

Dow Corning® 795 Silicone Building Sealant

1. PRODUCT NAME

Dow Corning® 795 Silicone Building Sealant

2. MANUFACTURER

Dow Corning Corporation
Midland, MI 48686-0994
Phone: (517) 496-6000
FAX: (517) 496-4586

3. DESCRIPTION

Dow Corning 795 Silicone Building Sealant is a one-part, cold-applied, non-sagging silicone material that cures to a medium modulus silicone rubber upon exposure to atmospheric moisture. The cured silicone rubber is durable and flexible enough to accommodate ± 50 percent movement of original joint dimension when installed in a properly designed weatherseal joint (see Figure 1). In a properly designed structural glazing joint (see Figure 2), the sealant is strong enough to support glass and other panel materials under high windload.

Dow Corning 795 Silicone Building Sealant offers the following features:

- Versatility – can be used for both high performance structural glazing and weathersealing – all with one product
- Primerless adhesion to many common construction materials
- Excellent weatherability – the sealant is virtually unaffected by sunlight, rain and snow and stays flexible in temperature extremes of -48°C (-55°F) to 149°C (300°F)
- Ease of use – Cold-temperature gunnability, easy to tool and a low-odor cure byproduct

Basic Uses: Dow Corning 795 Silicone Building Sealant can be used

in most new construction and remedial sealing applications including:

- Structural and nonstructural glazing
- Structural attachment of many panel systems
- Panel stiffener applications
- Weathersealing of most common construction materials including glass, aluminum, steel, painted metal, granite and other stone, concrete, brick and other masonry, EIFS and many plastics
- To apply Dow Corning® 123 Silicone Seal

Limitations: Dow Corning 795 Silicone Building Sealant should not be used:

- In structural applications without prior review and approval by

Dow Corning Corporation Technical Service and Development

- 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 that may affect adhesion
- 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

TYPICAL PROPERTIES

These values are not intended for use in preparing specifications.

As Supplied

	Colors	11 colors; custom colors also available
ASTM C 679	Tack-Free Time at 50% RH, hours	3
	Cure Time at 25°C (77°F) and 50% RH, days	7-14
	Full Adhesion, days	14-21
ASTM C 639	Flow, Sag or Slump, inches	0.1
	Working Time, minutes	20-30

As Cured – After 21 days at 25°C (77°F), 50% RH

ASTM D 2240	Durometer Hardness, Shore A, points	35
ASTM C 794	Peel Strength on Gloss, lb/in (kg/cm)	32 (5.7)
ASTM C 1135	Tensile Adhesion Strength at 25% extension, psi	40
ASTM C 1135	Tensile Adhesion Strength at 50% extension, psi	55
ASTM C 1184	Structural Silicone Specification	Pass
ASTM C 1248	Staining (granite, marble, limestone, brick and concrete)	None

As Cured – After 21 Days at 25°C (77°F) and 50% RH, then 10,000 hours in QUV Weatherometer, ASTM G 53

ASTM C 1135	Tensile Adhesion Strength at 25% extension, psi	35
ASTM C 1135	Tensile Adhesion Strength at 50% extension, psi	50

Specification Writers: Please obtain a copy of the Dow Corning Sales Specification for this product, and use it as a basis for your specifications. It may be obtained from any Dow Corning Sales Office, or from Dow Corning Customer Service in Midland, MI. Call 1-800-322-8723.

- For use as an interior penetration firestop sealing system

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

Composition and Materials:

Dow Corning 795 Silicone Building Sealant is a one-part, ready-to-use material that has the consistency of toothpaste. This consistency remains uniform over a wide temperature range from -23 to 50°C (-10 to 122°F), allowing the sealant to be applied easily at most temperatures.

Once cured, the sealant is a medium modulus silicone sealant that adheres primerless to many common construction substrates. When used as a structural sealant, *Dow Corning TS&D* must review all applications and perform adhesion and compatibility testing to all materials to contact the sealant. When used as either a weatherseal or structural sealant, *Dow Corning* recommends that field adhesion tests be performed on all materials to ensure adhesion is obtained. For details, refer to the most recent versions of the *Dow Corning Silicone Structural Glazing Manual*, Form No. 62-351, and *Dow Corning Weatherproofing Sealant Guide*, Form No. 62-433.

Packaging: *Dow Corning 795 Silicone Building Sealant* is supplied in 10.3-fl oz (305-mL) disposable plastic cartridges that fit ordinary caulking guns, 20-fl oz (590-mL) sausages and 2- and 4.5-gal (7.5- and 17-L) bulk containers. It can be dispensed by many air-operated guns and most types of bulk dispensing equipment.

