

Polyfleece SX® 1000 Radon

TECHNICAL DATASHEET

Status 26.01.2021

Item no. S01302015

PROPERTIES

Polyfleece SX® 1000 Radon is a high quality seal fleece with a swellable coating containing modified polymers and a damp and gas proof membrane on the outside. The chemical composition of the coating makes it start to expand when getting on contact with water (swelling rate appr. 150%). The swelling is only activated, when the gas and damp proof membrane is externally damaged. **Polyfleece SX® 1000 Radon** is tight against Radon gas.

Radon is a colorless, radioactive, inert gaseous element formed by the radioactive decay of radium. A natural source of radiation found in most soils and groundwater, radon poses a serious health threat if inhaled. Pollution of indoor air, due to the radioactive inert gas Radon can be reduced to save levels by using **Polyfleece SX® 1000 Radon**.

Polyfleece SX® 1000 Radon is a pre- or postapplied, external, holohedral, active waterproofing membrane. All concrete surfaces in under & over ground civil engineering and tunneling engineering constructions can be sealed with **Polyfleece SX® 1000 Radon**.

APPLICATION

Polyfleece SX® 1000 Radon is applied as a holohedral external seal for all kinds of reinforced concrete structures.

Polyfleece SX® 1000 Radon is mainly used for bonding to fresh concrete as a pre-applied waterproofing membrane: **Polyfleece SX® 1000 Radon** is laid out on a base plate 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 Radon**, which will suck up a part of the concrete water. By doing so the concrete adheres closely to the fleece which prevents any undergo of humidity between the membrane and the concrete. The monolithic compound guarantees not only a water-tightness but also a Radon gas tightness.

When postapplied **Polyfleece SX® 1000 Radon** is bonded to the existing concrete surface with **2K Sealing adhesive SX® 1** with the fleece side of the membrane gently being pushed into the adhesive.

TECHNICAL DATA

Color:	white / grey / blue		
Dimensions:	length:	20,0 m	(±5,0cm; MDV*)
	width:	1,5 m	(±3,0cm; MDV*)
	thickness:	1,74 mm	(±5,0%; MDV*)
Mass per unit area:		1.410 g/m ²	(±10,0%; MDV*)
Water tightness: (DIN EN 1928)			
Method A	Water pressure:	2 kPa (0,02 bar) 24 hrs.	pass
Method B	Water pressure:	400 kPa (4,0 bar) 72 hrs.	pass

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Durability against thermal aging: (DIN EN 1928)			
Water tightness Method A	Water pressure:	2 kPa (0,02 bar)	24 hrs. pass
Resistance against chemicals: (DIN EN 1928)			
Water tightness Method A	Water pressure:	2 kPa (0,02 bar)	24 hrs. pass
Compatibility with bitumen: (DIN EN 1928)			
Water tightness Method A	Water pressure:	2 kPa (0,02 bar)	24 hrs. pass
Tensile properties: (DIN EN 12311-2)	lengthw.:	(≥ 250 N/50 mm)	(MLV*)
	across:	(≥ 200 N/50 mm)	(MLV*)
Elongation at break: (DIN EN 12311-2)	lengthw.:	(≥ 20 %)	(MLV*)
	across:	(≥ 50 %)	(MLV*)
Joint strength: (DIN EN 12317-2)	glued seam:	≥ 100 N/50 mm	(MLV*)
Resistance to tearing: nail shank (DIN EN 12310-1)	lengthw.:	(≥ 150 N)	(MLV*)
	across:	(≥ 150 N)	(MLV*)
Resistance to impact: (DIN EN 12691)			
Method A (Al-plate)	≤ 200 mm-drop height:		(MLV*)
Method B (EPS-panel)	≤ 500 mm- drop height:		(MLV*)
Resistance to static loading: (DIN EN 12730)			
Method B	Imposed load: ≤ 20 kg		(MDV*)
Water vapour permeability: (DIN EN 1931)			
Method B	SD-value > 1000 m		
Radon diffusion coefficient	D = 1,0 * 10 ⁻¹² m ² /s		
Adhesion to concrete:	> 0,4 N/mm ²		
Resistance to temperature:	-40 °C / +100 °C		
Reaction to fire:	class E		

*MDV: Manufacturer's declared value
 *MLV: Manufacturer's limiting value

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PACKAGING & STORAGE

Dimension:

1.5 m x 20.00 m (30.0 m² per roll, 20 rolls per pallet = 600.0 m² per pallet)

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

INSTALLATION

Installation of **Polyfleece SX® 1000 Radon** in fresh concrete (pre-application):

Underneath a basement slab **Polyfleece SX® 1000 Radon** 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 Radon**, 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 Radon** in existing buildings (post-application):

Polyfleece SX® 1000 Radon 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 **Polyfleece SX® 1000 Radon** is gently pushed into the humid adhesive with the uncoated side = fleece side. The self-adhesive edge strip at the long side of **Polyfleece SX® 1000 Radon** functions as an overlap joint (remove protective film).

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.

Storing and working with **Polyfleece SX® 1000 Radon** is trouble free; it is neither combustible nor toxic. The working temperature of **Polyfleece SX® 1000 Radon** is from -10 °C to +40 °C (-5 °C / +30 °C construction device).

Polyfleece SX® 1000 Radon must be stored in a dry place.

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ACCESSORIES

Item no. S02410290	Polymer-swellingpaste SX® 100 cartridge 290 ml
Item no. S02500020	2K Sealing adhesive SX® 1 20 kg
Item no. S02500010	2K Sealing adhesive SX® 1 10 kg
Item no. S01830253	Polyfleece SX® 1000 Radon – adhesive tape 80 mm L=25 m
Item no. S01902075	Polyfleece SX® 1000 – adhesive tape 75 mm L=20 m
Item no. S01900025	Polyfleece SX® 1000 – fleece tape 80 mm L=20 m

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: 01/2021