Technical Data Sheet

DOWSIL™ 790 Silicone Building Sealant

Ultra-low-modulus sealant for new and remedial construction joint sealing applications

Features & Benefits

- Excellent performance even in building joints that experience extreme movement.
- Suitable for new and remedial construction.
- Extension/compression capability of +100/-50 percent.
- Excellent weathering properties and resistance to sunlight, rain, snow, and temperature extremes.
- Excellent unprimed adhesion to masonry, concrete substrates.
- Easy application over a wide temperature range.

Composition

- Ultra-low-modulus, one-part, neutral-cure silicone sealant.

Applications

- DOWSIL™ 790 Silicone Building Sealant offers outstanding unprimed adhesion to masonry and is particularly effective for sealing expansion and control joints, precast concrete panel joints, Exterior Insulation and Finish Systems (EIFS) joints, curtainwall joints, mullion joints, stone pavers, and many other construction joints. When used in accordance with Dow application and testing recommendations, the sealant forms a durable, flexible, watertight bond with many common building materials, including combinations of stone, concrete, masonry, granite, marble, aluminum, painted substrates, and glass.

Typical Properties

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

Test[1]	Property	Unit	Result
	As Supplied		
ASTM C 679	Tack-free Time, 50% RH	hours	1
	Curing Time, 50% RH, at 25°C (77°F), 3/8" Depth	days	7–14
	Full Adhesion, Cured Joint	days	14–21
ASTM D 2202	Flow, Sag, or Slump		None
CTM 98	Working Time	minutes	10–20

1. ASTM: American Society for Testing and Materials.
CTMs (Corporate Test Methods) correspond to standard ASTM tests in most instances. Copies of CTMs are available upon request.

Form No. 61-884-01-0924 S2D

Typical Properties (Cont.)

Test	Property	Unit	Result
EPA Method 24	VOC Content[2], Maximum	g/L	23
	As Cured – After 7 Days at 25°C (77°F) and 50% RH		
ASTM C 661	Durometer Hardness, Shore A	points	15
ASTM D 412	Tensile Strength, Maximum	psi (kg/mm^2)	100 (0.070)
ASTM C 794	Peel Strength	lb/in (kg/cm)	25 (4.46)
ASTM C 1135	Tensile		
	At 25% Extension	psi (kg/mm^2)	15 (0.010)
	At 50% Extension	psi (kg/mm^2)	20 (1.015)
ASTM C 719	Joint Movement Capabilities		
	Extension/Compression	%	+100/-50
ASTM C 1248	Staining, Various Substrates		None

2. Based on South Coast Air Quality Management District of California. Maximum VOC is listed both inclusive and exclusive of water and exempt compounds.

Description

Suitable for new construction or remedial applications, DOWSIL™ 790 Silicone Building Sealant provides excellent performance, even in building joints that experience extreme movement. It places a low stress on the sealant/substrate bond line to minimize failures in moving joints.

DOWSIL™ 790 Silicone Building Sealant is available in 11 colors: black, precast white, gray, natural stone, bronze, adobe tan, blue spruce, rustic brick, sandstone, charcoal, and dusty rose. Custom colors are available upon request.

Approvals/ Specifications

This sealant meets or exceeds the requirements of:

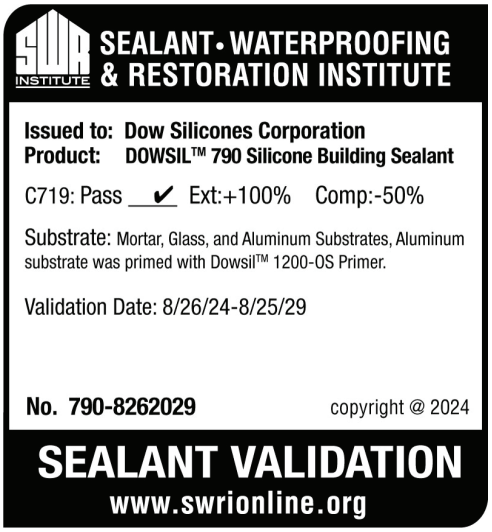
- ASTM Specification C 920, Type S, Grade NS, Class 100/50, Use T, NT, M, G, A, and O
- Many UL wall/floor fire designs, some without a protective cover plate (see www.ul.com for current listing)
- Fire Tests of Building Construction and Materials, UL 263 (ASTM E 119)

Data from an independent test lab and Sealant, Waterproofing and Restoration Institute validation are available from Dow and the SWR Institute. A complete product specification sheet for this product is available upon request.

How to Use

Consult the current version of the Dow Americas Technical Manual, Form No. 62-1112, for detailed information on application methods, joint design, field testing, and warranty requirements when using Dow sealants. Please contact your local sales application engineer for specific advice.

How to Use (Cont.)



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

When stored at or below 32°C (90°F), DOWSIL™ 790 Silicone Building Sealant has a shelf life of 12 months from date of manufacture. Refer to product packaging for “Use By” date.

Packaging Information

DOWSIL™ 790 Silicone Building Sealant is packaged in 10.3 fl oz (305 mL) disposable cartridges that fit ordinary caulking guns, 20 fl oz (590 mL) E-Z Pak foil sausages that fit caulking guns, and also in 2.0 and 4.5 gal (7.5 and 17 L) bulk pails. It can be dispensed by many air-operated guns and most types of bulk dispensing equipment.

Limitations

DOWSIL™ 790 Silicone Building Sealant should not be applied:

- In structural applications.
- Below grade or to materials that outgas, which can cause bubbling in curing sealant.
- On brass or copper or other similar material that can be corroded.
- To surfaces that are continuously immersed in water.
- For use as an interior penetration firestop sealing system.
- To building materials that bleed oils, plasticizers, or solvents – materials such as impregnated wood, oil based caulks, green or partially vulcanized rubber gaskets, or tapes or bituminous below-grade waterproofing and asphalt-impregnated fiberboard.
- In totally confined spaces because the sealant requires atmospheric moisture for cure.
- To surfaces that will be painted after application. The paint film will not stretch with the extension of the sealant and may crack and peel and most likely will not adhere to the sealant.
- To surfaces in direct or indirect contact with food.
- To wet or frost-laden surfaces.
- In applications where solvents or primers are not fully dried prior to sealant application. Uncured sealant is very sensitive to many solvents, primers, and cleaning agents; these may cause the sealant to remain uncured or tacky.

Limitations (Cont.)

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 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.

Form No. 61-884-01-0924 S2D