

eliminator®

SPRAY APPLIED BRIDGE DECK WATERPROOFING

DESCRIPTION

Eliminator® is a high performance waterproofing membrane based on Methyl Methacrylate (MMA) resins developed by Stirling Lloyd for the protection of concrete and steel structures. It cures rapidly to provide a tough, flexible seamless membrane. Airless spray equipment has been specifically developed to meter, mix and apply the product. Eliminator® has an unparalleled track record with thousand's of structures waterproofed successfully throughout the world.

USES

Eliminator® provides a complete waterproofing system to protect the substrate from the corrosive effects of water and chloride ions. Typical applications include:

- Concrete Bridge Decks
- Steel Bridge Decks
- Bridge Piers
- Bridge Service Ducts
- Culverts

The system can be amended to accommodate both high and low ambient temperatures without any detriment to the performance of the system.

APPROVALS

Eliminator® has been approved for use on road and railway bridges by numerous authorities worldwide. An example of those is shown below:

- British Board of Agrément (UK) – For Highways Agency road bridges.
- Railtrack (UK) - Railway bridges.
- Fascicule No. 67, S.T.E.R. 81 (French Highways Specification).
- SNCF (France) - Railway bridges
- Belgian Board of Agrément (UBATC-ATG)
- SNCB (Belgium) - Railway bridges.
- Road, Rail & Highway Approval, Czech Republic
- BANVERKET, Swedish Rail Authority

FEATURES

- Unparalleled track record
- Long and effective life
- Unaffected by high humidity and cures rapidly even at low temperatures enabling all year round application on all continents
- Rapid application rates. Outputs in excess of 2,000m² per day can be achieved.
- Fully reactive and does not contain solvents
- Impermeable to chloride ions
- Can bridge shrinkage cracks in concrete over a wide temperature range
- Excellent chemical and abrasion resistance
- Excellent Intercoat adhesion
- High bond strength to substrate

- Overcoating time not critical
- High bond of pavement surfacing materials to Eliminator®
- Unaffected by application of surfacing up to 250°C.
- Resistant to ballast and backfill materials
- Able to carry load after 1 hour
- On site quality assurance programme
- Applied only by authorised and trained contractors

TECHNICAL DATA

PROPERTY	VALUE
Application Temperature Range ⁽¹⁾	-5 to +30°C
Typical Tensile Strength (BS903: A2: 1995, ISO37: 1994; ASTM D412)	> 11.8 MPa
Typical Elongation at Break (BS 903: A2: 1995, ISO 37: 1994; ASTM - D412)	> 130%
Typical Tear Strength (BS ISO 34-1:2004)	70N/mm
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
Dynamic Crack Bridging @ -10°C, 23°C, & 40°C (UK Highways Agency: BD47 Tested to 1mm)	Pass
Heat Ageing at 70°C for 1 year. Tensile Strength & Elongation at Break (Equivalent to 32 years ageing at 20°C BS 903: A2: 1995, ISO 37: 1994)	No significant change
Tensile Adhesion Strength ⁽²⁾ (BS EN ISO 4624: 2003)	
Concrete	> 0.7 MPa
Steel	> 2 MPa
BD47 Requirement	> 0.3 MPa
Hardness (Shore D) (BS 2782: Part 3 Method 365B: 1992 ISO 868: 1985)	56
Resistance to Aggregate Indentation (UK Highways Agency: BD47)	No damage
Chisel Impact at 23° and 0°C (UK Highways Agency: BD47)	No damage
Dynamic Ballast Resistance (181 kN/2x10 ⁶ cycles, SNCF)	No damage or leaks

¹ Eliminator® can be applied at temperatures as low as -20°C and as high as 50°C with minor modifications. Please consult our Customer Services Department before placing any order.

² On properly prepared substrates these values are easily achieved with the Eliminator system.

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Abrasion Resistance (weight loss – grams)
(Taber Test) 0.57

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 decks 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. 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 consult our Customer Services Department.

APPLICATION

Primer

The substrate must be primed with an appropriate Stirling Lloyd primer prior to application of the Eliminator[®] 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

Eliminator[®] is spray applied to give a minimum dry film thickness of 2mm. The coverage rate will vary with surface texture.

Tack Coat / Bond Coat

A tack coat or bond coat must be applied to Eliminator[®] when it is being used as a waterproofing membrane on road bridges underneath asphalt or macadam surfacing. A range of tack coats or bond coats is available depending upon the pavement specification⁽³⁾. Please contact our Customer Services Department for further information.

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
Eliminator [®] Membrane	48kg & 400kg kits

All components of the Eliminator[®] 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 produce a range of products to compliment the Eliminator[®] system. These include:

- Expansion Joints – a range of compatible expansion joint details.
- Metaset[®] – a range of resin based rapid repair mortars.
- Sealants – a range of flexible sealants for all joints and cracks.

HEALTH & SAFETY

The system is fully compliant with USA Volatile Organic Compound (VOC) regulations and independent risk assessments, carried out in accordance with the UK Control of Substances Hazardous to Health (COSHH) regulations, indicate the application of Eliminator to be a low risk process. 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

Eliminator[®] 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 contact our Customer Services Department or visit www.stirlinglloyd.com.



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The information presented herein is accurate to the best of our knowledge. We pursue a progressive research and development policy and reserve the right to alter any of the details herein without notice. The information given must not be taken in any way to form a specification. All technical properties quoted are from laboratory prepared samples. We will not accept liability whatsoever arising out of the use of the information contained herein.

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

³ Data is also available on the tensile bond strength and the shear bond strength of Eliminator to a variety of surfacing specifications from our Customer Services Department.