

Technical Data Sheet

EVT Natural Stone HPM



Product description Elastic single-component silicone sealant for indoor and outdoor use in contact to marble and natural stone, with 25% maximum movement tolerance

Curing system neutral curing

Special properties

- elastic silicone-based sealant
- no plasticizer migration on absorbent substrates
- optimized tooling properties
- low odour formulation
- ageing and weather-resistant, good UV resistance
- compatible with paints
- good adhesion also on metals, compatible with copper
- with fungicide

Fields of application

For sealing joints and connecting joints in contact to marble and natural stone.

EVT Natural Stone HPM must not be used in aquarium construction, as mirror adhesive and in areas with direct food contact.

In underwater applications, especially accurate tooling is necessary (preparation of substrate; often primer necessary). Underwater joints must be checked in suitable time intervals and have to be reworked if necessary.

Not suited for plastics with in general poor adhesion to silicones (eg PE, PP, PET).

Yield

Meters of joint per 310 ml cartridge for the following joint dimensions:

5 x 5 mmapprox. 12.0 m

10 x 10 mmapprox. 3.0 m

Colours and packaging

Standard colours: transparent, white (other colors available on request)

Packaging: 310 ml cartridges; 400 ml and 600 ml film bags; other package sizes available on request

Usage instructions

Substrate pretreatment

The substrate must be dry, firm, and free of dust and grease (clean with isopropanol, if necessary). Porous substrates (e.g. concrete, plasterboard and untreated wood) must be primed. Before primer application, remove any cement slurry, mold release agents or impregnations. In renovation projects, old sealant, remains of paint and loose material must be fully removed. On coated substrates (paints, lacquers), compatibility to the sealant must be tested.

The joint must always be provided with a suitable, correctly dimensioned joint backing (e.g. PE cord, rock wool) to prevent adhesion on three faces. To avoid contamination and to achieve a precise joint, we recommend masking the joint edges with adhesive tape before primer application and filling - especially when working with marble / natural stone.

Joint dimensions

Joint dimensions should be at least 5 x 5 mm for indoor and 10 x 8 mm (width x depth) for outdoor applications. With increasing joint width (up to 30 mm), joint depth should be roughly half the joint width. Make sure that triangular bevels have uniform sides of equal length with at least 7 mm bonding surface on each side.

Tooling

After applying the sealant with a suitable manual, battery-powered or pneumatic caulking gun, the sealant can be smoothed in the joint with water or with a neutral, non-staining water-based smoothing agent and a suitable tool (e.g. jointing trowel). Smoothing is not only recommended for optical reasons, but also establishes close contact and good adhesion to the substrate. Remove excess smoothing agent (risk of schlieren). Any adhesive tape used should be removed immediately after smoothing. We recommend the FS caulking gun and FS jointing trowel.

Important remarks

The function of the sealant can only be guaranteed if correctly applied in accordance with the technical recommendations given in this data sheet and in related standards. Sealant application in situations with strongly fluctuating temperatures (premature stressing of the sealant) must be avoided.

The sealant is compatible with many paints and lacquers. Owing to the large number of different coating systems on the market, own tests concerning adhesion and compatibility have to be performed prior to application. For example, it is known that alkyd resin based paints may give discolouration in combination with neutral curing silicones. The sealant is not overpaintable,

Especially on powder-coated substrates, adhesion has to be tested carefully, since it can be affected negatively depending on the coating used (may even vary for different colours of the same brand of powder coating).

In contact with bituminous, tar- or plasticizer-releasing substrates (eg EPDM, neoprene, butyl), discolouration and/or loss of adhesion may occur.

Good ventilation must be provided during application and curing to allow curing by-products to evaporate. Low temperatures, low humidities and joint depths above 15 mm can retard skin formation and curing significantly.

Exposure to liquid (eg acid-based cleaning agents, strongly colored liquids) or gaseous chemicals (eg. tobacco smoke) for longer periods can result in discoloration of the product, especially for light colors (white). In general, the mechanical properties of the sealant are not adversely affected.

Products with fungicide give additional protection against mould to the joint. But, they can not supersede good housekeeping: It's essential to keep the joint clean, dry and free from substances, that may serve as nutrition medium (eg soap residues, skin scales).

Technical Data

Density (DIN EN ISO 2811-1)	1,03 ± 0,03 g/cm ³
Skin forming time (23°C/50% r.F)	app. 15 min
Penetration (DIN 51579 / 5 sec.)	145 ± 30 1/10 mm
Slump (ISO 7390)	≤ 2 mm
Cure rate (within first 24 hours)	app. 3 mm
Shore A hardness (DIN 53505)	20 ± 5 units
Tensile strength (ISO 8339-A, 100%)	app. 0,55 N/mm ²
Maximum movement tolerance	25 %
Volume loss (DIN EN ISO 10563)	max. 4 %
Application temperature (sealant & substrate)	+5 to +35°C
Temperature stability range (fully cured sealant)	-40 to +150°C
Shelf life (originally closed packages)	18 months (+5 to +35°C, 50% r.H.)

Rate of curing depends on temperature, humidity and depth of substrate. The data given refer to tests at standard conditions (23°C / 50% rel. humidity). Under these conditions, a 10 x 10 mm joint will cure in 8 to 14 days. Low temperature, low humidity and joint depth above 15 mm will retard skin formation and curing significantly.

Data given were determined shortly after production, and may slightly vary with increasing age of product and for different colours. They are not meant for specification purposes.

For safety data, see Safety Data Sheet *Take all measures resulting from the safety data sheet and hazard markings to prevent accidents and protect health.*

Information given in this data sheet is based on the current state of knowledge. This does not exempt the purchaser from carrying out his own careful inspections of incoming goods in individual cases. We reserve the right to make changes to the product data in the course of technical progress or due to operationally related further development. Owing to factors beyond our control during application, recommendations given in this data sheet require tests and experiments by the customer. Our recommendations do not exempt the customer from the obligation to check any infringements of third-party rights himself and eliminate them if necessary. The suggestions for product use are not equivalent to a warranty of its suitability for the recommended purpose.

Each new release of this data sheet supersedes the previous one.



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