

Enviro Shield

HYDROSTATIC BARRIER AND MOISTURE TOLERANT PRIMER

Enviro Shield is a two-part, water-based epoxy that acts as a hydrostatic barrier and primer. Enviro Shield can be used in applications requiring a hydrostatic barrier against water ingress from the negative side. In addition, Enviro Shield can also be used as a moisture tolerant primer under a range of EnviroSystems membranes and UV stable topcoats. It is suitable for commercial, industrial, and residential applications.

FEATURES AND BENEFITS

- Bonds to damp and green concrete
- Negative side barrier
- Resistant to a wide range of chemicals
- Rising damp control
- High solids content
- Low VOC content
- Easy to apply
- Water based

APPLICATION SOLUTIONS

Negative side pressure up to 25m head:

- Treatment and mitigation of rising damp
- Below grade basements and car parks
- Barrier coat for water tank membranes
- Tunnels and lift wells
- Retaining walls

Negative side pressure up to 3m head:

- Efflorescence control
- Treatment and mitigation of rising damp

Positive side pressure:

- Barrier coat under subsequent membranes
- Window reveals

Primer:

- Self-priming barrier coat
- Internal and external wet areas
- Retaining walls
- Enviro Shield can also be used to promote adhesion when a premium priming solution is required.

PRODUCT INFORMATION

Packaging: Available in 4L and 20L kits. Kits ratio is 1:1 (A:B) by volume.

Colour: Grey

Shelf life: Enviro Shield can be stored in its original sealed containers for 12 months. Once opened and resealed for later use, the shelf life could vary depending on storage conditions. Always check product quality before using after prolonged periods of storage.

Storage conditions: Enviro Shield should be stored in dry conditions, where it is protected from direct sunlight and at a substrate temperature between +5°C and +35°C.



FLOORING



Directions for Use

SUBSTRATE PREPARATION

All defective host substrate must be removed prior to application. Defective material includes cracked or structurally weakened surfaces and chloride contaminated and carbonated concrete. A concrete corrosion expert must be consulted for critical projects or structural applications. Surfaces must be clean, dry and free from contamination such as dust, laitance, grease, coatings and curing compounds. Remove all sharp edges including screws, nails and concrete/mortar projections. Large holes and pits should be filled with Enviro Mortar 45. A cementitious skim coat may also be required to provide an even profile.

Shot-blasting, scarification, mechanical chipping or high-pressure water blasting may be used to achieve a recommended minimum CSP3 surface finish.

All surfaces must be free of dust, oils, and surface contaminants. This may require steam cleaning or high-pressure water blasting.

Enviro Shield is suitable for use over the following substrates:

- ④ New concrete - cured for min. 28 days under 6% moisture (gravimetric method)
- ④ Concrete blockwork - cured for min. 28 days
- ④ Renders and screeds - cured for min. 7 days under 6% moisture (gravimetric method)
- ④ Compressed fibre cement (min. 15mm)
- ④ Plasterboard walls - wet area grade only (min. 10mm)
- ④ Masonry and stone surfaces

NOTE: Substrate moisture content measured using gravimetric testing. As measured using Tramex CME 4 Moisture Meter.

MIXING

Add Enviro Shield Part B grey liquid hardener to the Enviro Shield Part A base, thoroughly mix with a mechanical mixer at low speed (less than 400 RPM) prior to application. Mix for 5 minutes or until uniform. Allow to stand for 5 minutes after mixing and then mix again for a minute. When using Enviro Shield as a primer, the first coat may be diluted up to 20% with water for increased penetration into porous materials such as blockwork. See table below for mixing rates.

DILUTION RATE	4L KIT	20L KIT
5%	200mL water	1L water
10%	400mL water	2L water
20%	800mL water	4L water

APPLICATION

Enviro Shield can be applied using brush, roller or airless & conventional spray. Only mix sufficient material for use within the pot-life of 1 hour, as mixed material will not be suitable for use beyond this period. Apply sufficient coats of Enviro Shield to achieve the appropriate minimum Dry Film Thickness (DFT). Please see Coverage Rate Table for details. Precautions: In enclosed spaces such as tanks, basements, lift wells, where there is poor air flow and damp conditions, or where the relative humidity is greater than 85%, forced ventilation such as fans is recommended while the product is drying. Do not apply if the temperature of the air or substrate is below 10°C.

