



Technical Data Sheet

DOWSIL™ 798 Cold and Cleanroom Silicone Sealant

Low modulus neutral silicone sealant

Features & Benefits

- Neutral alkoxy cure system
- 100% silicone polymer
- Mildew resistant
- Bacteriostatic sealant
- Low modulus, high elasticity
- Low odor
- Conforms to ISO 11600-F&G-25LM
- Resistant to ozone, ultra-violet radiation and temperature extremes
- Tested according to FDA regulations Code CFR 21 § 177.2600

Applications

- DOWSIL™ 798 Cold and Cleanroom Silicone Sealant is specifically formulated for sealing applications in critical environments, such as, but not limited to hospitals or medical premises, cleanrooms, datarooms, coldrooms, refrigeration or food-related surroundings. It is a one-part neutral curing silicone sealant, suitable for use in either interior or exterior applications where joints are susceptible to mildew. It is a bacteriostatic sealant, better protected against the bacterial growth. DOWSIL™ 798 Cold and Cleanroom Silicone Sealant offers good adhesion to most porous and non-porous surfaces including masonry, tiles, aluminum, PVC-U, polyacrylate, polycarbonate, glass and glazed surfaces.

Typical Properties

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

Test	Property	Unit	Result
	Cure system		Neutral
	Application temperature	°C °F	+5 to +40 +41 to +104
CTM197B	Specific gravity	g/ml	1.51
CTM364C	Extrusion rate	g/minute	200
CTM98B	Skin-over time (23°C or 73°F, 50% R.H.)	minutes	20
CTM95A	Tack-free time (23°C or 73°F, 50% R.H.)	minutes	30
CTM663A	Cure rate (23°C or 73°F, 50% R.H.)		
	1 day	mm	2.0
	3 days	mm	4.0

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

Typical Properties (Cont.)

Test	Property	Unit	Result
2 mm thickness S2 dumb-bells (ISO 37)			
CTM137A	E-Modulus 100%	MPa	0.45
CTM137A	Tensile strength	MPa	1.9
CTM137A	Elongation at break	%	700
12 x 12 x 50 mm size T.A. joint (ISO 8339/DIN²2-8339)			
CTM677	E-Modulus 100%	MPa	0.35
CTM677	Tensile strength	MPa	0.75
CTM677	Elongation at break	%	380
CTM99E	Hardness (Shore A)		29
	Elastic recovery	%	> 90
ISO ³ 9047	Joint movement capability		25

2. DIN: Deutsche Industrie Norm.
3. ISO: International Standardisation Organisation.

Technical Specifications and Standards

- Conforms to SNJF (Facade – 25E)
- Non-sensitive to bacteria according to ISO 22196:2007 for Methicillin Resistant Staphylococcus aureus, Escherichia Coli and Salmonella enteritidis.
- Non-sensitive to bacteria according to NF EN ISO 846 – Method C for Pseudomonas aeruginosa.
- Non-sensitive to mould according to NF EN ISO 846 – Method A and B for Aspergillus niger, Penicillium pinophilum, Paecilomyces variotii, Trichoderma virens, Chaetomium globosum.



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 non-porous 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. Porous surfaces such as concrete, brickwork, and mortar must be mechanically cleaned using a steel brush, sanding disc or other mechanical 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.

How to Use (Cont.)

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 our Primer Guide or contact one of our regional service centers for technical assistance.

Back-up Materials

When back-up material is required, closed cell polyethylene backer rod is recommended. Low tack polyethylene tape should be used in joints too shallow to allow the use of 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.

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 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™ 798 Cold and Cleanroom 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. For joint dimensions greater than 25 mm, please contact one of the regional service centers for technical assistance.

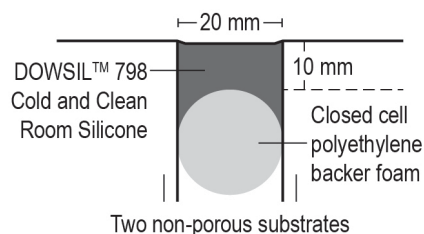


Figure 1: Deep joint.

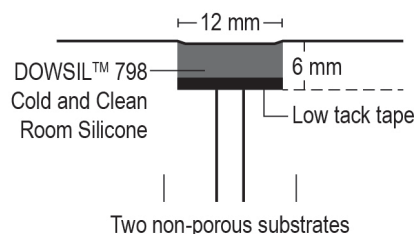


Figure 2: Shallow joint.

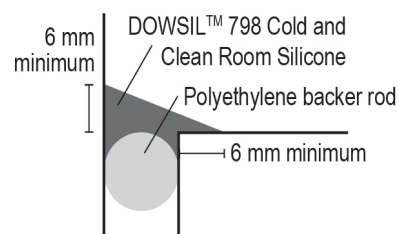


Figure 3: Fillet joint.

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™ 798 Cold and Cleanroom Silicone Sealant has a usable life of 12 months from the date of production.

Packaging Information

DOWSIL™ 798 Cold and Cleanroom Silicone Sealant is supplied in 310 ml cartridges, packed in boxes of 12.

Limitations

Do not use DOWSIL™ 798 Cold and Cleanroom Silicone 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™ 798 Cold and Cleanroom Silicone Sealant in a totally confined space because the sealant requires atmospheric moisture to cure.

DOWSIL™ 798 Cold and Cleanroom Silicone Sealant is not recommended for use on submerged joints or in joints where physical abuse or abrasion is likely to occur. Bleeding can occur on porous substrates such as concrete, marble, granite or other natural stones. On sensitive substrates, specific testing should be carried out. DOWSIL™ 798 Cold and Cleanroom 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, 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

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

