

StrataShield External PU Mastic

Polyurethane sealant for external use

Product overview

StrataShield External PU Mastic is a single component, elastomer polyurethane sealant for use on expansion joints and other external areas.

Technical characteristics: pre-application

Properties	Unit / Description
Chemical description	Polyurethane sealant medium modulus
Physical state	Paste
Skin formation time (23°C, 50% RH)	Approx 60 mins
Rate of cure (24hr, 23°C, 50% RH)	≥3mm
Resistance to flow (23°C, 50°C)	≤ 3mm
Shrinkage	≤ 10%
Temperature of application	+5°C ≤ T ≤ +40°C
Specific gravity	1.3 g/cm ³ 0.95 g/cm ³ (20°C)
VOC content (g/L i %)	≤ 80 g/l
Pot life (100g, 23°C)	2 hours (skin formation)
Storage	Store in a well-ventilated room at a maximum temperature of 30°C.
Use before	Up to 12 months from production date, in original unopened packaging, protected from humidity.
Packaging	600ml sausage packs 20 units per box 50 boxes per pallet
Available colours	Grey / White (other colours upon request)

Consumption (applicable joint length in m)

Joint depth	Joint width				
	4 mm	6 mm	8 mm	12 mm	20 mm
4 mm	19	13	9.7	6.5	3.8
6 mm		8.6	6.5	4.3	2.6
8 mm			4.8	3.2	1.9
10 mm				2.6	1.6

Chemical resistance

This information is given as indication in case of accidental contact with chemical products;

Chemical	Resistance
Acetic acid 10% / 25%	Medium
Hydrochloric acid 10%	Good
Ammonia 22%	Good
Acetone	Medium
Ethyle acetate	Medium
Lactic acid 50%	None
Nitric acid 10%	None
Sulfuric acid 5%	Medium
Orthophosphoric acid 84%	Good
2 Butoxy ethanol	Medium
Saltwater	Good
Bleach / E spirit / White spirit	Good
Hydrogen peroxide 33vol	Good
Ethanol 20%	Good
Ehtanol 100%	Medium
Ethyl 2 hexanol	Medium
Gasoline / Paraffin / Mineral Oil	Good
Octanol	None
37% formic aldehyde solution	Good
Soda solution 10% / 50%	None
Tricholorethylen	Medium

Substrate preparation

The surface must be clean, dry and free of dust, grease or residues. On concrete, wait first for it to cure out and stabilise (minimum 4 weeks). A preliminary test is necessary on siliconised tiles. Always check product compatibility with the surface in terms of adherence, chemical compatibility and staining (make a pre-test if required).

Correctly size the joint according to the predictable movements and to the capacity of movement. The width of the joint must be between 6 and 40 mm, including all vertical joints. For joints of 10 mm and smaller, the depth of the joint must be equal to its width. For joint widths greater than 10 mm respect a depth to width ratio of 2:1.

Technical characteristics: cured joint

Properties	Unit / Description
Movement capability	25%
Max elongation	>250%
Modulus	a 100% 0.25 - 0.30
Shore hardness A	MEL 022 25 - 30
Service temperature	-20°C ≤ T ≤ +80°C
UV resistance	Because of the sensitivity of polyurethanes to UV, clear colours may change over time. This discolouration does not affect the mechanical properties of the cured product.

Application guidelines

If necessary, apply in a thin layer a polyurethane-type primer. We recommend that a primer is used on mortars and similar materials with smooth surfaces. Once the primer has cured, use (press) a flexible backing rod that will not adhere to the sealant. The bottom of the backing rod should not show notches likely to cause bubbling. Protect the edges of the joint by adhesive tape for a better finish.

Apply the sealant in one layer for joints of small width, and in three layers for joints of large width (the first two onto the edges of the joint and the third onto the bottom). Smooth with water free of additives. Press the sealant correctly against the edges and the bottom of the joint while avoiding any air bubbles being formed. Remove the masking tape.

Cleaning and maintenance

Clean excess material with white spirit before it dries and cures. Excess dried sealant can be removed by gentle scraping.

The product can be painted over later, once it has fully cured. Use water based paint (acrylic or vinyl) but test first. Please also be aware that joint movement over time can lead to cracking of any subsequent paint.

Health and safety

StrataShield External PU Mastic contains isocyanates. Always follow the instructions provided in the material safety data sheet and take the precautions described there. As a general rule, suitable ventilation must be ensured during application and all ignition sources must be avoided. Avoid contact with skin and, in the event of contact with eyes, clean immediately with water and obtain medical attention.

This product is intended for professional use only and should only be used in the way described on this technical datasheet.

Further information

The information contained in this datasheet, along with any advice provided (either written or verbal) through testing are based on our experience and do not constitute any product guarantee for the installer.

We recommend that all of the information provided is carefully studied before proceeding with application, and strongly advise that suitable tests are carried out onsite before application in order to determine the suitability and compatibility for the specific project.

The application, use and processing of our products are beyond our control, and therefore under the exclusive responsibility of the installer. As a result, the installer will be solely responsible for any damage derived from the partial or complete disregard of our guidance or the general mis-use of any of our materials.