be removed immediately after tooling.

### Priming:

Primers are not usually required but might be needed for some specific substrates for maximum adherence. Please contact us for technical assistance.

### Back-up Materials:

When back-up material is required, closed cell polyethylene backer rod is recommended. Low tack polyethylene tape should be used in joints too shallow to allow the use of backer rod. Back-up materials provide back pressure and prevent three-sided adhesion that limits sealant movement capability.

### Finishing:

The joint should be tooled within 5 minutes of application to ensure good contact between the sealant and the substrate. Tooling of the sealant also gives a smooth, professional finish.

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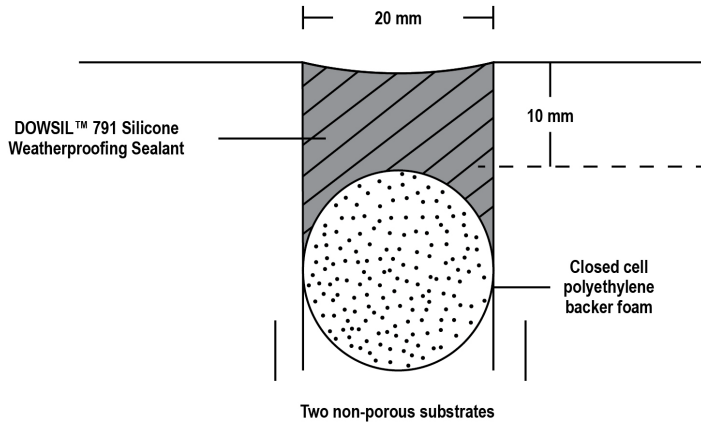
Registered in Cardiff No. 3000843

**Clean-up:**

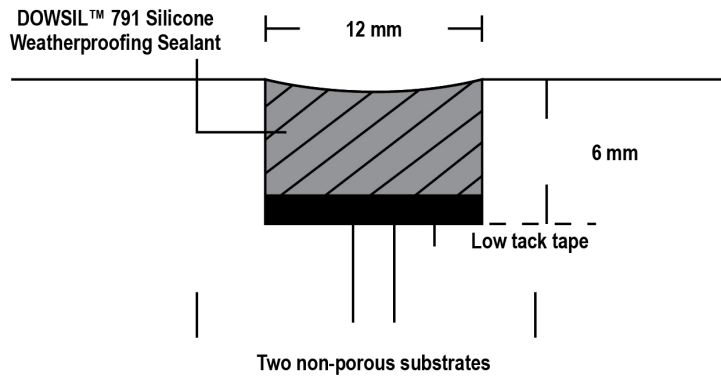
Excess sealant may be cleaned off tools and non-porous surfaces whilst in an uncured state using DOWSIL™ R-40 Universal Cleaner. If sealant is misapplied to porous substrates, it should be left until just cured, and then removed by peeling, cutting or other mechanical means. Care should be taken not to damage plastic or coated surfaces.

**Joint Design:**

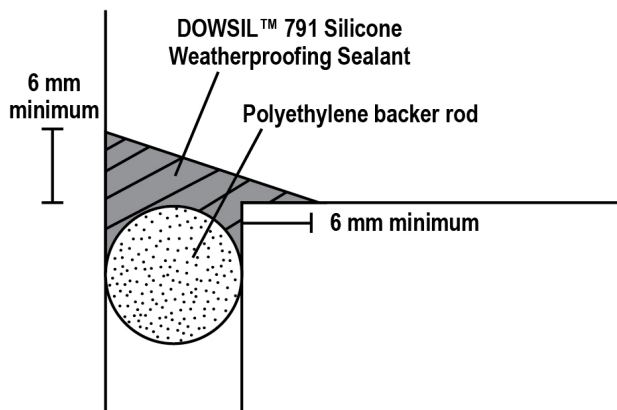
The sealant joint width should be designed to accommodate the movement capability of the sealant. When designing joints using DOWSIL™ 791 Silicone Weatherproofing Sealant, the minimum width should be 6 mm. For joints between 6–12 mm wide, a seal depth of 6 mm is required. For joints above 12 mm wide, a width to depth ratio of 2:1 should be used. In situations where fillet joints are needed, a minimum of 6 mm sealant bite to each substrate is recommended. For joint dimensions with a width greater than 25 mm or a depth greater than 15 mm, please contact us for technical assistance.



**Figure 1:** Deep joint



**Figure 2:** Shallow joint



**Figure 3:** Fillet Joint

## 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.

## Storage

DOWSIL™ 791 Silicone Weatherproofing Sealant should be stored in cool and dry conditions. When stored at or below 30°C in the original unopened containers, DOWSIL™ 791 Silicone Weatherproofing Sealant has a usable life of 12 months from the date of production.

## Limitations

Do not use DOWSIL™ 791 Silicone Weatherproofing Sealant on bituminous substrates, substrates based on natural rubber, chloroprene or EPDM or on building materials and flexible plastics which might bleed oils, plasticizers or solvents. Do not use DOWSIL™ 791 Silicone Weatherproofing Sealant in a totally confined space because the sealant requires atmospheric moisture to cure. DOWSIL™ 791 Silicone Weatherproofing Sealant is not recommended for use on submerged joints or in joints where physical abuse or abrasion is likely to occur. Bleeding can occur on porous substrates such as concrete, marble, granite or other natural stones. On sensitive substrates, specific testing should be carried out.

This product is not suitable for areas where food contact is likely.

DOWSIL™ 791 Silicone Weatherproofing Sealant is not recommended for structural glazing or insulated glazing applications.

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

## Disposal

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

Please note: The above technical information is given as a guide and is based on recent test data obtained under laboratory conditions. Materials should be fully tested by the end user to establish suitability of the product for the intended application. August 2024

**Premier Sealant Systems Ltd.**

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