Colors: *Dow Corning 795 Silicone Building Sealant* is available in 11 colors: black, white, gray, limestone, bronze, sandstone, adobe tan, dusty rose, rustic brick, blue spruce and charcoal. Custom colors are available upon request.

Applicable Standards: *Dow Corning 795 Silicone Building Sealant* meets or exceeds the test requirements of:

- Federal Specification TT-S-001543A (COM-NBS) Class A for silicone building sealants
- Federal Specification TT-S-00230C (COM-NBS) Class A for one-component building sealants

- ASTM Specification C-920 Type S, Grade NS, Class 25, Use NT, M, G and A
- Canadian Specification CAN2-19.13-M82

4. TECHNICAL DATA

Dow Corning 795 Silicone Building Sealant is virtually unaffected by sunlight, rain, sleet and snow. Its unique weatherability enables it to retain its original design properties even after years of exposure. Joint performance does not change significantly with aging or exposure to weather. Seals remain watertight and weatherproof.

Cured sealant will perform at cold temperatures down to -48°C (-55°F) or at high temperatures up to 149°C (300°F) and will not become brittle, tear or crack. *Dow Corning 795 Silicone Building Sealant* is compatible with most reflective glass and insulating glass units.

5. INSTALLATION

Dow Corning 795 Silicone Building Sealant is uniquely formulated to be used for both structural glazing and weathersealing applications. Joint

design determines whether the sealant is to be used as a structural sealant, weatherseal sealant or both.

Structural glazing applications for *Dow Corning 795 Silicone Building Sealant* must be reviewed by the Technical Service staff, *Dow Corning Corporation*, Building Materials Industries Technical Service and Development.

The following instructions provide a general overview of the installation process. Complete design and installation procedures are outlined in the *Silicone Structural Glazing Manual* for structural glazing applications and the *Weatherproofing Sealant Guide* for weathersealing applications.

Joint Design: The design of a structural glazing joint must be prepared by the design professional, based upon industry-accepted design guidelines.

A typical structural glazing joint is illustrated in Figure 2. Basic design parameters include:

- Glueline thickness must not be less than 1/4" (6 mm)
- Structural bite must not be less than glueline thickness
- Structural bite (in inches) must be

Figure 1: Recommended Joint Design and Typical Joint Sealing Configurations (See *Weatherproofing Sealant Guide*, Form No. 62-433)

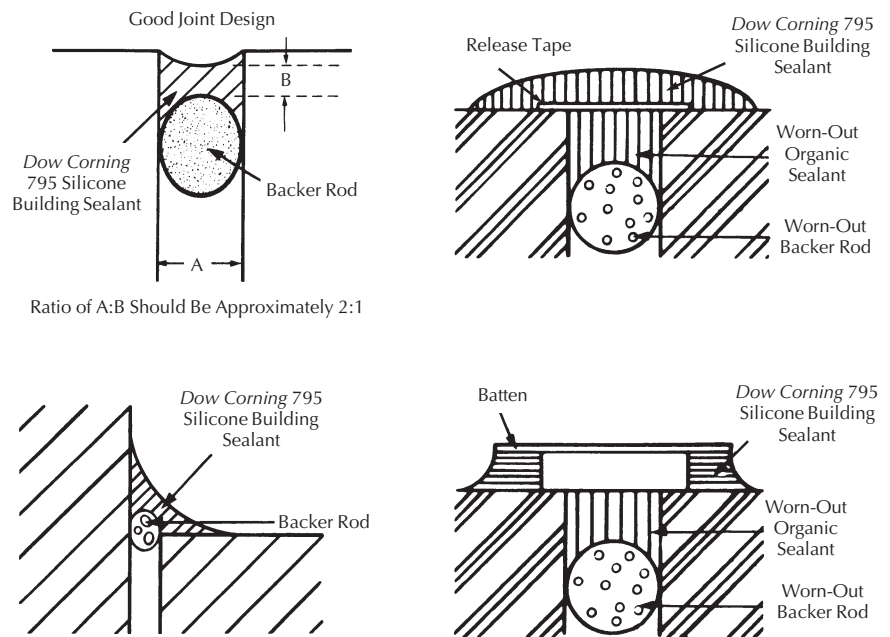
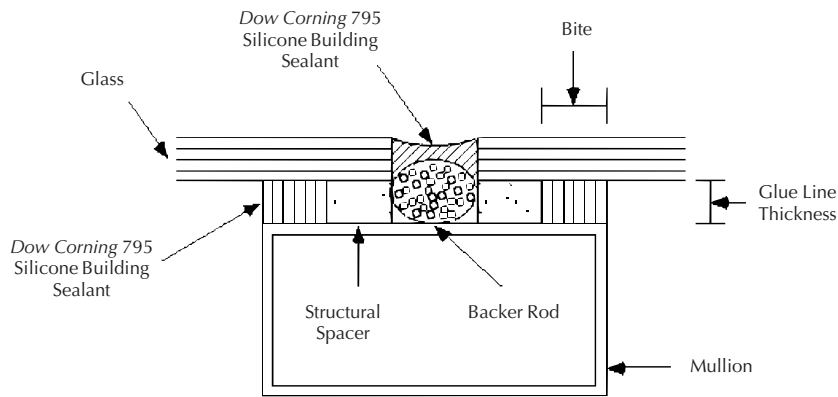


