

Tank Lining Material



Used to line Franklin Hodge's standard range of tanks.

Can be used to provide a cost effective means of waterproofing and refurbishment of existing tanks including concrete.

Franklin Hodge Industries standard range of water storage tanks is fitted with tailor made liners in either Butyl Rubber or EPDM material. Both materials are flexible synthetic membranes, ideal for lining water tanks and have similar properties.

WRAS Drinking Water Approval

For the storage of potable or drinking water, we offer a special grade of butyl rubber which has been tested to BS6920 and is approved under the UK Water Regulations Advisory Scheme for use in contact with potable water.

Impermeability

Butyl rubber and EPDM sheeting provides a completely waterproof seal and, with its closely packed molecular structure, is extremely resistant to the transmission of liquids or vapour.

Weather resistance

Because both Butyl rubber and EPDM contain no plasticisers or additives that can evaporate or leach over time, weather resistant properties of the two materials is excellent, with strength and elasticity remaining virtually unchanged over many years, despite exposure to sunlight, ultraviolet radiation and ozone.

Temperature range

Temperatures ranging from -30°C to +120°C (60°C maximum for prolonged periods) will not affect Butyl Rubber or EPDM material. If storing water at temperatures above ambient, we recommend that as a precaution, you contact our office for more information.

Elasticity

Water retaining properties of both Butyl Rubber and EPDM will not be affected even when the materials are stretched up to 300% of normal size.

Durability

For use as tank lining materials, both Butyl rubber and EPDM have excellent resistance to abrasive wear, tearing, flexcracking and puncturing. If there is a slight foundation subsidence and should there be small surface irregularities present in a tank both membrane materials will adapt without failing. Polyester matting underlay material, installed between the tank shell and the foundation or tank wall, is available for extra protection against puncturing in such situations. Very sharp objects and blows by sharp instruments may damage tank liners and we recommend that, as a precaution, clean rubber soled footwear is worn during internal tank installations or inspections.

Water treatment & Chemical resistance

With respect to the use of Chlorine for water tank treatment, we confirm that sterilisation to BS6700 is acceptable.

Ease of repair

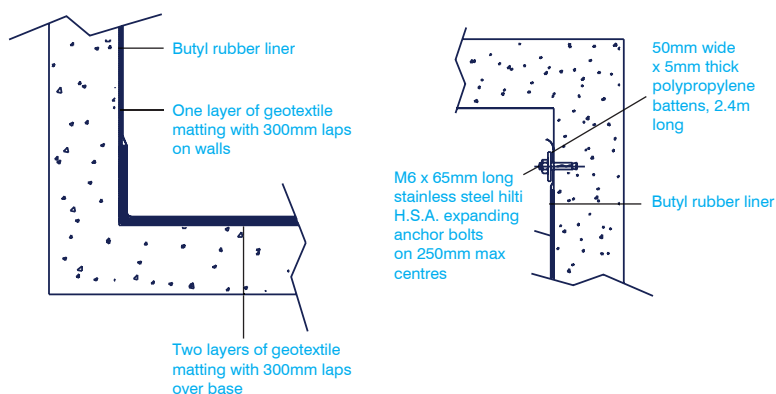
In the unlikely event that the internal tank membrane liner is punctured, it can easily be repaired with minimal disruption usually by a heat/pressure process. This can be carried out by technicians on site. The same heat/pressure process is used in liner manufacture or modification and does not affect the overall integrity of the liner. Alternatively, for overseas or remote installations, specially prepared "cold" repair kits are available.

Tank Lining Material Technical Data

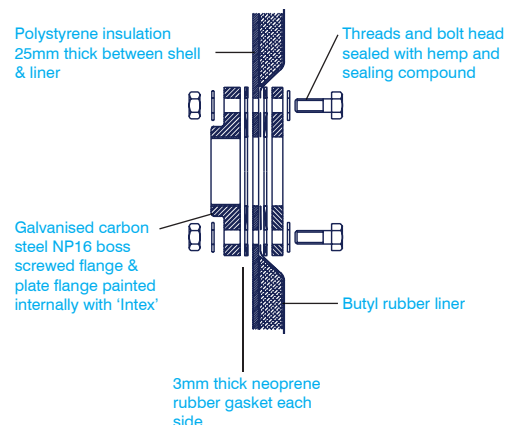
Physical property	Test method	Standard Grade Butyl 72601	WRAS Approved Grade 72612	EPDM
Hardness	BS903 A26	65 + 5° IRH	65 + 5° IRH	65 + 5° IRH
Modulus at 300% elongation	BS903 A2	min 4.5 MPa	min 4.5 MPa	min 5.0 MPa
Tensile strength	BS903 A2	min 8.5 MPa	min 9.0 MPa	min 9.0 MPa
Elongation at break	BS903 A2	min 350%	min 350%	min 400%
Tear strength	BS903 A3C	min 20 kN/m	min 23 kN/m	min 30 kN/m
After heat ageing 168 h/121°C	BS903 A19			
Tensile strength	BS903 A2	min 6.5 MPa	min 7.5 MPa	min 7.5 MPa
Elongation at break	BS903 A2	min 250%	min 300%	min 300%
Ozone resistance 96 h/50 pphm/80% elongation at 30°C	BS903 A43	No cracks	No cracks	No cracks
Brittle Point	BS903 A25	max -30°C	max -30°C	max -40°C

Applications:

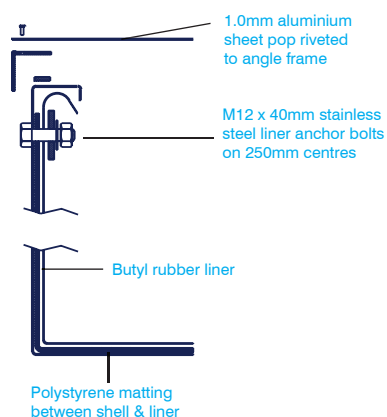
Base, wall & top liner fixings in concrete tanks



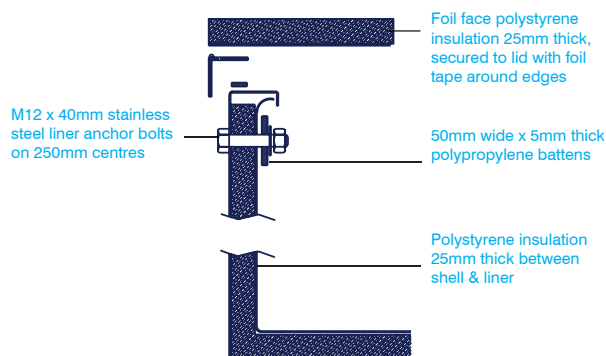
Typical connection detail



Typical details of lining an uninsulated galvanised steel water tank



Typical details of lining an insulated galvanised steel water tank



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