

DOWSIL™ 798 Cold and Cleanroom Silicone Sealant

Product Description

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, data rooms, cold rooms, refrigeration or food-related surroundings. It is a low modulus, 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 nonporous surfaces including masonry, tiles, aluminum, PVC-U, polyacrylate, polycarbonate, glass and glazed surfaces.

Features

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

Applications

- Sealing applications in critical environments
- Sealing in interior
- Sealing in exterior

Physical information

	Value
Application temperature	+5°C to +40°C
Specific gravity	1.51 g/ml CTM197B
Extrusion rate	200 g/min CTM364C
Skin-over time (23°C or 73°F, 50% R.H.)	20 min CTM98B
Tack-free time (23°C or 73°F, 50% R.H.)	30 min' CTM95A

Premier Sealant Systems Ltd.

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Registered in Cardiff No. 3000843

Cure rate (23°C or 73°F, 50% R.H.)	CTM663A
1 day	2.0 mm
3 days	4.0 mm
2 mm thickness S2 dumbbells (ISO 37)	
E-Modulus 100%	0.45 MPa CTM137A
Tensile strength	1.9 MPa CTM137A
Elongation at break	700% CTM137A
12 x 12 x 50 mm size T.A. joint (ISO 8339/DIN22-8339)	
E-Modulus 100%	0.35 MPa CTM677
Tensile strength	0.75 MPa CTM677
Elongation at break	380% CTM677
Hardness (Shore A)	29 CTM99E
Elastic recovery	>90%
Joint movement capability	25 ISO ³ 9047

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

2. DIN: Deutsche Industrie Norm

3. ISO: International Standardisation .Organisation

Technica 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.

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Installation

Preparatory Work:

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.

CAUTION:

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.

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 us for technical assistance.

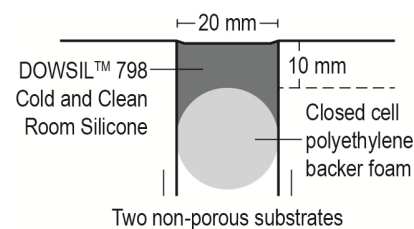


Figure 1: Deep joint

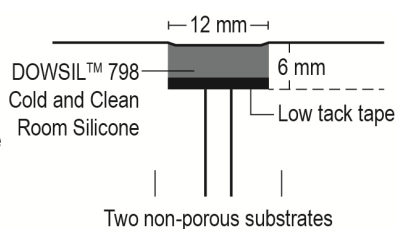


Figure 2: Shallow joint

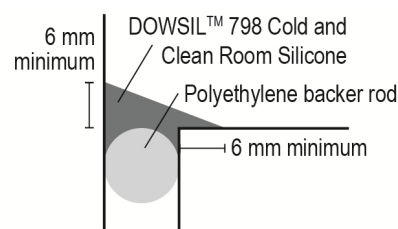


Figure 3: Fillet Joint

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.

Storage

When stored in cool, dry conditions below 30°C in the original unopened containers, DOWSIL™ 798 Cold and Cleanroom Silicone Sealant has a usable life of 12 months from the date of production.

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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.

Disposal

Dispose in accordance with all local regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

Please note: The above technical information is given as a guide and is based on recent test data obtained under laboratory conditions. Materials should be fully tested by the end user to establish suitability of the product for the intended application. August 2024

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