

INTEGRITANK[®]

Cold Spray Applied Structural Waterproofing Membrane

Product Description

INTEGRITANK[®] is a high performance, structural waterproofing membrane for the protection of steel and concrete structures based on GCP's (previously Stirling Lloyd) unique ESSELAC[®] advanced resin technology and extensive experience in the development of coatings for specialist waterproofing. It cures rapidly to provide a tough, flexible seamless membrane, 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.

INTEGRITANK[®] Spray Grade is suitable for larger areas and can achieve outputs of 2,000m² per day dependent on site conditions.

INTEGRITANK[®] Hand Grade is ideal for application in small areas or where restricted 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

- A range of approvals including British Board of Agrément (BBA) (UK), British Nuclear Fuels (UK) and CEMETE (France)
- Approved by British Board of Agrément for new and existing zero pitched roofs. See Agrément Certificate 03/4060 (2nd Issue)
- Unaffected by high humidity
- Rapid cure even at low temperatures

- Able to carry load or traffic after one hour
- Resistant to ballast and backfill materials
- Long and effective life
- Resistant to chloride ions
- Excellent chemical, abrasion and impact resistance
- Excellent UV and weather resistance
- Crack bridging capability
- High bond strength to substrate
- Excellent intercoat adhesion
- No critical overcoating time on any coat
- Can be applied to verticals and overhead
- On site Quality Assurance programme
- Applied only by authorised and trained contractors

Technical Data

INTEGRITANK® is CE Marked under EN1504-2 for which a Declaration of Performance is available on request.

¹ INTEGRITANK® Membrane can be applied at temperatures between -10°C and 50°C.

Property	Value
Application Temperature Range ¹	
Standard Grade	0°C to +30°C
Tropical Grade	15°C to 50°C
Standard Grade with Arctic Additives	-10°C to 0°C
Typical Overcoating Time	60 Minutes

Surface Preparation

All surface coating systems are dependent on the quality of surface preparation.

Concrete

New concrete substrates should be a minimum of seven days old and constructed in accordance with BS EN 1992. 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, contact Technical Services as these materials often have low cohesive strength or retain water in open pores.

Use METASET® ResiFilla Repair Compound for repairs to damaged concrete

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 consult the Technical Services Department.

Application

Primer

The substrate must be primed with an appropriate GCP 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 INTEGRITANK® Hand and Sprade Grade are applied in two colour-coded coats.

INTEGRITANK® Spray Grade is spray-applied to give a minimum dry film thickness of 2mm (1mm per coat). The coverage rate will vary with surface texture.

INTEGRITANK® Hand Grade system 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 INTEGRITANK® Spray and Hand Grade can be trafficked or loaded once fully cured.

Coverage

Primer: refer to separate datasheet

Membrane (Spray & Hand Grade): typically 1.4kg/m²/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 acetone before the material is allowed to cure.

Packaging & Storage

Primer: refer to separate datasheets

Spray Grade Membrane: 48kg & 400kg kits, including BPO powder catalyst

Hand Grade Membrane: 20kg, resin only

BPO Liquid Catalyst, pack: 5kg & 20kg (for use with Hand Grade)

	48 Kg KIT size		400 Kg KIT size	
	Pail size	Pails/pallet	Drum size	Drums /pallet
INTEGRITANK® Part A	24 Kg	12	200 Kg	2
INTEGRITANK® Part B*	23.04 Kg	12	192 Kg	2
BPO Powder Catalyst	920 g	**	8 Kg	**

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 the correct conditions, the components have a minimum shelf life of twelve months.

If your product is more than twelve months old you must contact Technical Service before use.

Special Note: Air Freight packaging is available on request.

Please contact your local GCP representative.

* INTEGRITANK® Part B is supplied in Yellow and Mid Grey for 2 color-coded application.

Please refer to application guideline or consult your GCP representative.

Ancillaries

GCP produces a range of products to compliment the INTEGRITANK® system. These include:

- SENTINEL® Expansion Joints – a range of compatible expansion joint details.
- METASET® – a range of ESSELAC resin based rapid curing levelling and repair compounds.
- GCP Smoothing Primer - a levelling primer.
- Sealants – a range of flexible sealants for all joints and cracks.

Health and Safety

Please refer to our safety datasheets for further information.

General Information

INTEGRITANK® is part of a wide range of specialist waterproofing, surfacing and repair materials manufactured and supplied by GCP.

If you require any further information on this or any other of our products, please do not hesitate to contact us or visit www.gcpat.com.

Technical Properties of Membrane		
PROPERTY	TEST METHOD	VALUE
Minimum Thickness	ASTM D412	2mm minimum
Elongation	BS903:A2, BS ISO37; ASTM D412	>130%
Density of cured membrane	ASTM D792	>1.10g/cm ³
Tensile Adhesion Strength of membrane	BS EN ISO 4624 Concrete Substrate Steel Substrate PVC Substrate	≥0.7 MPa ≥ 2.0 MPa ≥2.0 MPa
Intercoat overlap adhesion, after 7 days without surface preparation	Same as tensile adhesion of membrane to the surface	BS EN ISO 4624
Water Vapor Transmission	ASTM E96 at 230 C	<4g/m ² /day
Tensile Strength	BS 903:A2 BS ISO 37; ASTM D412	≥12MPa
Shore Hardness	BS2782: Part 3 Method 365BBS EN ISO 868	≥40 (Shore D)
Water penetration	British Board of Agreement Tanking Certification	Zero
Chisel Impact	British Board of Agreement Tanking Certification	Pass
Aggregate Indentation	British Board of Agreement Tanking Certification	Pass
Static Crack-Bridging	ASTM C836	2mm @ -26C
Resistance to abrasion	Taber Method H22 Wheel – 1000 cycles (or equivalent test approved by the Engineer)	<0.60g
Hydrostatic head resistacne	ASTM 5385	>70 meter



gcpat.ae | United Arab Emirates customer service: +971 4 5139560

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GCP Applied Technologies (UK) Limited, 580-581 Ipswich Road, Slough, Berkshire, SL1 4EQ, UK

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