Figure 2: Typical Structural Glazing Design



greater than or equal to the smallest leg of the largest lite (in feet) \times windload (psf) \div 480

- The structural sealant joint must be able to be filled using standard caulking practices
- The structural joint must not move during cure

The above design parameters are general industry guidelines for silicone structural glazing. Project specific recommendation will be made following the review of drawings by Dow Corning Corporation Technical Service and Development.

Properly designed weatherseal joints will accommodate more movement in a 2 to 1 width to depth configuration (Figure 1). The sealant should be no thicker than $\frac{3}{8}$ " (9 mm) and no thinner than $\frac{1}{8}$ " (3 mm) for joints where full movement is expected. Joints above 1 in (25 mm) may require sealant depth up to a maximum of $\frac{1}{2}$ " (13 mm).

Open cell polyurethane, closed cell polyethylene and non-gassing polyolefin backer rods are all acceptable for use. Certain applications, i.e., EIFS and double weatherseal joints, may require a specific backer rod type. When the joint cavity is shallow, use a polyethylene bondbreaker tape to prevent three-sided adhesion. These backer materials allow sealant to be applied and tooled properly in the joint and after cure, stretch freely within the joint.

The width of building expansion joints varies because of seasonal and daily changes in temperature. If the

sealant cannot be installed when the design width is approximately half way between the dimensional extremes, the designed joint must be at least twice the total anticipated joint movement. Good architectural practice calls for joint design of four times the anticipated movement due to construction tolerances and material variations.

Glazing rabbets and joints should be designed to allow installation and retention of the bond breaking backer material during the installation and curing of the silicone sealant.

Lap shear joints should have a bead width that is equal to or greater than the anticipated movement.

Joint Dimension: Small curtainwall panels and lites should allow a minimum width of $\frac{1}{4}$ " (6 mm) for the sealant bead. Larger panels, in which a great deal of movement is expected, should allow a minimum width of $\frac{1}{2}$ " (13 mm) for the sealant bead. Joints should always be sized to allow Dow Corning 795 Silicone Building Sealant to perform within its movement capability of ± 50 percent of original joint dimension.

Glazing of plastic lites, and panels fabricated from plastic, require larger than usual joint dimension due to the plastic's high coefficient of thermal expansion.

In all cases, a minimum of $\frac{1}{4}$ " (6 mm) of sealant contact with each substrate is required to ensure adhesion in a moving joint.

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

Porous substrates should be cleaned where necessary by grinding, saw cutting, blast cleaning (sand or water) or mechanical abrading, or a combination of these methods as required to provide a sound, clean, dry surface for sealant application. Dust, loose particles, etc., should be blown out of joints with oil-free compressed air or vacuum cleaning.

Metal, glass and plastic substrates should be cleaned by mechanical or solvent procedures. Detergent or soap and water treatments are not acceptable. In all cases where used, solvents should be wiped on and off with clean, oil- and lint-free cloths.¹

Refer to the *Dow Corning Structural Glazing Manual* and *Dow Corning Weatherproofing Sealant Guide* for additional surface preparations guidelines.

Priming: Laboratory adhesion testing is required to determine priming requirements for all structural glazing applications. Consult the *Dow Corning Structural Glazing Manual* for further details on proper priming procedures.

The *Dow Corning Weatherproofing Sealant Guide* includes general priming guidelines for weatherseal applications. Prior to general job use, field adhesion tests should be performed to verify sealant adhesion to each substrate. Field adhesion test procedures and quality assurance guidelines are outlined in the aforementioned guide.

