



Technical Data Sheet

DOWSIL™ 881 High Strength Sealant

High modulus acetoxysilicone sealant

Features & Benefits

- Fast cure one-part acetoxysilicone sealant
- High modulus
- High and durable adhesion to glass
- Resistant to UV exposure
- Resistant to intermittent water immersion

Applications

- DOWSIL™ 881 High Strength Sealant is a one-part sealant particularly suitable for bonding glass where a stiff, high strength bond is required, along with a fast cure and high resistance to UV and water contact. Not suitable for structural glazing applications.

Typical Properties

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

Test ¹	Property	Unit	Result
	Cure system		Acetoxysilicone
	Standard colors		Clear, black
	Application temperature	°C °F	+5 to +30 +41 to +86
	Working time	minutes	5
CTM 97B	Specific gravity	g/ml	1.1
CTM 663A	Cure rate 23°C (73.4°F), 50% R.H.		
	1 day	mm	3.0
	7 days	mm	8.0
	2 mm thickness S2 dumb-bells (ISO² 37)		
CTM 137A	E-modulus 100%	MPa	0.50
CTM 137A	Tensile strength	MPa	> 2
CTM 99E	Durometer hardness, Shore A		28

1. CTM: Corporate Test Method, copies of CTMs are available on request.
2. ISO: International Standardization Organization.

How to Use

Surface Preparation

Ensure that surfaces to be sealed are clean, dry, sound and free from grease, dust and other contaminants which could impair adhesion. Surfaces can be cleaned and degreased by wiping with a suitable solvent, such as DOWSIL™ R-40 Universal Cleaner, on a clean oil and lint-free cloth before application of sealant.

Note: When using any solvent, always provide adequate ventilation. Avoid heat, sparks and open flames. Observe and follow all precautions listed on solvent container label.

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

For specific advice, please refer to the *Primers' Guide* or contact Dow for technical assistance.

Sealant Application

The sealant is ready to use. Ensure complete filling of the joint in order to prevent the presence of bubbles. The sealant should have a minimum thickness of 1 mm. Tooling a triangular sealant bead inside the gap is highly recommended.

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.

Clean-up

Excess sealant may be cleaned off tools and non-porous surfaces whilst in an uncured state using DOWSIL™ R-40 Universal Cleaner. Care should be taken not to damage plastic or coated surfaces. Alternatively, cured silicone may be removed by peeling, cutting or other mechanical means. Care should be taken not to damage plastic or coated surfaces.

Joint Design

The sealant joint width should be designed to accommodate the movement capability of the sealant. When designing joints using this product, the minimum width should be 6 mm. For joints between 6–12 mm wide, a seal depth of 6 mm is required. For joints above 12 mm, a width to depth ratio of 2:1 should be used. In situations where fillet joints are needed, a minimum of 6 mm of sealant bite to each substrate is recommended. For joint dimensions greater than 25 mm, please contact Dow for technical assistance.

Joint Design (Cont.)

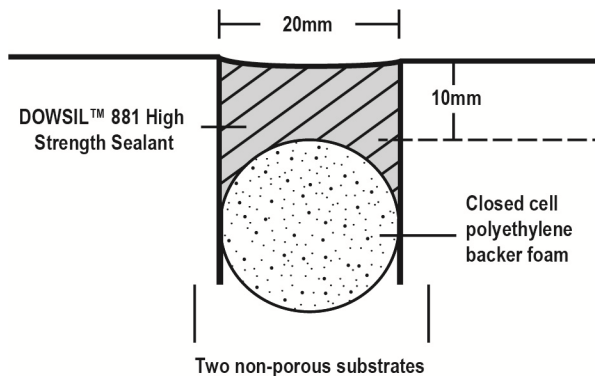


Figure 1: Deep joint

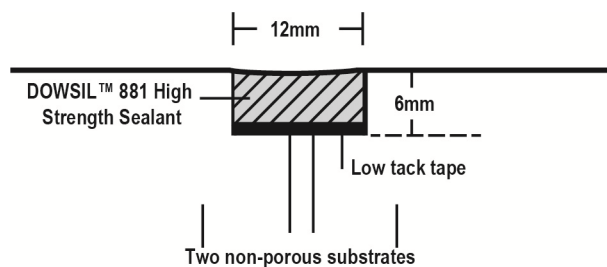


Figure 2: Shallow joint

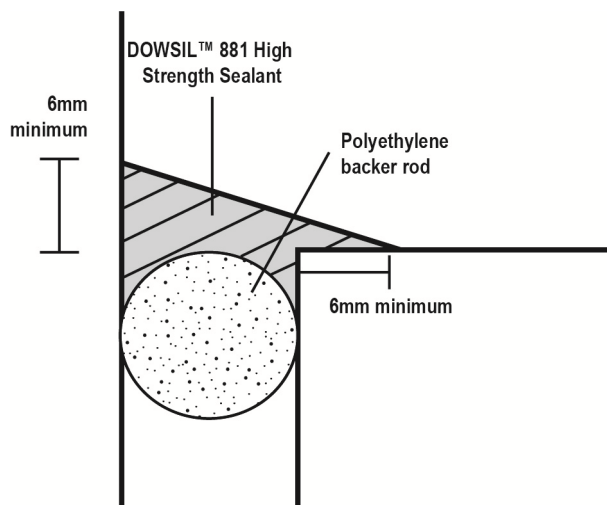


Figure 3: Fillet joint

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 in cool, dry conditions below 30°C (86°F) in the original unopened containers, DOWSIL 881 High Strength Sealant has a usable life of 15 months from the date of production.

Packaging Information

This product is available in 310 ml cartridges packed in boxes of 12, 400 ml sausages packed in boxes of 15, 600 ml sausages packed in boxes of 20 and 20 liter pails.

Limitations

DOWSIL™ 881 High Strength Sealant is not recommended for use on porous substrates such as concrete, stone, marble or granite.

Do not use DOWSIL™ 881 High Strength Sealant on bituminous substrates, substrates based on natural rubber, chloroprene or EPDM, or on building materials and flexible plastics which might bleed oils, plasticizers or solvents.

Do not use DOWSIL™ 881 High Strength Sealant in a totally confined space because the sealant requires atmospheric moisture to cure. Because acetic acid is released during curing, it can corrode mirror silver and sensitive metals such as zinc, copper, brass and lead.

DOWSIL™ 881 High Strength Sealant is not recommended for structural glazing or insulated glazing applications.

DOWSIL™ 881 High Strength Sealant is not suitable in connection with laminated glass.

Delamination of PVB film may occur up to 20 mm when used in contact with the edge of laminated glass.

For sealing or gluing materials other than glass, please ensure the adhesion is sufficient for your specific application. Please contact Dow for technical assistance.

DOWSIL™ 881 High Strength Sealant is not suitable for food contact applications.

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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