



Sealant and Adhesives | DOWSIL™ 791 Weatherproofing Sealant

## DOWSIL™ 791 SILICONE WEATHERPROOFING SEALANT



- 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.
- Ideal for expansion, connection, perimeter and other movement joints
- Neutral cure
- Low odor
- Resistant to ozone, ultra-violet radiation and temperature extremes
- Joint movement capability  $\pm$  50%

### CLASSIFICATIONS/STANDARDS

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

## TYPICAL PHYSICAL PROPERTIES & PERFORMANCE DATA

Test	Property	Value
	Cure system	Alkoxy
	Application temperature	+5 to +40°C
CTM1 97B	Specific gravity	1.50
CTM 364C	Extrusion rate	220 g/minute
CTM98B	Skin-over time (23°C, 50% R.H.)	20 minutes
CTM 95A	Tack-free time (23°C, 50% R.H.)	30 minutes
CTM 663A	Cure rate (23°C, 50% R.H.)	1 day: 2.0mm 3 days: 4.0mm
2 mm thickness S2 dumb-bells (ISO2 37/DIN3 53 504)		
CTM 137A	Modulus 100%	0.45 MPa
CTM 137A	Tensile strength	1.9 MPa
CTM 137A	Elongation at break	700%
12x12x50 mm size T.A. joint (ISO 8339/DIN 2-8339)		
CTM 677	Modulus 100%	0.35 MPa
CTM 677	Tensile strength	0.75 MPa
CTM 677	Elongation at break	380%
CTM 99E	Hardness (Shore A)	29
ISO 7389	Elastic recovery	> 90%
ISO 9047	Joint movement capability	$\pm$ 50%



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## APPLICATION

### SURFACE PREPARATION

Ensure that the surfaces to be sealed are clean, dry, sound and grease-free. Clean non-porous surfaces with DOWSIL™ R-40 Universal Cleaner, and dry thoroughly with a clean, lint-free cloth before application of sealant. Porous substrates such as concrete, brickwork, mortar, etc. must be mechanically cleaned of loose particles using a steel brush, sanding disc or any similar means.

**Note:** 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 the 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

Where backup material is required, closed cell polyethylene backer rod is recommended. Back-up materials provide back pressure and avoid 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.

### CLEAN-UP

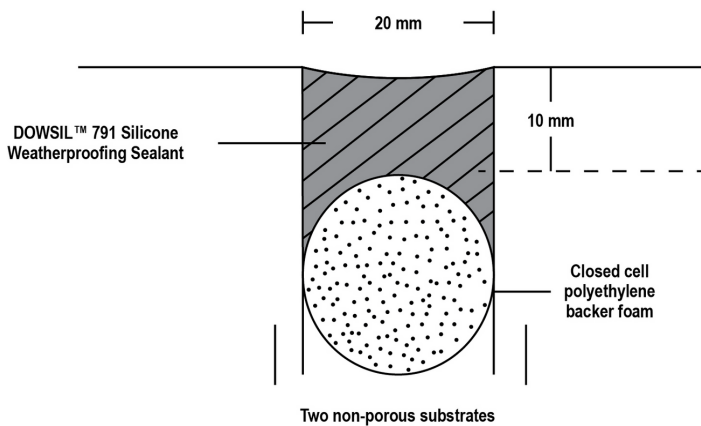
The excess sealant may be cleaned off tools and non-porous surfaces whilst in an uncured state using DOWSIL™ R40 Universal Cleaner. If sealant is misapplied to porous substrates, it should be left until it is just cured and then removed by peeling, cutting or other mechanical means. Care should be taken not to damage plastic or coated surfaces.



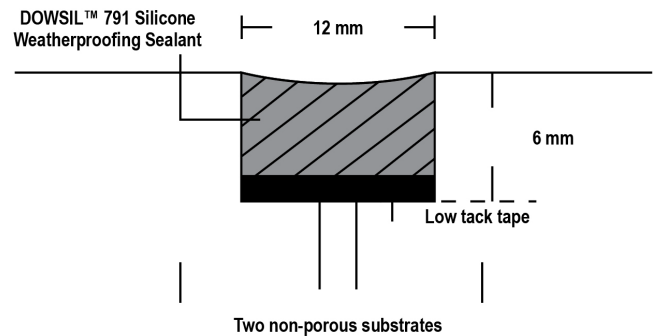
## JOINT DESIGN

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 your regional service centres for technical assistance.

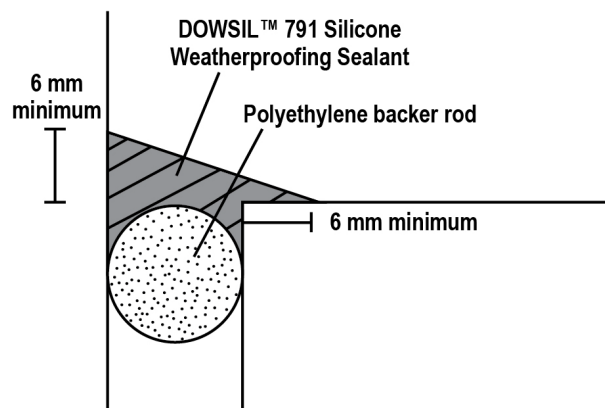
### 1. Deep Joint



### 2. Shallow Joint



### 3. Fillet Joint





## GENERAL INFORMATION

### Colours

DOWSIL™ 791 Silicone Weatherproofing Sealant is available in a broad range of colours. Please refer to the colour chart for different options.

### 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

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.

### Packaging Information

DOWSIL™ 791 Silicone Weatherproofing Sealant is supplied in 310 ml cartridges and 600 ml sausages.

### 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.

### 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 of 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.