



Tosseal™ 83

One Part Mildew Resistant Silicone Sealant

Product Description

TOSSEAL 83 is a one component silicone sealant which resists mildew even under prolonged exposure to high temperatures and humidity. This product cures to a durable high modulus silicone rubber sealant on exposure to atmospheric moisture at room temperature. TOSSEAL 83 effectively seals around bathtubs, sinks, showers, kitchen and bathroom plumbing fixtures, and can be used for sealing ceramic tile. It provides lasting flexibility and watertight adhesion to most ceramics, glasses, plastics and metals. TOSSEAL 83 satisfies JIS A 5758 code regulations (F,G-30SLM), a test of durability of construction sealing materials under extreme performance requirement.

Key Features and Typical Benefits

- One component, ready-to-use sealant
- Room temperature cure
- Neutral cure (ketoxime cure)
- No acetoxy odor during cure
- Easy gunnability over a wide temperature range
- Superior mildew resistance
- Maintains good flexibility
- Excellent adhesion to many materials

Potential Applications

- Sealing for ceramic tile, bathtubs, sinks, showers, bathroom and kitchen plumbing fixtures
- Interior sealing in building and housing
- Sealing in pre-fabricated housing, freight containers, and cold storage room

Typical Uncured Properties

Test Method : JIS A 1439

		TOSSEAL 83
Consistency		Paste
Specific Gravity	(23°C)	1.03
Extrudability	(5°C) sec	5
Tack-Free Time	(23°C) min	10
Slump	mm	0

Typical Cured Properties

Test Method : JIS A 1439

		TOSSEAL 83
50% Modulus	MPa { kgfcm ² }	0.39 {4.0}
Max Tensile Strength	MPa { kgfcm ² }	0.81 {8.3}
Elongation	%	170

TEST CONDITIONS	Substrate	: H-shaped, anodized aluminum
	Primer	: TOSPRIME D
	Cure time	: 14 days at 23°C/50% relative humidity : 14 days at 30°C/50% relative humidity



Mildew Resistant Properties

The mildew resistance properties of TOSSEAL 83 (anti-mildew type) and TOSSEAL 381 (general purpose type) were compared using result of the JIS Z 2911 fungus resistance test.

Under JIS Z 2911, spores from the following mildews were applied to sealant samples and cultivated for 28 days at 28°C to confirm the growth of any mildew. Test results are given in the chart below.

Aspergillus niger NBRC 105649

Paecilomyces variotii NBRC 33284

Chaetomium globosum NBRC 6347

Penicillium pinophilum NBRC 33285

Trichoderma virens NBRC 6355

JIS Z 2911 Test Results

SEALANT	SEALANT TREATMENT BEFORE TESTING	TEST RESULTS*
TOSSEAL 83 silicone (Anti-mildew type)	Control	0
	Immersed in 50°C water for 7 days	0
TOSSEAL 381 (General Purpose type)	Control	4
	Immersed in 50°C water for 7 days	4

*TEST RESULTS	0	EXCELLENT (no mildew growth)
	4	POOR (mildew growth 50-100% of specimen area)

Application Instructions

• SURFACE PREPARATION

Substrate surface should be thoroughly cleaned with a suitable solvent such as alcohol, xylene, or methyl ethyl ketone (MEK). Do not use soap, detergent or water. Wipe the surface dry. Sealant will not properly adhere to a wet substrate.

• MASKING

To obtain a neat sealant line, use masking tape to cover areas adjacent to any joints before priming.

• PRIMER

A preliminary adhesion test of sealant on the substrate is recommended to ascertain proper adhesion. For difficult-to-bond substrates, use of a primer (TOSPRIME C, D or E) is suggested. Please refer to the chart on page 3 for proper primer selection. Allow primer to dry thoroughly before proceeding.

• BACK-UP MATERIAL

Do not apply sealant in direct contact with organic rubber such as chloroprene or EPT etc. Rubber closed to back-up materials may stain the silicone sealant.

• APPLYING AND TOOLING SEALANT

Cut nozzle to desired bead size, break the membrane film completely and extrude sealant in the joint. Tool immediately, within 5 minutes of application, with a spatula to spread the sealant against the back-up material and joint surfaces. Remove masking tape immediately after tooling. Sealant will begin to skin on the exposed surface in about 10 minutes and cure will progress inward.

Notes

- TOSSEAL 83 may yellow slightly after extended exposure to sunlight or UV light.
- Alcohol is a suitable solvent for removing stains from sealant.



Handling and Safety

- Wear eye protection when handling uncured sealant as it can irritate eyes. In case of eye contact, immediately flush eyes well with water and contact a physician.
- This product releases methyl ethyl ketoxime vapors as a by-product of cure. Maintain adequate ventilation in the work place at all times.
- Extended contact with the skin may cause irritation and should be avoided.
- Not for food contact use.

Storage

- Store in a cool, dry, dark place.
- Keep out of reach of children.

Packaging

- 333ml cartridge available in cases of 50 (5 boxes of 10 cartridges)

Colors

- Available in 4 colors (Color suffix)
White (W)
Ivory(W2)
Light ivory (W3)
Dark ivory (W4)

Primer Selection

TOSSEAL primers; TOSPRIME C, D and E have been specially prepared to ensure the durability and bonding strength of TOSSEAL 83 to various substrates. The chart below shows which primer is most compatible with the substrate.

PRIMER	SUBSTRATE
TOSPRIME C	Mortar, Masonry
TOSPRIME D	Glass, Metal, Ceramic
TOSPRIME E	Painted metal, Painted surfaces

Caution: Primers contain solvents which are highly flammable and toxic. Observe all cautions. Storage, mixing and use must be done in a well ventilated area away from any source of ignition such as heat, sparks, and flame.

Do not use on marble without primer because of migration. TOSPRIME C is recommended.

Limitations

Customers must evaluate MPM products and make their own determination as to fitness of use in their particular applications.

Patent Status

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