

Polyfleece SX[®] 1000

Active waterproofing membrane

TECHNICAL DATASHEET

Status 18.12.2024

Item no. S01102010
S01102020

PROPERTIES

Polyfleece SX[®] 1000 is a high quality seal fleece with a swellable coating containing modified polymers and a LDPE-foil. The chemical composition of the coating makes it start to expand when getting on contact with water (swelling rate appr. 150%), once the protective LDPE-coat has been damaged by mechanical attack.

Polyfleece SX[®] 1000 is applied as external, pre- or postapplied waterproofing membrane, as holohedral seal or as linear seal of connection joints. Due to its especial characteristics the membrane integrally bonds to concrete which prevents any lateral water transport between the concrete and the membrane. All concrete surfaces in under & over ground civil engineering and tunneling engineering constructions can be sealed with **Polyfleece SX[®] 1000**.

APPLICATION

Polyfleece SX[®] 1000 is applied as linear or holohedral external seal for all kinds of reinforced concrete structures.

Polyfleece SX[®] 1000 can be used for bonding to fresh concrete as a pre-applied waterproofing membrane: **Polyfleece SX[®] 1000** is laid out on the substrate with its coated side facing the blinding layer or it will be fixed with its coated side towards the formwork in wall constructions. The position of the reinforcement is directly on the uncoated side of the seal fleece, concrete is then poured on to this uncoated side of **Polyfleece SX[®] 1000**, which will suck up a part of the concrete water. By doing so it integrally bonds to the concrete from which a high peel adhesion will occur. This function prevents any undergo of water between sealing membrane and concrete effectively.

Alternatively **Polyfleece SX[®] 1000** can be post applied to existing structures. To ensure the sealing of existing buildings the fleece side faces in the direction of the construction. **Polyfleece SX[®] 1000** is installed with **2K Sealing adhesive SX[®] 1** on the concrete surface.

For both applications primarily the LDPE-cover seals up the concrete surface durably whereas the swelling function triggered by the effect of moisture results in pressurized swelling which builds up between the concrete and the bordering media starts to build up once the LDPE-coat is locally damaged. This moisture triggering swelling effect effectively seals even parts of the coating which have been damaged by mechanical impact as a result of the concreting process.

On the surface of **Polyfleece SX[®] 1000** isolation boards can easily be installed with solvent free adhesives by simply gluing the boards on the surface. When having a damp/wet surface this can easily be dried with a towel before installing the adhesive.

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TECHNICAL DATA

Sizes	Unit	Tolerance	
Length (acc. DIN EN 1848-2)	20,0 m	±5,0 cm	MDV*
Width (acc. DIN EN 1849-2)	1,0 m	±3,0 cm	MDV*
Thickness (acc. DIN EN 1849-2)	1,69 mm	±5,0 %	MDV*
Weight (acc. DIN EN 1849-2)	1.280 g/m ²	±10,0 %	MDV*

Essential characteristics	Performance
Water tightness: (DIN EN 1928) Method B Method B	Water pressure: 60 kPa (0,6 bar) 24 hrs. pass Water pressure: 500 kPa (5,0 bar) 72 hrs. pass
Durability against thermal aging: (DIN EN 1928) Water tightness Method B	Water pressure: 60 kPa (0,6 bar) 24 hrs. pass
Resistance against chemicals: (DIN EN 1928) Water tightness Method B	Water pressure: 60 kPa (0,6 bar) 24 hrs. pass
Compatibility with bitumen: (DIN EN 1928) Water tightness Method B	Water pressure: 60 kPa (0,6 bar) 24 hrs. pass

