



DOWSIL™ 375 Construction & Glass Embedding

Self-levelling two-part polyurethane for embedding of glass panels

Features & Benefits

- Pure glass aesthetics with invisible fixing
- Excellent flowability for efficient application
- Lightweight container sizes for easy handling
- Efficient and fast application for enhanced productivity
- Very rigid to minimize panel deflection
- Long pot life
- Very fast cure, at room temperature
- Color match to profile possible

Composition

- Two-part polyurethane: filled polyol and polymeric isocyanate

Applications

- Embedding of glass panels in U-profiles for glass balustrades
- Suitable for indoor and outdoor applications

Typical Properties

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

Test	Property	Unit	Result
DOWSIL™ 375 Construction & Glass Embedding – part A – polyol as supplied			
	Color		Cream
ASTM ¹ D4889	Viscosity Brookfield, 25°C	mPa.s	17000
ISO ² 2811	Specific gravity, 20°C	g/cm ³	1.61
DOWSIL™ 375 Construction & Glass Embedding – part B – hardener as supplied			
	Color		Brown
ASTM D4889	Viscosity Brookfield, 25°C	mPa.s	160–240
ISO 2811	Specific gravity, 20°C	g/cm ³	1.23

1. ASTM: American Society for Testing and Materials.
2. ISO: International Standardization Organization.

Typical Properties (Cont.)

Test	Property	Unit	Result
DOWSIL™ 375 Construction & Glass Embedding - mixed			
	Color		Cream (without color paste) Grey, black (with color paste addition)
	Mixing ratio (weight)		100:19
	Mixing ratio (volume)		100:25
ASTM D4878	Viscosity (mixed) at 23°C	mPa.s	5000
DOWM ³ 10159	Pot life	min	60
	Curing time at 20°C	hours	7
ISO 868	Shore D hardness		70
ISO 527	Tensile strength	MPa	17
ISO 527	Elongation at break	%	11

3. DOWM: Dow Method. Internal procedure. Can be provided upon request.

Description

DOWSIL™ 375 Construction & Glass Embedding has been specifically developed to securely mount and support flat and curved monolithic or laminated glass panels in the U-shaped profiles used in these system designs and in other interior and exterior embedding applications. It is a pourable, self-levelling, two-part polyurethane, designed for use as a supporting material for glass panels that are only retained at the base.

Approvals / Specifications

Balustrade assemblies made with DOWSIL™ 375 Construction & Glass Embedding have passed pendulum tests according to DIN 18008-4 at an independent test institute. The test report and certificate are available from Dow representatives upon request.

How to Use

Surface Preparation

In balustrade designs where DOWSIL™ 375 Construction & Glass Embedding is typically applied, adhesion between the product and the U-profile, as well as between the product and the glass should be avoided to avoid stress in the glass (and possible glass breakage) and make replacement of the glass panel easier if required. Therefore, after glass cleaning, the areas of the glass and U-profile that will be in direct contact with DOWSIL™ 375 Construction & Glass Embedding should be pre-treated to prevent adhesion, for example, with a silicone spray. Important: prior to applying the release agent, protect with tape the area that will be sealed with a weather sealant later in the installation, to ensure that adhesion is not compromised. For further information, please read the DOWSIL™ 375 Construction & Glass Embedding technical manual and contact Dow Technical Specialists for any remaining question.

How to Use (Cont.)

Application of DOWSIL™ 375 Construction & Glass Embedding

If a color paste is used, first add the appropriate paste amount into part A. Stir the pail of part A thoroughly with a drill equipped with a mixing paddle. Pour the whole content of the pail of part B into the pail of part A. The part A pail will accommodate the contents of both pails. There is no need to weigh or measure. Stir the part A and part B materials together at constant speed until a homogeneous mixture is obtained, for at least 90 seconds. The glass panel can be installed into the U-Profile either before or immediately following installation of the material. Pour the mixture by tilting the pail or use a pump to inject into the casting cavity. Ensure all gaps are filled and allow the material to level and cure. For further advice, please contact Dow's Technical Specialists.

Finishing

Remove the protection tape. (This can either be done right after the material has been applied into the cavity or after curing). Once the material is completely cured, clean the areas of the glass and U-profile above the cured material. Create a weather seal connecting the glass and the U-profile by applying DOWSIL™ 791 Weatherproofing Sealant on top of the embedding material for protection from water ingress and UV exposure.

Handling Precautions

Always wear gloves and eye protection when handling the materials. We recommend wearing a respiratory mask of type AP2 (meeting standard EN 14387) during mixing and transferring the mixture.

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™ 375 Construction & Glass Embedding part A and B should be stored in a dry place at a temperature between 15 and 25°C. The shelf life is 12 months from date of manufacture. Refer to product packaging for "Use By" date.

Packaging Information

DOWSIL™ 375 Construction & Glass Embedding part A polyol comes in a 16 kg package. There is a large headspace between the surface of part A polyol and the rim of the pail. This eases the mixing process and avoids splashes. DOWSIL™ 375 Construction & Glass Embedding part B hardener comes in a 3 kg package. After opening of the packaging, the remaining content must be protected from humidity.

Limitations

Compatibility tests with substrates of other materials used in the assembly have to be performed before application.

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.

dow.com

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