Masking: Areas adjacent to joints may be masked to ensure neat sealant lines. Do not allow masking tape to touch clean surfaces on which the sealant is to adhere. Tooling should be completed in one continuous stroke

¹Follow solvent manufacturer's recommended safe handling instructions and applicable federal, state and local regulations.

immediately after sealant application and before a skin forms. Masking should be removed immediately after tooling.

It is imperative that uncured silicone sealants do not come in contact with non-abradable surfaces such as polished granites, metal or glass. Because excess silicone sealant cannot be completely removed with organic or chlorinated solvents, these surfaces must be masked or extreme care must be taken to prevent any silicone sealant from contacting them during application. Once any uncured silicone sealant is allowed to contact the surface, it will be difficult to completely remove.

In cases where uncured sealant is inadvertently applied to adjacent surfaces, the sealant should be cleaned while still uncured, using a commercial solvent such as xylene, toluene, or methyl ethyl ketone (MEK).¹

Method of Application: Install backer material or joint filler, setting blocks, spacer shims and tapes as specified. Apply sealant in a continuous operation, using a positive pressure adequate to properly fill and seal the joint. Tool or strike the sealant with light pressure to spread the material against the backer material and the joint surfaces. A tool with a concave profile is recommended to keep the sealant within the joint. Do not use liquid tooling aids such as water, soap or solvents.

Tool the sealant applied at sills so that precipitation and cleaning solutions will not pool.

Table I: Estimating Requirements

Linear Feet per Gallon of <i>Dow Corning 795 Silicone Building Sealant</i> for Various Joint Sizes									
		Width, Inches							
Depth, Inches		1/4	3/8	1/2	5/8	3/4	1	2	3
	1/8	616	411	307	—	—	—	—	—
	3/16	411	275	205	164	—	—	—	—
	1/4	307	205	154	123	103	—	—	—
	3/8	—	137	103	82	68	51	25	17
	1/2	—	—	77	62	51	39	19	12

Dow Corning 795 Silicone Building Sealant can be applied at outdoor temperatures as low as -23°C (-10°F), provided that surfaces are clean, dry and frost-free.

Do not apply *Dow Corning 795 Silicone Building Sealant* when surface temperatures are in excess of 50°C (122°F).

Safe Handling Information: PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE FROM YOUR DOW CORNING REPRESENTATIVE, OR DISTRIBUTOR, OR BY WRITING TO DOW CORNING CUSTOMER SERVICE, OR BY CALLING 1-800-322-8723.

Storage and Shelf Life: When stored at or below 27°C (80°F), *Dow Corning 795 Silicone Building Sealant* has a shelf life of 12 months from date of manufacture. Refer to product packaging for “Use By” date.

6. AVAILABILITY AND COST

Availability: *Dow Corning 795 Silicone Building Sealant* is marketed through the United States and Americas through authorized distributors. For the location of the distributor nearest you, contact Dow Corning Customer Service at 1-800-322-8723.

Cost: Pricing information can be obtained by contacting your local Dow Corning distributor.

7. WARRANTY

Limited Weatherseal Warranty: Dow Corning Corporation produces and sells a full line of silicone construction sealants and adhesives.

These products offer a variety of physical characteristics and adhesion properties. *Dow Corning 795 Silicone Building Sealant* is part of that line and, when used with compatible substrates and when applied within the stated shelf life and according to manufacturer's recommendations for application and joint design, Dow Corning warrants that it will perform as a watertight weatherseal for a period of 20 years from the date of purchase. In addition to maintaining the integrity of the weatherseal, the sealant will not change color when used with backup materials and substrates that have been approved for compatibility by Dow Corning, either after specific testing or noted in a current Dow Corning publication.

Limitations: This warranty specifically excludes failure of the sealant due to:

- Natural causes such as lightning, earthquake, hurricane, tornado, fire, flooding, etc., or
- Movement of the structure resulting in stresses on the sealant that exceed Dow Corning's published specifications for elongation and/or compression for the sealant, whether due to structural settlement, design error or construction error, or
- Disintegration of the underlying substrates, or
- Mechanical damage to the sealant caused by individuals, tools or other outside agents, or
- Changes in the appearance of the sealant from the accumulation of dirt or

other contaminants deposited on the sealant from the atmosphere

Remedies: In the event of a claim under this warranty, you must notify Dow Corning Corporation in writing within 30 days of the occurrence of the failure. Dow Corning's sole liability shall be to furnish sufficient silicone replacement material to restore the integrity of the weatherseal. Any labor or other cost associated with the repairs are the responsibility of the owner. DOW CORNING SHALL NOT BE LIABLE FOR AND EXPRESSLY DISCLAIMS ANY LIABILITY FOR DAMAGE TO THE CONTENTS OF THE STRUCTURE OR FOR CONSEQUENTIAL OR INCIDENTAL DAMAGE, WHETHER IN CONTRACT OR IN TORT, INCLUDING NEGLIGENCE.

