

integritank[®]

STRUCTURAL WATERPROOFING MEMBRANE

DESCRIPTION

Integritank is a liquid applied, fully reactive, elastomeric membrane based on Methyl Methacrylate (MMA) resins that cure rapidly to provide a tough impermeable waterproof membrane. It is available in both spray and hand grades.

USES

Integritank is designed to retain, exclude or protect structures from water, oils, fuels and many aggressive chemicals. With the spray grade outputs in excess of 2,000m² per day can be achieved. The hand grade version was specifically developed for application in small areas or where restrictive access prevents spray application. Typical applications include:

- Tunnels
- Balconies
- Podium Decks
- Basement tanking
- Roofs including Green and Bio-Diverse roofs
- Concrete, masonry, asphalt or steel substrates requiring a chemical and/or abrasion resistant coating
- Storage tanks and silos.
- Secondary containment - bund lining or earthen containment bunds (using a fabric carrier for the coating)
- Silage units
- Canals and culverts
- Sewage and sludge tanks
- Low-level radiation tanking and roofing applications.

FEATURES

- Approved by British Board of Agrément (UK), British Nuclear Fuels (UK) and CEMETE (France)
- Unaffected by high humidity and rapid cure even at low temperatures enabling all year round application on all continents
- Fast track and weather tolerant application all year round
- Fully reactive and does not contain solvents
- Able to carry load or traffic after one hour
- Resistant to ballast and backfill materials
- Long and effective life
- Impermeable to chloride ions
- Excellent chemical, abrasion and impact resistance
- Excellent UV and weather resistance
- Can bridge shrinkage cracks in concrete over a wide temperature range
- High bond strength to substrate
- Excellent intercoat adhesion
- Overcoating time not critical
- Can be applied to verticals and overhead
- On site quality assurance programme
- Applied only by authorised and trained contractors

TECHNICAL DATA

PROPERTY ¹	VALUE
Application Temperature Range ²	-5 to +40°C
Typical Overcoating Time	~ 60 minutes
Typical Tensile Strength (BS903: A2: 1995, ISO37: 1994; ASTM D412)	13 MPa
Typical Elongation at Break (BS 903: A2: 1995, ISO 37: 1994; ASTM - D412)	130%
Low Temperature Flexibility (Mandrel Test MOAT 27: 5.4.2 1983)	
Unaged	Pass at -25°C
56 days heated at 70°C	Pass at -20°C
28 days water soak at 23°C	Pass at -25°C
Static Crack Bridging @ 0°C (DTp Appendix B: Technical Memorandum BE27 Tested To 2mm)	Pass
Typical Elongation at Break (BS 903: A2: 1995, ISO 37: 1994; ASTM - D412)	> 130%
Heat Ageing at 70°C for 1 year. (Equivalent to 32 years ageing at 20°C BS 903: A2: 1995, ISO 37: 1994)	No significant change
Tensile Strength Elongation at Break	
Hardness (2mm Application)	
Shore D	51
Shore A	90 – 95
(BS 2782: Part 3 Method 365B: 1992 ISO 868: 1985)	
Dimensional Stability (MOAT 27: 5.1.6.1 1983)	+0.23%
Methane Resistance (Wimpey Environmental Method)	0.03ml/m ² /day/ atmosphere
Water Vapour Permeability @ 25°C, 75% RH (BS 3177: 1959)	3.36g/m ² /day
Resistance to Aggregate Indentation (DTp Appendix B: Technical Memorandum BE27)	No damage
Chisel Impact at 23° and 0°C (DTp Appendix B: Technical Memorandum BE27)	No damage
Dynamic Ballast Resistance (181 kN/2x10 ⁶ cycles, SNCF)	No damage or leaks
Resistance to Static Indentation (MOAT 27: 5.1.10 1983)	L ₄
Resistance to Dynamic Indentation (MOAT 27: 5.1.10 1983)	I ₃
Water Vapour Resistance @ 25°C, 75% RH (BS 3177: 1959)	61 MNsg ⁻¹

¹ Property values range in accordance with normal statistical test variation. Please consult the relevant standard or contact us for further advice.