IMPORTANT: Allow each coat to sufficiently dry before proceeding to the next coat. Please see Coverage rate section for further details. Minimum application requirements set forth by the NCC and relevant Australian Standards should be followed when applying EnviroSystems products. General Maintenance Procedures and a regular inspection and maintenance plan must be adopted from the date of commissioning to identify and rectify localised point damage.

In hot weather, avoid extremes and work in the morning or evening once substrate has cooled. Shade the work area, and keep product stored in cool conditions out of direct sunlight.

In cold weather, keep all products stored out of the cold, especially products not intended to be frozen. Warming materials to around 30°C can help but products may react to the substrate temperature rapidly when applied. Use heated tents around work areas.

In high humidity and wet weather, do not apply when rain is imminent, check the forecasts. Use tents or protection to cover areas to be worked on. Use fans or driers and ventilation to remove moisture and lower humidity, do not directly blow onto product.

OVERCOATING

When priming, it may be prudent to broadcast Aggregate/Extender into the "wet" primer to enhance holdup of the subsequent applied topping. If curing in ideal conditions, 23°C and 50% RH, over coating can be undertaken after 8 hours minimum and 24 hours maximum.

CLEANING

Enviro Shield should be removed from all tools and equipment, prior to hardening, with water. Cured material can only be removed mechanically. Observe all OH&S and Safety Data Sheet information pertaining to safe usage and handling of solvents.

Product Data

PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	RESULTS
Volatiles Organic Compounds (VOCs)	ASTM D3960-05	<13g/L
Pot Life	AS1145.3	40 - 60 minutes

COVERAGE RATE

TYPE	LITRES/m ²	m ² /20L KIT	WFT/COAT	NUMBER OF COATS	FINISHED DFT (ALL COATS)
Primer Diluted, 20% Water	0.32	72	320µm	1	140µm
Primer Undiluted	0.32	60	320µm	1	160µm
Positive	0.32	60	320µm	1	160µm
Negative, up to 3m Head	0.66	30	320µm	2	320µm
Negative, 3 - 25m Head	1.0	20	320µm	3	480µm

NOTE: WFT = Wet Film Thickness. DFT = Dry Film Thickness. WFT Gauges are available from EnviroSystems upon request.
 Coverage dependent on weather and substrate conditions.

CURING TIME

TEMPERATURE	MINIMUM OVERCOATING TIME	MAXIMUM OVERCOATING TIME	FULL CURE
10°C @ 50%RH	24 hours	72 hours	7 days
15°C @ 50%RH	24 hours	48 hours	7 days
25°C @ 50%RH	8 hours	24 hours	7 days

Variations in temperature and humidity can affect the cure rate of the coating. The above chart should be used as a guide only to determine the approximate rate of cure. Other factors can also influence the cure rate such as substrate temperature, enclosed environments and wind conditions.

COMPATIBLE MEMBRANES

Enviro Shield is not suitable for use in areas subject to UV exposure unless over coated.

Enviro Shield can be over coated with the following approved membranes and UV stable top coats:

- Enviro 700X
- Enviro Clad
- Enviro 200P Ultra
- HP Sprayed Elastomer Series
- Enviro 500 EXT

The overcoating window (time from application) will ultimately depend on the prevailing environmental conditions.



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HEALTH & SAFETY ADVICE

Cured Enviro Shield films are environmentally friendly. Always provide adequate ventilation and wear appropriate Personal Protection Equipment (PPE) during use. If swallowed, DO NOT induce vomiting, have plenty of water or milk. If in eyes, flush with water for 15 minutes. Seek immediate medical advice. Wash off splashes of material on the skin with clean water and soap. If irritation occurs seek medical advice. Refer to the Safety Data Sheet for full safety and handling procedures.

NOTE: Safety Data Sheets are available upon request.

KEEP OUT OF REACH OF CHILDREN

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use of application and no warranty as to accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, his representative or the contractor is responsible for checking the suitability of products for their intended use.

NOTE: Field service where provided, does not constitute supervisory responsibility. Suggestions made by Enviro systems either verbally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Enviro systems are responsible for carrying out procedures appropriate to a specific application

NOTE: All products manufactured by Enviro systems comply with the description and properties indicated in the technical data sheet that was current at the date of manufacture.