THIS WARRANTY IS IN LIEU OF ALL OTHER WRITTEN OR ORAL, EXPRESS OR IMPLIED WARRANTIES AND DOW CORNING SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE.

Structural Adhesion Warranty: *Dow Corning 795 Silicone Building Sealant* may be used as a structural adhesive under certain conditions, but Dow Corning Corporation disclaims any general adhesion warranty. Dow Corning will issue project-specific Structural Adhesion Warranties on a case-by-case basis. No Structural Adhesion Warranty will be issued until Dow Corning has reviewed the pertinent building prints and specifications and has completed adhesion

and compatibility testing of the various materials to be used with *Dow Corning 795 Silicone Building Sealant*. For details on how to obtain the Structural Warranty, please contact your Dow Corning field representative.

8. MAINTENANCE

Generally, no maintenance is required. If the sealant becomes damaged, replace the damaged portion. *Dow Corning 795 Silicone Building Sealant* will adhere to cured silicone sealant with only a preparatory solvent wipe to remove accumulated dirt. Dirty sealant may be cleaned with a solvent wipe or soap and water.

9. TECHNICAL SERVICE

Complete technical information and literature are available from Dow Corning and authorized building sealant distributors. Laboratory testing and technical service are available from Dow Corning. See the last page for a list of Dow Corning U.S. Construction Testing Laboratories.

10. FILING SYSTEM

- Sweets Catalog 07920/DOW BuyLine 2882
- Architectural specifications and complete technical literature are available from Dow Corning upon request.

Additional information is available via the Dow Corning web site at www.dowcorning.com.

DOW CORNING NORTH AMERICA FIELD SALES OFFICES:

ATLANTA

1225 Northmeadow Parkway, Suite
104
Roswell, GA 30076
(770) 751-7979

CHICAGO

1120 West Lake-Cook Road, Suite 1120C
Buffalo Grove, IL 60089
(847) 541-3430

DETROIT

47799 Halyard Drive, Suite 77
Plymouth, MI 48170
(734) 454-2000

GREENSBORO

2914B Patterson Street
Greensboro, NC 27407
(336) 547-7272

LOS ANGELES

5 Corporate Park
Suite 280
Irvine, CA 92714
(949) 757-5000

NEW YORK CITY – METRO

500 International Drive, Suite 350
Mount Olive, NJ 07828
(973) 691-1414

SAN FRANCISCO

PO Box 5121
910 Auburn Court
Fremont, CA 94537-5121
(510) 490-9302

**MIDLAND – CORPORATE
HEADQUARTERS**

Midland, MI 48686-0994
(517) 496-6000

CANADA

Dow Corning Canada, Inc.
6747 Campobello Road
Mississauga, Ontario L5N 2M1
(905) 826-9600

MEXICO

Dow Corning de Mexico S.A. de C.V.
Campos Eliseos 345-5 Piso
Col. Polanco
Delegacion Miguel Hidalgo
C.P. 11550 Mexico, D.F.
525 327 1300

DOW CORNING U.S. CONSTRUCTION TESTING LABORATORIES:

ATLANTA

Dow Corning Corporation
1225 Northmeadow Parkway, Suite
104
Roswell, GA 30076
(770) 751-7979

MIDLAND

Dow Corning Corporation Test Lab
2200 West Salzburg Road
Auburn, MI 48611
(517) 496-6000

SAN FRANCISCO

Dow Corning Corporation
PO Box 5121
910 Auburn Court
Fremont, CA 94537-5121
(510) 490-9302

CUSTOMER SERVICE AND ORDER ENTRY INFORMATION:

CORPORATE HEADQUARTERS

Dow Corning Corporation
Midland, MI 48686-0994
(517) 496-6000

The information and data contained herein are based on information we believe reliable. You should thoroughly test any application and independently conclude satisfactory performance before commercialization. Suggestions of uses should not be taken as inducements to infringe any particular patent.

Dow Corning is a registered trademark of Dow Corning Corporation.

©1991, 1999 Dow Corning Corporation. All rights reserved.

Printed in USA

AGP4583

Form No. 61-885E-99

DOW CORNING

Dow Corning Corporation
Midland, Michigan 48686-0994