Technical Data Sheet

DOWSIL™ 795 Structural Glazing Sealant

One-part, neutral-cure silicone sealant

Features & Benefits

- Meets ASTM C1184 for Structural Silicone Sealant
- Meets ASTM C719 Class 50 High movement capability ±50% in well designed weatherseal joint
- Excellent adhesion to a wide range of substrates including glass, anodized and coated aluminum profiles
- Non corrosive cure system
- Ease of use – all-temperature gunnability and easy tooling
- The cured product exhibits excellent weathering characteristics, and a high resistance to ultra-violet radiation, heat and humidity
- High ultimate tensile strength which makes it suitable for structural bonding applications
- Excellent mechanical properties

Composition

- One-part, neutral-cure, RTV silicone sealant

Applications

- DOWSIL™ 795 Structural Glazing Sealant is a one-component Silicone sealant designed for site or factory glazing and curtainwall production. It requires contact with air as it reacts with atmospheric moisture to cure to a tough but flexible silicone rubber. DOWSIL™ 795 Structural Glazing Sealant can be used where dual structural and weatherseal applications are desired. It has up to ±50% movement capability in a well-designed weatherseal joint.

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	1.5 (max)
	Curing time at 25°C, 50% RH	days	7–14
	Full adhesion	days	14–21
ASTM C 639	Flow, sag or slump	mm	0
	Working time	minutes	20–30

1. ASTM – American Society for Testing and Materials.

Form No. 63-1217-01-0124 S2D

Typical Properties (Cont.)

Test	Property	Unit	Result
	Specific gravity		1.44
	VOC content[2]	g/l	32
	As cured - 7 days at 25°C (77°F), 50% RH		
ASTM D 412	Tensile strength (ultimate)	MPa	2.3
	Elongation	%	670
ASTM C 661	Durometer hardness, Shore A	points	35
ASTM D 624	Tear strength, die B	kN/m	13
	As cured – after 21 days at 25°C (77°F), 50% RH		
ASTM C 794	Peel strength	kg/cm	8.5
ASTM C 1135	Tensile strength, at 100% elongation	MPa	0.6
	Ultimate tensile strength, at break	MPa	1.2
	Ultimate elongation at break	%	400
ASTM C 719	Joint movement capability	%	±50
	As cured – after 21 days at 25°c, 50% relative humidity followed by 5,000 hours in a quv weatherometer, ASTM G 154-06		
ASTM C 1135	Tensile strength, at 100% elongation	MPa	0.6
	Ultimate tensile strength, at break	MPa	1.1

2. Based on South Coast Air Quality Management District of California. Maximum VOC is listed both inclusive and exclusive of water and exempt compounds. For a VOC data sheet for a specific sealant color, please send your request to Dow.

Description

DOWSIL™ 795 Structural Glazing Sealant is a one-part, neutral-cure, architectural-grade sealant that easily extrudes over a wide temperature range. This cold-applied, non-sagging silicone material cures to a medium- modulus rubber upon exposure to atmospheric moisture. The cured sealant is durable and flexible enough to accommodate ±50% movement of original joint dimension when installed in a properly designed weatherseal joint. In a properly designed structurally glazed joint, the sealant is strong enough to support glass and other panel materials under high wind-load and seismic effects.

Approvals/ Specifications

DOWSIL™ 795 Structural Glazing Sealant meets the requirements of: ASTM Specification C 1184 for structural silicone sealants ASTM Specification C 920, Class 50.

SINGAPORE GREEN BUILDING PRODUCT SGBC VERY GOOD

SGBP 4336

Colors

DOWSIL™ 795 Structural Glazing Sealant is available in 4 colors: black, white, gray and bronze.

How to Use

When DOWSIL™ 795 Structural Glazing Sealant is used in structural applications the structural joint design MUST be reviewed by a technical service specialist.

Complete design and installation guidelines are contained in the Asia Technical Manual, and must be followed for warranty applications when using this product.

Joint Design

Structural joints sealed with DOWSIL™ 795 Structural Glazing Sealant should have a minimum depth (or bite) of 6 mm. For large site-glazed joints the sealant or bite should be not more than 12 mm when the sealant can cure from one side only. When an open-cell moisture-permeable spacer tape is used, a structural bite up to 24 mm can cure to optimum strength. The exact structural bite should always be calculated. The thickness of the structural sealant joint or glueline should be 6 mm minimum. As it must accommodate thermal and dynamic movements the actual joint movements should be calculated. Ideally the bite to glueline ratio should be not more than about 3:1.

Accessory Selection

The appropriate selection of all accessories such as setting blocks and backing materials is important to avoid discoloration or adhesion-related problems due to incompatibility. Dow will also assess the suitability of proposed accessory materials as part of the standard testing services. Silicone-based setting blocks are generally recommended for best compatibility.

Preparatory Work

Thoroughly clean all substrates to be sealed, removing all contaminants such as grease, oil, dust, frost or water. All metal, glass, or other surfaces should be cleaned with the recommended solvent, using a lint free cloth.

Method of Application

Install backing material or joint filler, setting blocks, spacer shims and tapes. Mask areas adjacent to joints to ensure neat sealant lines. Apply DOWSIL™ 795 Structural Glazing Sealant in a continuous operation using positive pressure. (The sealant can be applied using many types of air-operated guns and most types of bulk dispensing equipment.) Before a skin forms (typically within 15 minutes), tool the sealant with light pressure to spread the sealant against the backing material and joint surfaces. Remove masking tape as soon as the bead is tooled.

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 27°C (80°F), DOWSIL™ 795 Structural Glazing Sealant has a shelf life of 12 months from the date of manufacture. Refer to product packaging for “Use By Date.”

Questions about the use of DOWSIL™ 795 Structural Glazing Sealant can be answered by calling your local application sales engineer. Our laboratory personnel and technical service staff are also available for assistance.

Packaging Information

DOWSIL™ 795 Structural Glazing Sealant is supplied in 300 ml disposable plastic cartridges and 600 ml foil sausages.

Limitations

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

DOWSIL™ 795 Structural Glazing Sealant should not be used for structural applications without the prior written approval of the Construction Industry Technical Services Department. Each project should be specifically and separately approved by Dow.

Project specific approval involves the following prerequisites:

- Joint dimensioning and print reviews.
- Successful laboratory adhesion and compatibility testing to all building components.
- Observance of professional sealant application and workmanship standards.
- Users should always consult the Technical Services Department for adhesion recommendation.

Dow shall not be held liable for any possible claims arising from structural glazing use of DOWSIL™ 795 Structural Glazing Sealant for projects which have not been specifically approved by Dow.

For projects which have been approved, Dow will issue a structural adhesion warranty on a case by case basis at the user's request. It is the user's exclusive responsibility to ensure project compliance with local building regulations.

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.

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Form No. 63-1217-01-0124 S2D