Silicone

Dow Corning® 791

Features and Benefits

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

Application

- Dow Corning® 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 façades

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

Packing

- Dow Corning 791 Silicone Weatherproofing Sealant is supplied in 310ml cartridges

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

Usable Life and Storage

- Dow Corning 791 Silicone Weatherproofing Sealant should be stored in cool and dry conditions. When stored at or below 30°C (86°F) in the original unopened containers, Dow Corning 791 Silicone Weatherproofing Sealant has a usable life of 12 months from the date of production

Method of Application

- Ensure that surfaces to be sealed are clean, dry, sound and grease free
- Clean non-porous surfaced with Dow Corning® R40 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 solvent container label

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Joint Design

The sealant joint width should be designed to accommodate the movement capability of the sealant. When designing joints using Dow Corning 791 Silicone Weatherproofing Sealant, the minimum width should be 6mm.

For joints between 6–12mm wide, a seal depth of 6mm is required. For joints above 12mm wide, a width to depth ratio of 2:1 should be used. In situations where fillet joints are needed, a minimum of 6mm sealant bite to each substrate is recommended.

For joint dimensions with a width greater than 25mm or a depth greater than 15mm, please contact one of Dow Corning Regional Service Centres for technical assistance.

Figure 1. Deep Joint

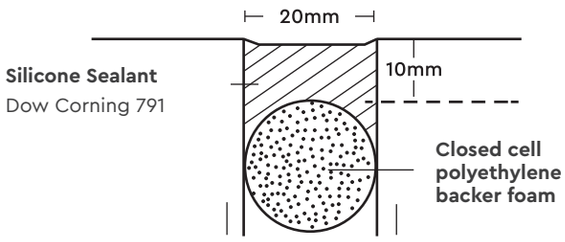


Figure 2. Shallow Joint

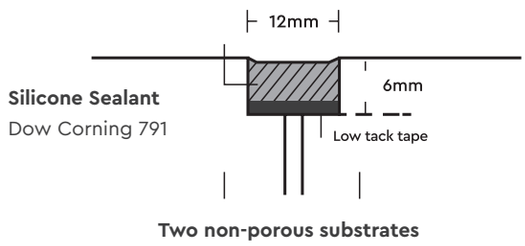
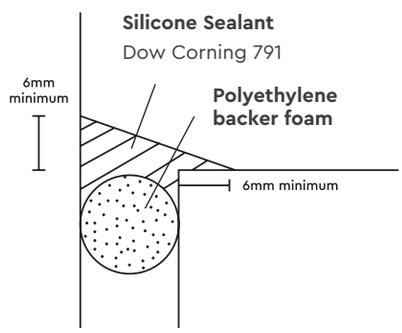


Figure 3. Fillet Joint



Back-Up Materials

Where back-up 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.

Clean Up

Excess sealant may be cleaned off tools and non-porous surfaces whilst in an un-cured state using Dow Corning 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.

Handling Precautions

Product safety information required for safe use is not included. Before handling, read product and safety data sheets and container labels for safe use, physical and health hazard information.

The material safety data sheet is available on the Dow Corning Website at dowcorning.com. You can also obtain a copy from your local Dow Corning sales representative or Distributor or by calling your local Dow Corning Global Connection.

Health and Environmental Information

To support Customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

Limitations

- Do not use Dow Corning 791 Silicone Weatherproofing Sealant on bituminous substrates, substrates based on natural rubber, chloroquine or EPDM or on building materials and flexible plastics which might bleed oils, plasticizers or solvents
- Do not use Dow Corning 791 Silicone Weatherproofing Sealant in a totally confined space because the sealant requires atmospheric moisture to cure. Dow Corning 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.
- Dow Corning 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.

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Typical Properties

Test	Property	Unit	Value
-	Cure system	-	Alkoxy
-	Application Temperature	°C	-25 to +50
-	-	°F	-13 to +122
CTM 97B	Specific gravity	-	1.50
CTM 364C	Extrusion rate	g/minute	220
CTM98B	Skin-over time (23°C or 73°F, 50% R.H)	minutes	20
CTM 95A	Tack-free time (23°C or 73°F, 50% R.H)	minutes	30
CTM 663A	Cure rate (23°C or 73°F, 50% R.H)	-	-
	1 day	mm	2.0
	3 days **2mm thickness S2 dumb-bells (ISO 37/DIN 53 504)**	mm	4.0
CTM 137A	Modulus 100%	MPa	0.45
CTM 137A	Tensile strength	MPa	1.9
CTM 137A	Elongation at break **12×12×50mm size T.A. Joint (ISO 8339/DIN 2–8339)**	%	700
CTM 677	Modulus 100%	MPa	0.35
CTM 677	Tensile strength	MPa	0.75
CTM 677	Elongation at break	%	380
CTM 99E	Hardness (Shore A)	-	29
ISO 7389	Elastic recovery	%	>90
ISO 9047	Joint movement capability	%	±50

CTM: Corporate Test Method, copies of CTMs are available on request.
ISO: International Standardization Organization.
DIN: Deutsche Industrie Norm.

Conforms to **SNJF, ISO 11600-F&G-25LM**
DIN 18540 Class F

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