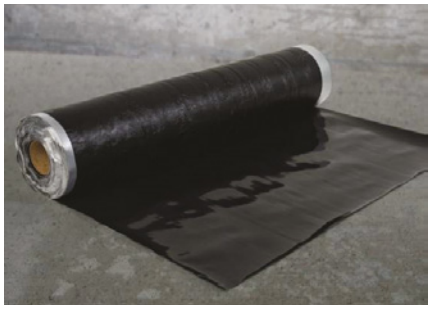
Product Data Sheet

Triton Titan Tank

A self-adhesive membrane designed for gas-proofing and waterproofing/tanking of underground structures where harmful ground gases are anticipated.

Uses

- Quick and easy installation
- Can be a fully welded system
- High resistance to ground gases
- Exceptional Chemical Resistance
- Manufactured to meet the most up to date British Standards and guidance
- Long Term Durability (performance guaranteed for the lifetime of the building



Compliance and Certification

- CE Mark – EN13967:2012
- NHBC Standards Compliant
- CIRIA C748 Compliant (VOC Barrier)
- BS 8485:2015+A1:2019 Compliant (Methane and Carbon Dioxide Barrier)
- BS 8102:2009 Compliant (Type A Waterproofing)

Technical Data

Characteristics	Test Method	Unit	Titan Tank
Physical Properties			
Thickness	EN 1849-2	mm	1.2
Width	EN 1849-2	m	1 or 0.3
Length	EN 1849-2	m	20
Weight	EN 1849-2	G/m²	1350
Hydraulic Properties			
Water Vapour Transmission Rate	EN 1931	G/m²/Day	0.11-0.18
Watertightness (60kPa)	EN 1928	–	Pass
Watertightness (196 kPa-20m Water Head) (Basement Application)	EN 1928	–	Pass
Mechanical Properties			
Resistance to Static Load	EN 12730-B	Kg	≥20
Puncture Resistance	EN 12236	kN	≥2.0
Tensile Strength (MD)	EN 12311-1	N/50mm	>550
Tensile Strength (CMD)	EN 12311-1	N/50mm	>400
Tensile Elongation (MD/CMD)	EN 12310-1	%	>550
Tear Resistance (MD/CMD)	EN 12310-1	N	>300
Resistance to Impact	EN 12691-B	mm	>650
Reaction to Fire	EN 13501-1	Class	E
Resistance to Artificial Ageing	EN 1296/EN 1928	–	Pass
Resistance to Chemicals	EN 1847/EN 1928	–	Pass

