SWELLSEAL® Mastic Data Sheet

Caulk-applied, one-component, hydro-swelling mastic for sealing smooth and rough construction joints and pipe penetrations

Product Description

SWELLSEAL® Mastic is a one-component, polyurethane-based, solvent free, hydroswelling mastic, supplied in cartridges and aluminium sausages, for the sealing of construction joints and around pipe penetrations. SWELLSEAL® Mastic cures and swells in the presence of moisture. Curing time depends on temperature and humidity conditions, i.e. curing time will reduce if RH and Celsius degrees are higher. SWELLSEAL® Mastic will become firm in 24-36 hours. Performance is not affected by the curing time.

Product Advantages

- Solvent free.
- SWELLSEAL® Mastic can be applied to concrete, PVC, HDPE, steel, etc.
- The excellent filling and adhesion properties of the product provide a first line filling of cracks and voids, even on lightly humid, smooth or rough surfaces.
- In contact with water SWELLSEAL® Mastic will expand to about 350% of it's original volume.
- Flexible system, which adapts to the irregular surface of the substrate.
- Easy application with standard caulking gun.
- Durable: will exceed the construction's life.
- Has a good all-round chemical resistance(*) and
- can resist petroleum, mineral and vegetable oils and greases.
- SWELLSEAL® Mastic is approved for contact with potable water.

(*) For chemical resistance please contact your local GCP representative.

Field of Application

SWELLSEAL® Mastic is used for:

- Sealing rough and smooth construction joints of in-situ cast concrete.
- Sealing joints between pre-cast segments (e.g. manholes, box culverts, cable ducts and pipes).
- Sealing around steel H-beams.
- Sealing between rough surfaces (e.g. slurry walls) and concrete slabs.
- Bonding strip sealants to rough surfaces.

- Sealing around bolt spacers and void formers.
- On secant pile walls.

Application

1. Precautions

SWELLSEAL® Mastic is preferably applied onto a dust-free concrete surface. The surface can be rough or smooth, moist or dry.

Installation during heavy rain or in prolonged contact with water results in a premature swelling of the strip, which should be avoided.

Preferably the mastic should cure for 24 hours before pouring concrete.

Despite the fact that SWELLSEAL® Mastic has a very good adherence to the concrete, care must be taken, as with all products of this type, not to pour the concrete directly on the product to avoid damaging of the applied sealant.

2. Application Method

For 310cc Cartridges

Break the moisture-proofing aluminium foil on the top of the cartridge and remove the seamer from the bottom. Cut the nozzles diagonally at the appropriate position. Place the cartridge into caulking gun.

For 600cc Sausages

Put the sausage in the empty tube of the caulking gun and cut 1cm off the top of the sausage. Close the tube and install the nozzle. Cut the nozzle diagonally at the appropriate position. SWELLSEAL® Mastic is applied with a caulking gun in an uninterrupted band (minimum 10mm wide and high), in the middle of the joint or prefab element. Concrete cover should be at least 7cm on both sides, in order to avoid cracks from the expansion pressure of swelling SWELLSEAL® Mastic.

Storage

Minimum 12 months in a dry place at temperatures between 5°C and 30°C.
See shelf life information on the packaging.

Packaging

310ml Cartridges	600ml Sausages
12 per cardboard box	12 per cardboard box
1 pallet = 75 cardboard boxes	1 pallet = 40 cardboard boxes
Weight per cartridge • 0.55kg gross • 0.50kg net	Weight per sausage • 0.99kg gross • 0.90kg net

Accessories

To be ordered separately

- Skeleton caulking gun for cartridges 310mL.
- Caulking gun for sausages 600mL closed tube.
- Nozzle for caulking gun 600mm closed tube.

Consumption

The consumption of SWELLSEAL® Mastic per linear metre depends on the quality of the surface of the concrete.

NOZZLE DIAMETER	LENGTH (CARTRIDGE)	LENGTH (SAUSAGE)
3mm	20 - 25m	40 - 50m
6mm	8 - 10m	16 - 20m
8mm	4 - 5m	8 - 10m
10mm	Approx. 3m	Approx. 6m

Appearance

Pasty during application and rubbery after curing. Colour: white.

Health & Safety

For full information consult the relevant Material Safety Data Sheet.

Technical Data / Properties

PROPERTY	VALUE	NORM
Solids	100%	Test DNC
UNCURED		
Consistency	Gel / Paste	Test DNC
Density (at 20ºC)	Approx. 1.45kg / dm^3	DIN 53504
Slump in Vertical Application	< 5mm (average 3mm)	Boeing test
Hand Dry (at 20ºC and 60% rel. humidity)	12h	Test DNC
Flash Point	> 130ºC	Pensky-Martens method
CURED (7 DAYS AT 25ºC, 10 MM THICK)		
Elongation at Break	Approx. 625%	DIN 53504
Tensile Strength	Approx. 2.2N / mm^2	DIN 53504
Resistance to Hydrostatic Pressure	Up to 150 metres of water column	Test DNC
Swelling Capacity in Contact with Water	Swells to approx. 350% of its original dry volume	Test report KUL University

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