² For temperatures outside this application range please contact us.

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Resistance to Water Pressure
6 metre head of water no leak
(DTp Appendix B: Technical Memorandum BE27)

For information about the chemical resistance of Integritank please consult our Customer Services Department.

SURFACE PREPARATION

It should be stressed that the success of any waterproofing system is dependent on the thoroughness of the surface preparation.

Concrete

New concrete substrates should be a minimum of seven days old. The substrate must be clean, dry and structurally sound. It must be free from laitance, oils and all other surface contaminants. Where the use of a non-structural screed or a lightweight concrete substrate is proposed, please seek our advice as these materials often have low cohesive strength or retain water in open pores.

Repairs to damaged concrete can be made using Metaset[®] Rapid Repair Mortar.

Steel

On steel surfaces all rust, dirt and contamination should be removed to expose bright metal to achieve a surface finish to comply with Swedish standard Sa 2.5.

For compatibility with other construction materials or where additives, cement replacement or curing compounds have been used please contact us.

APPLICATION

Primer

The substrate must be primed with an appropriate Stirling Lloyd primer prior to application of the Integritank membrane. A choice of primers is available depending on the type of substrate and weather conditions. They are usually applied using a brush or roller. Please consult the appropriate datasheets.

Membrane

Both grades of Integritank are applied in two colour-coded coats.

Integritank Spray Grade is metered, mixed and spray applied using plural component spray equipment to give a minimum dry film thickness of 1mm per coat.

An Integritank Hand Grade is also available. The mixed material is poured onto the substrate and spread using a trowel and / or brush. For vertical surfaces the material should be applied by brush. The material should be applied in two even coats to give a minimum dry film thickness of 1mm per coat.

Both spray and hand grade can be trafficked or loaded once fully cured.

COVERAGE

Primer	refer to separate datasheet
Membrane (Spray & Hand Grade)	1.4kg/m ² /coat

Coverage rates are based on a smooth substrate and will vary with surface texture and porosity.

CLEANING

All tools and equipment should be cleaned with Stirling Lloyd Solvent No.1 (Acetone) before the material is allowed to cure.

PACKAGING & STORAGE

Primer	refer to separate datasheets
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Spray Grade Membrane	48kg & 400kg kits
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Hand Grade Membrane ³	20kg kits
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Catalyst	20kg kits for on-site addition
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All components of the Integritank system should be stored in cool, dry, protected conditions, out of direct sunlight and in accordance with the relevant site Health & Safety regulations. Storage temperature must not exceed 25°C. Do not store near naked flames or foodstuffs. Stored in unopened containers, under these conditions, the components have a shelf life of six months.

ANCILLARIES

Stirling Lloyd produces a range of products to complement the Integritank system. These include:

- Metaset[®] – a range of resin based rapid repair mortars.
- SL Smoothing Primer - an MMA levelling primer.
- Sealants – a range of flexible sealants for all joints and cracks.

HEALTH & SAFETY

The Material Safety Data Sheet must be read, understood and available on site before commencing work.

It is the Company's policy to take all reasonable steps to prevent injury to all property and personnel from foreseeable hazards. This extends to the public in so far as they come into contact with the Company or its products.

GENERAL INFORMATION

Integritank is part of a wide range of specialist waterproofing, surfacing and repair materials manufactured and supplied by Stirling Lloyd. If you require any further information on this or any other of our products, please do not hesitate to contact us or visit www.stirlinglloyd.com.

³ Integritank Hand Grade is supplied in both winter and summer and tropical grades. The winter grade is automatically supplied in the UK between October 1st and March 31st. It has additional cold cure accelerator added at the manufacturing stage to increase the speed of cure at temperatures below 10°C. The catalyst levels should be adjusted in accordance with the ambient temperature during application.

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Union Bank, King Street, Knutsford, Cheshire, WA16 6EF, England
Tel: +44 (0) 1565 633111 Fax: +44 (0) 1565 633555
E-Mail: info@stirlinglloyd.com
www.stirlinglloyd.com