



Technical Data Sheet

DOWSIL™ 796 Neutral Silicone

Neutral silicone sealant

Features & Benefits

- Good unprimed adhesion to a variety of substrates
- Low modulus, high elasticity
- 100% silicone sealant
- Neutral cure
- Low odor
- Conforms to ISO 11600-F&G-25LM
- Resistant to ozone, ultra-violet radiation and temperature extremes

Applications

DOWSIL™ 796 Neutral Silicone is a one-part, low modulus, neutral curing silicone sealant specifically developed for the sealing of PVC-U, glass, glazed surfaces and brickwork. It is very popular for perimeter sealing applications of windows and doors.

Typical Properties

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

Test ¹	Property	Unit	Result
	Cure system		Alkoxy
	Application temperature	°C	+5 to +40
		°F	+41 to +104
CTM 97B	Specific gravity		1.52
CTM 364C	Extrusion rate	g/minute	210
CTM 98B	Skin-over time (23°C or 73°F, 50% R.H.)	minutes	15
CTM 95A	Tack-free time (23°C or 73°F, 50% R.H.)	minutes	35
CTM 663A	Cure rate (23°C or 73°F, 50% R.H.)		
	1 day	mm	2.0
	3 days	mm	3.5
2 mm thickness S2 dumb-bells (ISO² 37/DIN³ 53 504)			
CTM 137A	E-Modulus 100%	MPa	0.45
CTM 137A	Tensile strength	MPa	1.8
CTM 137A	Elongation at break	%	700

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

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Typical Properties (Cont.)

Test	Property	Unit	Result
	12x12x50 mm size T.A. joint (ISO 8339/DIN 2-8339)		Alkoxy
CTM 677	E-Modulus 100%	MPa	0.35
CTM 677	Tensile strength	MPa	0.75
CTM 677	Elongation at break	%	380
CTM 99E	Hardness (Shore A)		30
ISO 7389	Elastic recovery %	%	> 90
ISO 9047	Joint movement capability %	%	± 25

Technical Specifications and Standards

- Conforms to SNJF Vitrage et Façade Category 1
- ISO 11600-F&G-25LM
- EN 15651 - CE MARK



How to Use

Surface Preparation

Ensure that surfaces to be sealed are clean, dry, sound and free from frost. Clean all joints of release agents, water repellents, laitance, dust, dirt, old sealants and other contaminants which could impair adhesion. Non-porous surfaces should be cleaned and degreased by wiping with a suitable solvent such as DOWSIL™ R-40 Universal Cleaner on an oil and lint-free cloth before application of sealant. Porous substrates should be mechanically cleaned using a steel brush, sanding disc or any similar means.

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

No primer is required for PVC-U and for most common construction substrates including brick. However, a test placement prior to general use is always recommended.

Back-up Materials

Closed cell polyethylene backer rod is recommended as a back-up material to provide back pressure and avoid three sided adhesion that limits sealant movement capability. Low tack polyethylene tape should be used in joints too shallow to allow the use of backer rod.

How to Use (Cont.) 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. 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™ 796 Neutral Silicone, 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. For joint dimensions greater than 25 mm, please contact your regional service center for technical assistance. In situations where fillet joints are needed, a minimum of 6 mm sealant bite to each substrate is recommended.

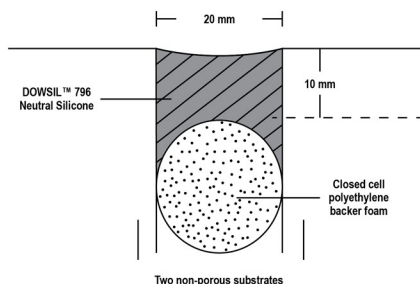


Figure 1: Deep joint.

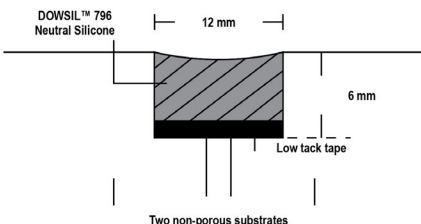


Figure 2: Shallow joint.

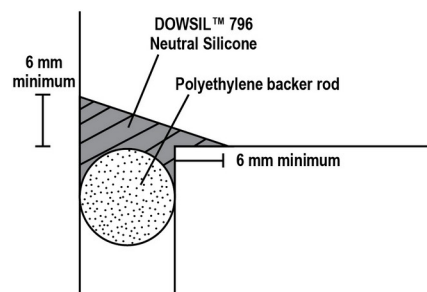


Figure 3: Fillet joint.

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 CONSUMER.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 30°C (86°F) in the original unopened containers, DOWSIL™ 796 Neutral Silicone has a usable life of 12 months from the date of production.

Limitations

DOWSIL™ 796 Neutral Silicone is not recommended for structural glazing or insulated glazing applications. Do not use DOWSIL™ 796 Neutral Silicone on bituminous substrates, substrates based on natural rubber, chloroprene or EPDM or on building materials which might bleed oils, plasticisers or solvents. Do not use DOWSIL™ 796 Neutral Silicone in a totally confined space because the sealant requires atmospheric moisture to cure. It is not recommended for use on submerged joints, or in joints where physical abuse or abrasion are likely to occur. Bleeding can occur on porous substrates, such as concrete, marbles, granites and other natural stones. Specific testing should be carried out on sensitive substrates.

DOWSIL™ 796 Neutral Silicone is not suitable for food contact applications.

It is recommended that DOWSIL™ 796 Neutral Silicone is not applied to surfaces that are below 5°C (41°F) as it is impossible to guarantee a dry surface at these temperatures.

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, consumer.dow.com or consult your local Dow representative.

consumer.dow.com

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.

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