Characteristics	Test Method	Unit	Titan Tank
Vapour Permeability 100% Concentration			
Transmission Rate of Benzene	EN ISO 15105-2	mg/m²/day	<3.6
Transmission Rate of Toluene	EN ISO 15105-2	mg/m²/day	<13.8
Transmission Rate of Ethyl Benzene	EN ISO 15105-2	mg/m²/day	<2.7
Transmission Rate of Xylenes (M,P,O)	EN ISO 15105-2	mg/m²/day	<7.7
Transmission Rate of Hexane	EN ISO 15105-2	mg/m²/day	<0.6
Transmission Rate of Vinyl Chloride	EN ISO 15105-2	mg/m²/day	<0.05
Transmission Rate of Trichloroethene (TCE)	EN ISO 15105-2	mg/m²/day	<54.7
Transmission Rate of Tetrachloroethene (PCE)	EN ISO 15105-2	mg/m²/day	<26.2
Transmission Rate of Naphthalene	EN ISO 15105-2	mg/m²/day	<0.0006
Transmission Rate of CIS-1,2-Dichloroethylene	EN ISO 15105-2	mg/m²/day	<1.1
Gas Permeability			
Methane Permeability	EN ISO 15105-1	ml/m²/day/atm	0.13
Methane Permeability (Jointed)	EN ISO 15105-1	ml/m²/day/atm	1.00
Carbon Dioxide Permeability	EN ISO 15105-1	ml/m²/day/atm	3.01
Vinyl Chloride Gas Permeability	EN ISO 15105-1	ml/m²/day/atm	0.04
Radon Permeability	K124/02/195	m²/S	$1.0x10^{-12}$
Durability and Chemical Resistance			
Chemical Resistance – Sulfuric Acid (10% Solution of Sulfuric Acid (H2so4)) 50° for 56 Days.	EN 14414-A	Tensile Strength Retained	100%
		Result	Pass
Chemical Resistance – Basic (Calcium Hydroxide Saturated Suspension) 50° for 56 Days.	EN 14414-B	Tensile Strength Retained	100%
		Result	Pass
Chemical Resistance – Solvents (35% Diesel, 35% Paraffin, 30% Oil Hd30 (Vol)) 50° for 56 days.	EN 14414-C	Tensile Strength Retained	>80%
		Result	Pass
Chemical Resistance – Solvents (35% Diesel, 35% Paraffin, 30% Oil Hd30 (Vol)) 50° for 56 days.	EN 14414-C	Tensile Strength Retained	>80%
		Result	Pass
Chemical Resistance – Synthetic Leachate (Mixture of 14 Acids, Chlorides, Sulphates & Phosphates) 50° for 56 days.	EN 14414-D	Tensile Strength Retained	100%
		Result	Pass
Resistance to Leaching – Hot Water (Deionised water) 50° for 56 days.	EN 14415-A	Tensile Strength Retained	100%
		Result	Pass
Resistance to Leaching – Aqueous Alkaline (Saturated Calcium Hydroxide) 50° for 56 days.	EN 14415-B	Tensile Strength Retained	100%
		Result	Pass
Resistance to Leaching – Organic Alcohol (30% Methanol, 30% Isopropanol, 40% Glycol) 50° for 56 days.	EN 14415-C	Tensile Strength Retained	100%
		Result	Pass
Chemical Resistance – Benzene – 100% Saturated Concentration	EN 14414-D (MOD)	Tensile Strength Retained	95% (MD) 102% (CMD)
		Result	Pass
Chemical Resistance – Toluene – 100% Saturated Concentration	EN 14414-D (MOD)	Tensile Strength Retained	94% (MD) 91% (CMD)
		Result	Pass
Chemical Resistance – Ethyl Benzene – 100% Saturated Concentration	EN 14414-D (MOD)	Tensile Strength Retained	99% (MD) 97% (CMD)
		Result	Pass
Chemical Resistance – Xylenes – 100% Saturated Concentration	EN 14414-D (MOD)	Tensile Strength Retained	91% (MD) 106% (CMD)
		Result	Pass
Chemical Resistance – TCE – 100% Saturated Concentration	EN 14414-D (MOD)	Tensile Strength Retained	99% (MD) 93% (CMD)
		Result	Pass

Characteristics	Test Method	Unit	Titan Tank
Chemical Resistance – PCE – 100% Saturated Concentration	EN 14414-D (MOD)	Tensile Strength Retained	93% (MD) 93% (CMD)
		Result	Pass
Chemical Resistance – Napthalene – 100% Saturated Concentration	EN 14414-D (MOD)	Tensile Strength Retained	101% (MD) 93% (CMD)
		Result	Pass
Chemical Resistance – Hexane – 100% Saturated Concentration	EN 14414-D (MOD)	Tensile Strength Retained	99% (MD) 104% (CMD)
		Result	Pass

Installation

- Installation works should only begin on a suitably prepared subgrade/ subsurface. Note: defects in the membrane are most commonly caused by subgrade/subsurface penetrations owing to insufficient surface preparation.
- All corners should be smoothed and rounded to reduce point loading and stress on the membrane. Internal corners can be 'filleted' using a suitable mortar prior to application.
- All surfaces to receive the **Triton Titan Tank** shall be primed using **GP-Primer** to aid adhesion to the surface.
- Install the **Triton Titan Tank** vertically in 1.0m wide panels (roll width) ensuring a minimum 50mm overlap to each adjacent panel, and joint and seal the overlap selvedge with **Triton Titan Tape** or welded joint as required.
- Form all of the necessary details to the wall area (vertical), such as pipe penetrations, connections, sumps or lift pits, pile caps, expansion joints and any others that are required using the appropriate accessory items.
- Important Note: For applications with a Ground Gas protection requirement, periodic validation and inspection of the install should occur in accordance with C735. For waterproofing applications only – upon completion of the install, check all joints, seams and sheet area for signs of damage/defect/tears and repair as necessary.
- Ensure protection is in place before backfilling.

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