

## Synthetic PVC Signal Layer Waterproofing Membrane

### DESCRIPTION

**TIKIPLAN SL 2017** is a synthetic flexible non-reinforced homogeneous plasticized PVC membrane with Signal Layer obtained by twin coloured co-extrusion method.

The twin colour (Signal Layer with Dark Base) of membrane acts as a signal layer allowing for easy detection of eventual damages during installation.

**TIKIPLAN SL 2017** complies with the European harmonized standard EN 13491 and EN 13967.

### ADVANTAGES

- Superior mechanical strength-resists various stresses
- Signal layer eases visual inspection of on-site damages
- Excellent weld ability
- Good tear and puncture resistance
- Resistance to bursting under high water pressure
- Double welded laps-allows for pressure testing of joints
- Good compatibility for welding with PVC water stops during compartmentalisation of structures
- Loose laid-act independently of structural movement
- High elongation and flexibility - eases installation
- High resistance to water, ground chemicals & salts

### USES

**TIKIPLAN SL 2017** is designed to waterproof and protect various substrates encountered in tunnels and underground works

- Tunnels
- Basement Floors and Retaining Walls
- Underground Structures

### APPLICATION INSTRUCTIONS

The substrate to be waterproofed must be flat, clean, smooth, dry and free from foreign materials. Any irregularities in the substrate must be eliminated before the laying of the membrane.

**TIKIPLAN SL 2017** can be installed using loose laid method or spot fixed mechanically with fasteners.

We recommend that, the installation should be carried out by a skilled applicator having prior experience with PVC membranes application, to realize a perfect and very careful application in any situation. The correct assembly of the membrane must be achieved by hot air weld equipment, either by using manual or automatic equipment.

It is advisable to carry out some sample welding for the adjustment of temperatures of welding machines before starting waterproofing operations, to define the optimal parameters of the membrane welding.

Atmospheric conditions, surface conditions & applicator skill make the difference to get correct and good quality of weld joints.

Independently of the welding system, it is compulsory to make sure that overlapping joints are cleaned & dry.

### INSTRUCTIONS

**TIKIPLAN SL 2017** is not resistant to silicones, tar, oil, fuels, bituminous products, organic solvents, and U.V rays.

**TIKIPLAN SL 2017** is not compatible to direct contact with phenolic foams, extruded/expanded polystyrene, polyurethanes, and their derivatives and with all other plastic materials of different nature from PVC. Hence, always a check for compatibility of **TIKIPLAN SL 2017** shall be conducted prior to installation.

To avoid compatibility issues and puncture damage, a layer of  $\geq 300\text{gsm}$  geotextile in polypropylene DANOFELT PP must be interposed as separating layer, between the **TIKIPLAN SL 2017** and the substrate.

## SUPPLY

**TIKIPLAN SL 2017** is supplied in standard roll sizes of 2mm thickness, 20m length and 2m / 2.1m width.

Thickness	2.0 mm (-0.5/+10%)
Width	2.0 / 2.1 mtr. (-0.5/+2%)
Length	20 mtr. (-0.5/+2%)
Colour	Signal Layer with Dark Base
Specific Weight	2.65 Kg. /m <sup>2</sup> (-0.5/+2%)

## STORAGE

**TIKIPLAN SL 2017** membranes must be stored above 5°C. Store under the shed & protect from extremes of temperature. Rolls must be stored in upright vertical position. Avoid stacking of rolls horizontally on their sides or in double stack position.

## SAFETY PRECAUTIONS

As with all synthetic products, care should be taken during use and storage of **TIKIPLAN SL 2017**.

## PROPERTIES

Property	Values	Test Standard
Thickness	2.0 mm (-5/+10%)	DIN 53370
Tensile Strength, L/T	17 ± 2 N/mm <sup>2</sup>	DIN 53455 ISO:527
Elongation at Break, L/T	≥300 %	DIN 53455 ISO:527
Static Puncture Resistance	≥2400 N	EN 12236
Water Tightness @ 10 Bars, 10 Hours	No Leakage Observed	DIN 16726
Durability Test		
Resistance to Weathering	No Cracking	EN 12224
Resistance to Oxidation	No Cracking	EN 1844
Low Temperature Flexibility @ -25°C	No Cracking	EN 495-5
Tear Strength, L/T	≥50 N/mm	DIN 53363
Reaction to Fire	Class E	EN ISO 11925-2, EN 13501-1
Resistance to Acid Solutions, 5% H <sub>2</sub> SO <sub>3</sub> , @23±2°C, 50% R.H, 28 days + 7 days	a) Change of Tensile Strength: ≤ - 10 % b) Change of Elongation at Break: ≤ - 10 % c) Folding at T of -25°C: No Break or Crack	DIN 16726 5.18
Resistance to Salt Solutions, 10% NaCl @23±2°C, 50% R.H, 28 days + 7 days	a) Change of Tensile Strength: ≤ - 10 % b) Change of Elongation at Break: ≤ - 10 % c) Folding at T of -25°C: No Break or Crack	DIN 16726 5.18
Resistance to Alkaline Solution, Ca (OH) <sub>2</sub> @23±2°C, 50% R.H, 28 days + 7 days	a) Change of Tensile Strength: ≤ - 10 % b) Change of Elongation at Break: ≤ - 10 % c) Folding at T of -25°C: No Break or Crack	DIN 16726 5.18

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