

# ELIMINATOR® Data Sheet

Cold, Liquid, Spray Applied Bridge Deck Waterproofing

## Product Description

ELIMINATOR® is a high performance waterproofing membrane for the protection of concrete and steel bridge decks based on Stirling Lloyd, now GCP's 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 impervious to water and waterborne contaminants. ELIMINATOR® has an unparalleled track record with thousands of structures waterproofed successfully throughout the world.

## Uses

ELIMINATOR® protects concrete and steel structures from the corrosive effects of water and chloride ions. Typical applications include:

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

ELIMINATOR® is installed in conjunction with Stirling Lloyd, now GCP Applied Technologies, proprietary primers, ensuring a high bond between substrate and membrane. For highway bridges a range of compatible tack coats promote adhesion between membrane and surfacing. The membrane can be trafficked for limited durations when required. Please discuss with GCP Technical Services if considering this application.

The system can be adapted to accommodate both high and low ambient temperatures without any detriment to the performance of the system (See table below).

## Product Advantages

- Long and effective life
- Able to withstand high humidity and cures rapidly even at low temperatures enabling all year round application
- Rapid application and re-access
- Crack-bridging across wide temperature range
- Excellent abrasion and chemical resistance
- High bond to substrate, preventing tracking of water under membrane.
- High thixotropy for application to vertical and horizontal surfaces
- Seamless, and chemically bonds to itself
- Two color-coded coats assure highest quality system minimizing defects
- Withstands 480°F pavement placement on the cured membrane

- Tough – tolerant to direct ballast loading without protection board. Conforms to AREMA Specifications Chapter 29-2-6, 2.3.10
- Quality Assured – ISO9001 certified manufacturing location
- Applied only by authorized and trained contractors

## Application

### Primer

The substrate must be primed with an appropriate GCP primer prior to application of the ELIMINATOR® membrane. A choice of primers are available depending on the type of substrate and weather conditions.

### Membrane

ELIMINATOR® is typically spray applied. The membrane is applied when the primer has cured, typically within 20 minutes. Two distinct color coats are used to aid quality assurance. ELIMINATOR® is typically applied in multiple configurations that includes, but is not limited to:

- One coat at minimum film thickness of 90 mils
- Two equal coats each at a minimum film thickness of 60 mils for a total of 120 mils
- Two coats comprising a first coat at a minimum film thickness of 80 mils followed by 40 mils with an aggregate broadcast
- Other configurations exist on a on project-by-project basis

### 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 paving. A range of tack coats and bond coats are available depending upon the pavement specification<sup>1</sup>.

## Cleaning

All tools and equipment should be cleaned with acetone before the material is allowed to cure.

## Precautions

ELIMINATOR® liquid resin components are classified as flammable liquid (flashpoint 52.7°F, 11.5°C) and must be handled accordingly. Workers should wear appropriate protective clothing. Adequate ventilation must be provided. Please refer to the most recent Safety Data Sheet (SDS) for recommendations.

## Safety and Handling

Read and understand the product label and Safety Data Sheet (SDS) for each system component. All users should acquaint themselves with this information prior to working with the products and follow the precautionary statements.

SDSs can be obtained by contacting your local GCP representative or office, by calling GCP toll free at 1-866-333-3SBM (3726) and in some cases from our web site atgcpat.com.

## Packaging & Storage

Primer – Refer to separate datasheets

ELIMINATOR® Membrane (Part A and Part B) – 46.7 Gallon Drum

All components of ELIMINATOR® system should be stored in cool, dry, protected conditions, out of direct sunlight and accordance with the relevant site Health & Safety regulations. Storage conditions must not exceed 77°F. Do not store near open flames or food.

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 contact GCP Technical Services before use.

<sup>1</sup> 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.

## Physical Properties

| PROPERTY                            | TEST METHOD                         | RESULT                                |
|-------------------------------------|-------------------------------------|---------------------------------------|
| Application Temperature             |                                     | -10°F to 120°F (-23°C to 50°C)*       |
| Gel Time                            | Internal                            | 6-11 minutes @ 68°F (20°C)            |
| Overcoating Time                    | Internal                            | 45 minutes @ 68°F (20°C)              |
| Water Absorption                    | ASTM D570-81                        | < 3.5%                                |
| Water Vapor Transmission            | ASTM E96-00                         | 1 gm/m <sup>2</sup> /day (≤1.0 perms) |
| Tensile Strength (typical)          | ASTM D638-91                        | 1,700 psi (11.8MPa)                   |
| Elongation At Break (typical)       | ASTM D638-91                        | 130%                                  |
| Low Temperature Flexibility         | CAN CGSB                            |                                       |
| @ -13°F (-25°C)                     | 37.5 M89, ¼ inch Mandrel            | Pass                                  |
| Resistance To Aggregate Indentation | BD 47                               | Recovered Thickness**                 |
| @ 104°F (40°C)                      |                                     | 100%                                  |
| @ 104°F (40°C)                      |                                     | 100%                                  |
| @ 257°F (125°C)                     |                                     | 100%                                  |
| Dynamic Ballast Impact              | SNCF 181kN/2x10 <sup>6</sup> cycles | No damage or leak                     |

Tensile Bond Strength

(minimum)

|                    |               |                              |
|--------------------|---------------|------------------------------|
| Concrete           | ASTM D4541-89 | 100psi (0.7Mpa)              |
| Steel              | ASTM D4541-89 | 290 psi (2.0 MPa)            |
| Shore Hardness     | ASTM D6132    | ≥40D                         |
| Volume Resistivity |               | 8.27E+14 Ohms-cm<br>(ER295A) |
| Surface Resistance |               | 2.45E+13 Ohms (ER295A)       |

\* Temperature extremes require additional site dosing. Please consult with GCP Technical services.

\*\* Samples subsequently tested to resistance to chloride ion penetration. Result: 0% increase in chloride ion penetration.

GCP also provides a wide range of polymer overlays, high friction surfacing, pavement marking and color demarcation systems for highways and private use. Please contact us for further information.

**gcpat.com | North America Customer Service: 1-866-333-3726**

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