

Expanding Waterstop

DESCRIPTION

This is a thermoplastic strip-applied, hydrophilic swellable construction cold joint waterstop. The profile has a bond-enhancing grooved surface and unique swelling properties.

APPLICATION

It is used for the planned sealing of construction cold joints. On contact with water, the swelling pressure increases slowly and thus ensures a tight seal of construction joints and cracks. It retains its shape during the swelling process. The maximum swelling capacity is limited to 300% of the initial mass, with an optimum cross section of 22 x 6 mm ensuring that there is no danger of concrete spalling due to excessive pressure. The unique compound compositions allows for temporary exposure to water without any swelling to occur. It is used to seal construction joints in in-situ-concrete against

- Soil humidity
- Water without hydro-static pressure
- Water with hydro-static pressure up to 2 bars (tested up to 100 m pressure head)

Areas of application are varied and include: wall/base connection joints, pipe penetrations, sealing of recesses, and anywhere where new and old concrete is joined. We recommend installing expanding waterstop using the special adhesive. Optional installation with powder actuated fasteners is possible, but the use of a grid-rail is not necessary. Splices are formed as butt-joints or simply overlapped. The substrate must be clean, free of any bond inhibiting debris such as dust, grease and ponding water. Do not install over voids.

PRODUCT DETAILS

- Dimensions: 22 x 6 mm
- Weight: approx. 120 g/m

- Tensile strength: (ASTM D412) 3 MPa (435 psi)
- Elongation %: (ASTM D412) 750
- Hardness Shore A: (ASTM D2240) 45 ± 5
- Tear Resistance: (DIN 53507) 8 N/mm
- Specific Gravity: (ASTM D792) 1.20 ± 0.3
- Packaging: 9 rolls 15 m per box

PHYSICAL PROPERTIES

- Swelling begins after 3 days reaching min. 200% at 15 days.
- Reversible expansion behavior (returns to initial mass after drying).
- Expanding waterstop is resistant to a great variety of different chemicals. (An excerpt of these chemicals is given in the attached chart)
- Expanding waterstop is physiologically harmless and environmentally friendly.

STORAGE

Minimum 36 months from manufacturing date, when stored in undamaged, unopened, original, sealed packaging, in cool and dry conditions at temperatures of +5°C to 25°C protect from UV radiation.



Resistance Table (Excerpt)

| Testing liquid | Reference for chemical compound group | Resistance |
|--------------------------------------|---------------------------------------|------------|
| Normal unleaded petrol/gasoline | Petrols | O |
| diesel | diesel and heavy fuel | O |
| engine oil | mineral oil | O |
| lubricants | mineral oil | O |
| toluol | Aromatic solvents | O |
| xylene | Aromatic solvents | O |
| methanol, 50 % in water | Alcohols | X |
| isopropanol, 50 % in water | Alcohols | X |
| N-methyl pyrrolidone | Nitrogenous solvent | X |
| Ethyl acetate | Aliphatic Ester | X |
| Methyl isobutylcetone | Aliphatic Ketones | X |
| formaldehyde, 35 % in water | Aldehyde | X |
| acetic acid, 10 % in water | Organic acid up to 10 % | X |
| sulphuric acid, 2 % in water | | X |
| sulphuric acid, 20 % in water | Mineral acid up to 20 % | X |
| caustic soda hydrated (pH=11-12) | Equals pH in concrete | X |
| caustic soda hydrated, 2 % in water | Inorganic caustic solution | X |
| caustic soda hydrated, 20 % in water | Inorganic caustic solution up to 20 % | X |
| common salt, 20 % in water | Salt solutions up to 20 % | X |
| common salt, 5 % in water | Salt solutions | X |
| liquid manure | Fermentation acid mixture | X |
| sodium silicate | solvent | X |

X: resistant

O: not resistant