

T120NR-E

3.0 MM THERMOPLASTIC WATERPROOFING MEMBRANE

DESCRIPTION

T120NR-E is a 3.0 mm thick homogenous non-reinforced PVC-P thermoplastic waterproofing membrane for tunnel projects with excellent puncture and elongation properties. Membrane is dual colour with black bottom and a integral yellow signal layer on the top. T120NR-E is resistant to micro-organisms and natural aggressive mediums occurring in groundwater and soil.

APPLICATIONS

T120NR-E primary application is to waterproof bored rock tunnels and associated stations and shafts. The membrane is part of a system that includes a PVC water-barrier sectional grid and pre-installed remedial grout tubing network. T120NR-E is suitable on wet or damp substrates and is installed with the yellow signal layer facing the installer and is secured into position in accordance with CETCO membrane installation guidelines.

Field seaming is accomplished by fusing the PVC-P membrane using conventional welding equipment in accordance with CETCO installation guidelines. Per project requirements, double channel welding equipment may be used allowing for air pressure testing of the air channel between the two welds.

CHARACTERISTICS/ADVANTAGES

- High resistance to ageing
- High tensile strength and elongation
- Resistant to micro-organisms and natural aggressive mediums in ground water and soil
- High resistance to mechanical impact
- High dimensional stability
- High flexibility in cold temperatures
- Heat weldable
- Can be installed on damp and wet substrate

LIMITATIONS

The membrane is not prolonged UV stabilized and must not be installed on structures permanently exposed to UV light and weathering. Consult CETCO for additional technical data and installation guidelines. Refer to Material Safety Data Sheet for health and safety information.

APPEARANCE

3.0 mm roll sheet membrane with smooth surface; yellow top layer; black bottom layer.

PACKAGING

Roll size 2.1 m x 20.0 m, 20 rolls per pallet.

STORAGE

Store in dry conditions. Protect from direct sunlight, rain, snow and ice. Product does not expire if correctly stored.

TECHNICAL DATA

MATERIAL PROPERTIES	TEST METHOD	NOMINAL VALUE
Water Tightness To Liquid Water	EN 1928B	PASS
Puncture Resistance (CBR Test)	EN 12236	≥ 4 kN
Tensile Strength	EN ISO 527	MD: ≥ 17 N/mm ² / CD: ≥ 17 N/mm ²
Elongation at Break	EN ISO 527	MD: ≥ 300% / CD: ≥ 300%
Durability of Water Tightness Against Ageing	EN 1928	PASS
Resistance to Impact	EN 12691	≥ 2000 mm
Resistance to Tear (Nail Shank)	EN 12310-2	MD: ≥ 1250 mm / CD: ≥ 1250 mm
Ignitability of Product	EN 11925-2	CLASS E
Joint Strength	EN 12317-2	≥ 10.8 N/mm ²
Water Permeability	EN 14150	< 10 ⁻⁶ m ³ /m ² /d
Peel Resistance of Joint	EN 12316-2	680 N / 50 mm
Dimensional Stability	EN 1107-2	≤ 2%
Foldability at Low Temperature	EN 495-5	≥ -40°C
Visible Defects	EN 1850-2	PASS
Durability of Water Tightness Against Liquid Chemicals Including Water (28 days / 23°C)	DIN 1626	PASS
Application Temperature Range	—	+4°C min. / +40°C