



## Technical Data Sheet

### DOWSIL™ 781 Acetoxy Sealant

Medium/high modulus acetoxy silicone sealant

#### Features & Benefits

- High strength
- Good elasticity
- Conforms to ISO 11600-F&G-20LM
- Resistant to ozone, ultra-violet radiation and temperature extremes

#### Applications

- DOWSIL™ 781 Acetoxy Sealant is a one-part, silicone sealant which has good adhesion to a range of non-porous surfaces including glass, aluminum, painted surfaces and composite boards. It offers excellent resistance to aging, shrinkage, cracking and discoloring.

#### Typical Properties

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

Test	Property	Unit	Result
	Cure system		Acetoxy
	Application temperature	°C °F	+5 to +40 +41 to +104
CTM <sup>1</sup> 97B	Specific gravity		1.02
CTM 364C	Extrusion rate	g/minute	220
CTM 98B	Skin-over time (23°C (73°F), 50% R.H.)	minutes	14
CTM 663A	Cure rate (23°C (73°F), 50% R.H.)		
	1 day	mm	3
	3 days	mm	5
	<b>2 mm thickness S2 dumb-bells (ISO<sup>2</sup> 37)</b>		
CTM 137A	E-modulus 100%	MPa	0.40
CTM 137A	Tensile strength	MPa	1.8
CTM 137A	Elongation at break	%	520

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

## Typical Properties (Cont.)

Test	Property	Unit	Result
12 x 12 x 50 mm size T.A. joint (ISO 8339/DIN <sup>3</sup> 2-8339)			
CTM 677	E-modulus 100%	MPa	0.4
CTM 677	E-modulus 60%	MPa	0.35
CTM 677	Tensile strength	MPa	0.59
CTM 677	Elongation at break	%	190
CTM 99E	Hardness (Shore A)		22
ISO 9047	Joint movement capability	%	20

3. DIN: Deutsche Industrie Norm.

## Technical Specifications and Standards

Conforms to ISO 11600-F&G-20LM.

## How to Use

### Surface Preparation

Ensure that surfaces to be sealed are clean, dry, sound and free from frost, release agents, old sealants and other contaminants which could impair adhesion.

All surfaces should 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. Use solvent resistant gloves. 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

All joint surfaces other than glass and glazed ceramics should be primed.

### Back-up Materials

When back-up material is required, a closed cell polyethylene backer rod is recommended. Low tack polyethylene tape should be used in joints too shallow to allow the use of a backer rod. Back-up materials provide back pressure and prevent three sided adhesion that limits sealant movement capability.

### 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.

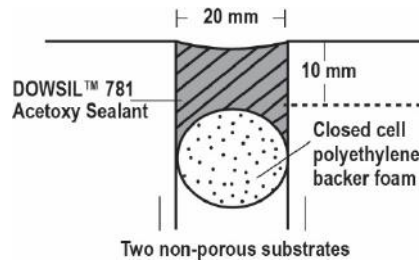
## How to Use (Cont.)

### Clean-up

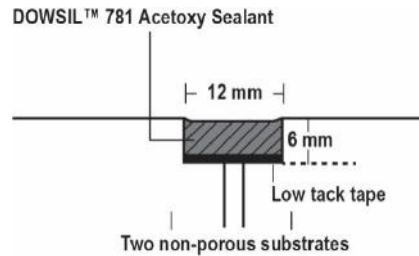
Excess sealant may be cleaned off tools and non-porous surfaces whilst in an uncured state using DOWSIL™ R-40 Universal Cleaner. If sealant is misapplied to porous substrates, it should be left until it is just cured and then removed by peeling, cutting or other mechanical means. Care should be taken not to damage plastic or coated surfaces.

### Joint Design

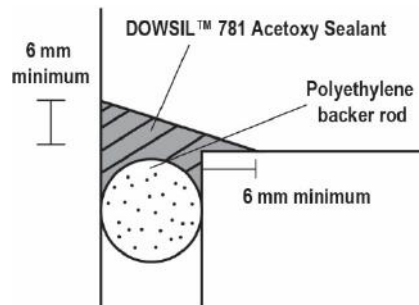
The sealant joint width should be designed to accommodate the movement capability of the sealant. When designing joints using DOWSIL™ 781 Acetoxy Sealant, the minimum width should be 6 mm. For joints between 6–12 mm wide, a seal depth of 6 mm is required. For joints above 12 mm wide, a width to depth ratio of 2:1 should be used. In situations where fillet joints are needed, a minimum of 6 mm sealant bite to each substrate is recommended. For joint dimensions greater than 25 mm, please contact one of our regional service centers for technical assistance.



**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™ 781 Acetoxy Sealant has a usable life of 27 months from the date of production.

**Packaging  
Information**

DOWSIL™ 781 Acetoxy Sealant is supplied in 310 ml cartridges packed in boxes of 12.

**Limitations**

DOWSIL™ 781 Acetoxy Sealant is not recommended for use on porous substrates such as concrete, stone, marble or granite. DOWSIL™ 781 Acetoxy Sealant should not be used in contact with the edge seal of an insulated glazing unit.

Do not use DOWSIL™ 781 Acetoxy 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™ 781 Acetoxy 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 copper, brass and lead. DOWSIL™ 781 Acetoxy Sealant is not recommended for use on submerged joints, or in joints where physical abuse or abrasion is likely to occur.

DOWSIL™ 781 Acetoxy Sealant is not suitable for food contact applications.

DOWSIL™ 781 Acetoxy Sealant has not been designed for use as an aquarium sealant.

DOWSIL™ 781 Acetoxy Sealant is not recommended for structural glazing or insulated glazing 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](http://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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