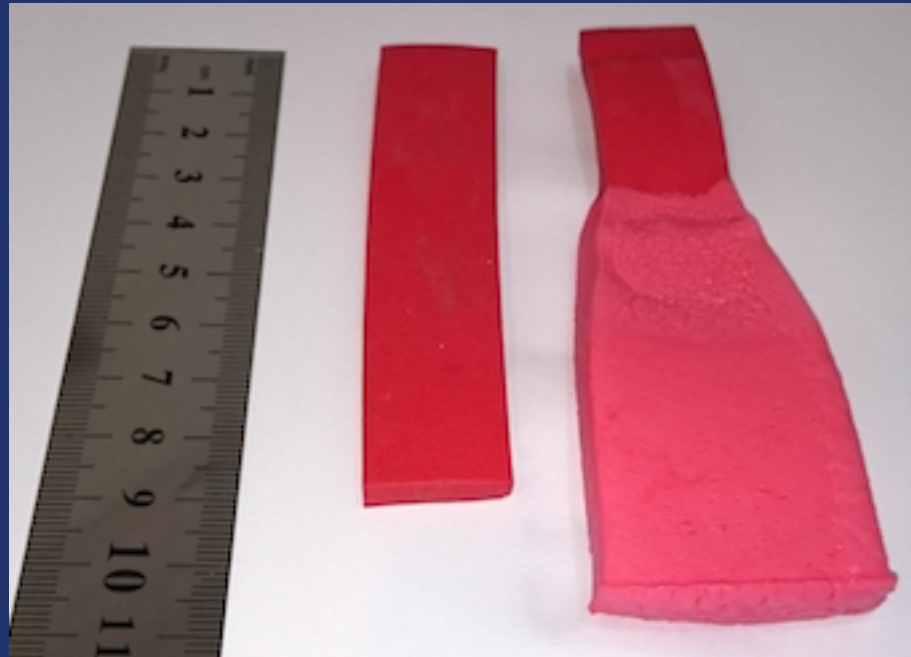


VELOSIT® WS 804

Swellable Thermoplastic Waterstop for Construction Joints

5 Bar
Water
Resistance
EN 12390-8



Application fields

VELOSIT WS 804 is a water swellable waterstop manufactured from a blend of proprietary thermoplastics and swelling agents compounded to produce a re-swellable waterstop of unique swelling ability. VELOSIT WS 804's delayed swellability makes it suitable to seal construction joints that will be exposed to rain or water for a few days prior to concreting or joining of pre-cast segments. Typical application fields include:

- Waterproofing of construction joints between pours
- Waterproofing of saw cut joints
- Waterproofing of pipe penetrations
- Waterproofing of wall/slab joints

Properties

VELOSIT WS 804 thermoplastic waterstops gradually swell when in contact with water.

VELOSIT WS 804 is easily nailed to the existing hardened concrete prior to pouring of the next fresh concrete.

VELOSIT WS 804 exhibits unique properties such as:

- 450 % swelling capacity; fully reversible for an unlimited number of cycles
- Dimensionally stable; does not wash-out like Bentonite waterstops
- Delayed swelling; volume increase starts several hours after water contact
- Swelling pressure resistant to 5 bars (73 psi) hydrostatic water pressures (up to 50 m (160 ft.) acc. to EN 12390-8)
- Extremely flexible: takes the shape of undulations in underlying concrete.
- Reduced height reduces pocketing on sides
- Delayed swellability of 10 to 21 days (depending on temperature) makes it ideal for construction during the rainy season or where repetitive water curing of pre-cast units might be required.
- Colour (Red or Blue) makes it clearly visible

Application

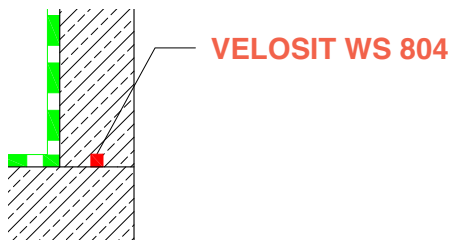
1.) Substrate preparation

VELOSIT WS 804 is designed to seal construction joints in reinforced concrete against water passage.

Remove all separating and bond-breaking substances from hardened concrete (eg. foundation and slab). Surface should be as level as possible with a minimum load bearing capacity of 15 MPa (2175 psi). Deep surface defects must be levelled off with a shrinkage-compensated, structural grade repair mortar to a smooth finish such as VELOSIT RM 202.

2.) Processing

Due to its swelling pressure VELOSIT WS 804 must be installed minimum 45 mm (1&3/4") from the edge. Do not use VELOSIT WS 804 in concrete sections smaller than 100 mm.



Fixing with nails: VELOSIT WS 804 can be nailed every 15 cm (6") to the prepared hardened concrete section. Use a power-actuated nail gun such as Hilti DX 76 to firmly staple VELOSIT WS 804 into place.

Cut overlaps, crossings or terminations of the waterstop in a 45° angle and ensure no gaps exist. Do not allow for any gaps exceeding 4 mm below or on the sides of VELOSIT WS 804 as this may significantly reduce the watertightness of the joint.

Plastic pipes can only be treated with VELOSIT WS 804 up to 50 mm dia (2") carrying cold water and

up to 25 mm (1") for pipes carrying water with temperatures of 30°C (86°F) or above. Due to the high swelling pressure of VELOSIT WS 804, plastic pipes may collapse under load. Larger diameters are only permitted when metal pipes are used.

3.) Curing

Avoid standing water on the waterstop as this may result in premature swelling of the material. VELOSIT WS 804's delayed swelling (approx. 5 hours @ 23°C) allows short term contact with water (such as hardened concrete pre-dampening or exposure to rain) prior to the next concrete pour.

Estimating

The required amount is calculated with the planned length of the joint waterproofing, allowing for an extra 10mm for detailing at every joint or wherever an "acute" change in direction of the construction joint occurs.

Cleaning

VELOSIT WS 804 does not cause any dirt. Dust/dirt can be cleaned off VELOSIT WS 804 with a moist cloth.

Do not install material that has already started to swell or is swollen. Wait until the material has completely dried and retrieved to its original dimensions.

Quality features

Color:	Red/Blue
Dimensions:	5 x 20 mm
Weight:	0.12 kg/m (0.24 lb./yd.)
Substrate temperature:	5 – 35 °C (40 – 95 °F)
Water impermeability: (EN 12390-8)	5 bar (73 psi)

Water absorption: 1.2 kg/m
(2.4 lb./yd.)

Maximum swelling
- potable water: 450 %
- sea water: + 140 %

Packaging

VELOSIT WS 804 is supplied in 50 m (163') rolls with 4 rolls per box (Total weight per box approx. 30 kg/ 67 lbs.).

Storage

VELOSIT WS 804 can be stored in unopened original packs for 5 years at 5 – 35 °C (40 – 95 °F) in a dry storage place protected against sunlight and water.

Safety

Please observe the actual valid material safety data sheet and follow the described safety measures for handling of the product.

Used product containers must be emptied completely after use. They can be returned to VELOSIT GmbH & Co. KG on request.

Recommendations

VELOSIT WS 804 is only available for professional applicators.

All described product features are determined under controlled laboratory conditions according to the relevant international standards. Values determined under job site conditions may deviate from the stated values.

Please always use the latest version of this data sheet available from our website www.velosit.de.

Manufacturer

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