

**PLAKA – COLMATUBE**

Swelling membrane for tube spacers in formwork

REF 04.01.16 - Version V01 – 11/05/2022



*Instructions from the manufacturer*

**Description**

COLMATUBE is made of synthetic hydro-expansive material.

**Use**

COLMATUBE is placed around tubes, in the centre of the wall thickness. After pouring, the membrane will expand in the presence of water and thus create genuine clamping pressure around the tube. COLMATUBE can expand by up to approximately 400% of its dry volume. This means the swelling membrane is efficient at sealing joints and cavities.

This prevents water from entering via the outside of tubes, due to the presence of air bubbles or gravel residues in the concrete.

**Properties**

Mechanical properties	
Property	Value (*)
Hardness	+/- 25° Shore A
Tensile strength	> 2 MPa
Elongation at break	> 300%
Temperature during use	-50°C / +70°C
Swelling capacity in rainwater	500 %
Swelling capacity in cement grout	400 %
Swelling capacity in salt water	200 %
Weather resistance	Excellent
Chemical resistance	Effective chemical resistance in general, but we recommend being careful of oils and aromatic fuels, plant-based oils and strongly aromatic solvents. Please contact our engineering department for specific and detailed information.

**Chemical resistance**

In general, effective chemical resistance against acids, alkanes and most water-based solutions.

Be careful when using solvents and hydrocarbons.

A list of common chemical products can be found below:

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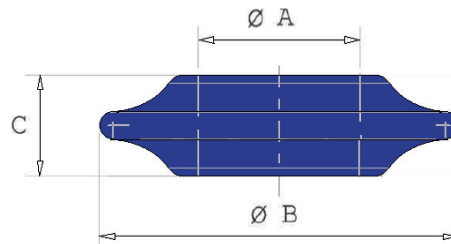
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Chemical resistance		
Water-based solutions	15% NaCl	Very good
	Detergent	Very good
	Biological washing powder	Very good
	Chlorinated water	Very good
Acids and alkanes	98% sulphuric acid	Moderate/good
	15% sulphuric acid	Very good
	10% hydrochloric acid	Moderate/good
	50% sodium hydroxide	Very good
	10% potassium hydroxide	Very good
	10% sodium sulphate	Very good
	10% sodium carbonate	Very good
Solvents	Cyclohexane	Unsuitable
	Diocetyl phthalate	Very good
	95% ethanol	Very good
	Glycerol	Good
	Hexane/pentane	Unsuitable
	Toluene	Unsuitable
Benzine/oils	White Spirit (turpentine)	Moderate
	General	Unsuitable
Fat		Moderate
Anti-freeze	50% in water	Very good

**Dimensions**



Code	ΦA	ΦB	C	Suitable for the outer diameter of tubes
DNBSUFO17	17mm	53.5mm	15mm	17-23mm
DNBSUFO24	24mm	53.5mm	15mm	24-32 mm
DNBSUFO39	39mm	68.5mm	15mm	39-60mm

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**Packaging**

Code	lt/bag	lt/box	lt/pal
DNBSUFO17	100	700	12600
DNBSUFO24	100	700	12600
DNBSUFO39	50	500	9000

**Installation**

To make sure that COLMATUBE works effectively, complete enclosure is needed so that enough dilation pressure is developed to guarantee water-tightness.

The concrete cover of the membrane must be at least 70 mm in order to avoid concrete failure.

The start of the swelling process is delayed to make sure that the membrane does not react too quickly in case water is present before or after application. However, installation during heavy rain or in stationary water can lead to premature swelling in the joint, and should always be avoided.

**Testing report**

The product was tested in accordance with test report no. 5261/998/14/MPA-BS.

This testing report is available upon request.