



## Technical Data Sheet

# DOWSIL™ 784 Silicone Sealant

### **FEATURES & BENEFITS**

- Fungus and mildew resistant
- Good elasticity
- Conforms to ISO 11600-G-20LM
- Resistant to ozone, ultra-violet radiation and temperature extremes

Medium/high modulus acetoxy silicone sealant

### **APPLICATIONS**

- DOWSIL™ 784 Silicone Sealant is a one-part, silicone sealant. It has good adhesion to glass, aluminum and other non-porous construction substrates. It is ideal for use as a weather-sealant in areas that may be subject to high humidity, such as windows in bathrooms and kitchens where mold growth can occur, as it contains a fungicide to prevent mold growth.

### **TYPICAL PROPERTIES**

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

Test <sup>1</sup>	Property	Unit	Result
	Cure system		Acetoxy
	Standard colors		Clear, white, gray, brown, black, aluminum
	Application temperature	°C °F	+5 to +40 +41 to +104
CTM 97B	Specific gravity	g/ml	1.02
CTM 364C	Extrusion rate	g/minute	220
CTM 98B	Skin-over time (23°C or 73°F, 50% R.H.)	minutes	12
CTM 95A	Tack-free time (23°C or 73°F, 50% R.H.)	minutes	20
CTM 663A	Cure rate (23°C or 73°F, 50% R.H.)		
	1 day	mm	2
	3 days	mm	4.0
<b>2mm thickness S2 dumb-bells (ISO 37)</b>			
CTM 137A	E-Modulus 100%	MPa	0.41
CTM 137A	Tensile strength	MPa	1.8
CTM 137A	Elongation at break	%	550
<b>12x12x50mm size T.A. joint (ISO 8339/DIN2-8339)</b>			
CTM 677	E-Modulus 100%	MPa	0.4
CTM 677	E-Modulus 60%	MPa	0.35

## TYPICAL PROPERTIES (Continued)

Test <sup>1</sup>	Property	Unit	Result
CTM 677	Tensile strength	MPa	0.57
CTM 677	Elongation at break	%	200
CTM 99E	Hardness (Shore A)		22
BS5889 Type B	Joint movement capability	%	20

<sup>1</sup>BS: British Standard.

CTM: Corporate Test Method, copies of CTMs are available on request.

DIN: Deutsche Industry Norm.

ISO: International Standardization Organization.

## TECHNICAL SPECIFICATIONS AND STANDARDS

Conforms to ISO 11600-G-20LM. Performance related to mildew and fungus resistance has been tested in accordance with the ISO-Norm 846.

## 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

DOWSIL 784 Silicone Sealant offers good adhesion to most nonporous substrates found in glazing applications. However, due to the wide variety of coatings available, we recommend that substrates be tested for adhesion prior to use. The use of a primer will maximize adhesion of the sealant particularly where cleaning is a problem, for example, mill finished aluminum. For specific advice, please refer to the Primers' Guide or contact one of Dow's Regional Service Centers for technical assistance.

### 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. Spatulas for tooling purposes are available from Dow.

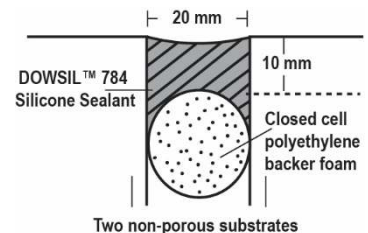
### Clean-up

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 784 Silicone 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.

**Figure 1: Deep joint**



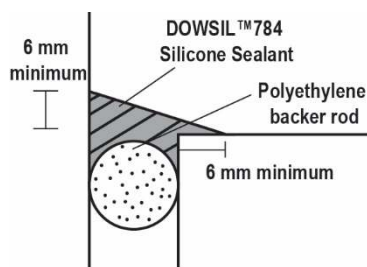
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DOWSIL™ 784 Silicone Sealant

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**Figure 2: 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  
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### **USABLE LIFE AND STORAGE**

When stored in cool, dry conditions below 30°C (86°F) in the original unopened containers, DOWSIL 784 Silicone Sealant has a usable life of 27 months from the date of production.

### **LIMITATIONS**

DOWSIL 784 Silicone Sealant is not recommended for use on porous substrates such as concrete, stone, marble or granite. DOWSIL 784 Silicone Sealant should not be used in contact with the edge seal of an insulated glazed unit.

DOWSIL 784 Silicone Sealant is not recommended for use with certain plastics, for example, PVC-

U where high thermal movement may occur.

Do not use DOWSIL 784 Silicone Sealant on bituminous substrates, substrates based on natural rubber, chloroprene or EPDM or on building materials which might bleed oils, plasticizers or solvents. Do not use DOWSIL 784 Silicone 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™ 817 High Modulus Adhesive should be used for this application. DOWSIL 784 Silicone Sealant is not recommended for use on submerged joints or in joints where physical abuse or abrasion is likely to occur.

DOWSIL 784 Silicone Sealant must not be used for construction or repair of aquarium systems.

DOWSIL 784 Silicone Sealant should not be used in conjunction with laminated glass.

DOWSIL 784 Silicone 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, [www.consumer.dow.com](http://www.consumer.dow.com) or consult your local Dow representative.

### **LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY**

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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