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Essential characteristics	Performance		
Tensile properties: (DIN EN 12311-2)	lengthw.: across:	(≥ 250 N/50mm) (≥ 200 N/50mm)	(MLV*) (MLV*)
Elongation at break: (DIN EN 12311-2)	lengthw.: across:	($\geq 20,0\%$) ($\geq 50,0\%$)	(MLV*) (MLV*)
Joint strength: (DIN EN 12317-2)	glued seam:	≥ 200 N/50mm	(MLV*)
Resistance to tearing: nail shank (DIN EN 12310-1)	lengthw.: across:	(≥ 150 N) (≥ 150 N)	(MLV*) (MLV*)
Resistance to impact: (DIN EN 12691) Method A (Al-plate) Method B (EPS-plate)	≤ 200 mm-drop height: ≤ 500 mm-drop height:	tight tight	(MLV*) (MLV*)
Resistance to static loading: (DIN EN 12730) Method B	Imposed load: ≤ 20 kg	tight	(MLV*)
Water vapour permeability: (DIN EN 1931) Method B	sD-Value = 170 m		(MDV*)
Radon diffusion coefficient	D = $2,8 \cdot 10^{-11}$ m ² /s (area) D = $9,2 \cdot 10^{-12}$ m ² /s (Joining seam)		(MDV*) (MDV*)
Reaction to fire: (DIN EN 13501-1)	class E		
Adhesion to concrete:	$> 0,7$ N/mm ²		
Resistance to temperature:	-40°C / +100°C		

*MDV: Manufacturer's declared value

*MLV: Manufacturer's limiting value

PACKAGING & STORAGE

Dimensions

Rolls 20,0 x 1,0m
Rolls 20,0 x 2,0m

Pallet: 20x 20,0m² = 400m²
Pallet: 20x 40,0m² = 800m²

Polyfleece SX[®] 1000 can be stored in the original unopened packaging for at least 12 months at temperatures between +5° C and +25°C.

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INSTALLATION

Installation of Polyfleece SX[®] 1000 in fresh concrete:

Underneath a basement slab **Polyfleece SX[®] 1000** is laid out with its coated side facing the blinding layer or it will be fixed with its coated side towards the formwork in wall constructions. The ready installed membrane has to be protected against mechanical damage by means of setting up protected walking paths and working areas. The position of the reinforcement is directly on the uncoated side of the seal fleece, concrete is then poured on to this uncoated side of **Polyfleece SX[®] 1000**, which will suck up a part of the concrete water. By doing so the concrete adheres closely to the fleece. It must be complied with a specific striking time of minimum 48 hours.

Installation of Polyfleece SX[®] 1000 in existing buildings:

Polyfleece SX[®] 1000 is bonded directly on the concrete surface. The surfaces where the seal fleece is installed on, must be firm, sustainable, clean and free of dust or loose particles. First the **2K Sealing adhesive SX[®] 1** is installed onto the concrete sub-surface, secondly the fleece side of **Polyfleece SX[®] 1000** is gently pushed into the humid adhesive.

Along the longitudinal seam the two protective films (blue protective film on fleece side, white protective film on opposite LDPE-side) of the self adhesive, preassembled tapes have to be removed before gluing the seam. The seam of the transverse joint must be carried out according to the installation manual. As an additional backup **Polyfleece SX[®] 1000 fleece tape** can be adhered over the seam

Storing and working with **Polyfleece SX[®] 1000** is trouble free; it is neither combustible nor toxic.

The working temperature of **Polyfleece SX[®] 1000** is from -10°C to +40°C (-5°C/+30°C construction device).

ACCESSORIES

Order no S02410290	Polymer-swellingpaste SX [®] 100 cartridge 290 ml
Order no S02830291	Contact adhesive SuperX 1 PLUS
Order no S02500020	2K Sealing adhesive SX [®] 1 20kg
Order no S02500010	2K Sealing adhesive SX [®] 1 10kg
Order no S01902075	Polyfleece SX [®] 1000 – adhesive tape 75mm L=20m
Order no S01900025	Polyfleece SX [®] 1000 – fleece tape 80mm L=25m

Note:

The information on this data sheet is based on our experience and given to the best of our knowledge, but is not legally binding. Recommendations, which are at variance with those stated in this data sheet, are only binding for us, when confirmed in writing. The manufacturer is not responsible for damages resulting from the misuse or incorrect storage of the product. For the accuracy of this information we are liable within the scope of our delivery and service conditions. Creation date: 12/2024