



# Enviro Shield

## Hydrostatic Barrier & Moisture Tolerant Primer



### DESCRIPTION

Enviro Shield is a two part, water based epoxy that acts as a hydrostatic barrier and primer coating. 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 top coats. It is suitable for commercial, industrial and residential applications.

### FEATURES

- Bonds to damp and green concrete < 25% MC
- Resistant to a wide range of chemicals
- Negative side barrier
- Rising damp control
- High solids content
- Low VOC content
- Easy to apply
- Water based

### TYPICAL USES

Enviro Shield can be used to provide a hydrostatic barrier coating in the following situations:

#### Negative side pressure up to 25m head

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

#### Negative side pressure up to 3m head

Enviro Shield can be used to provide either a negative or positive hydrostatic barrier coating under low pressure (up to 3m head) in the following situations:

- Efflorescence control
- Treatment and mitigation of rising damp

#### Positive side pressure

- Barrier coat under subsequent membranes.

#### Primer

Enviro Shield can be used as a moisture tolerant primer in the following situations:

- 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

### PHYSICAL PROPERTIES

Mix ratio	1:1 by volume
Cure time	5 days at 23°C, 50% RH
Pot-life	1 hour at 23°C, 50% RH
Re-coat time (min)	4 hours at 23°C, 50% RH
Re-coat time (max)	3 days at 23°C, 50% RH
Solids Content	50% by volume

### SUBSTRATE PREPARATION

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, concrete and mortar projections and other foreign matter. Large holes and pits should be filled with Enviro Mortar 45. A cementitious skim coat may be also be required to provide an even profile.

Some substrate preparations may initially require mechanical grinding in order to provide an adequate and clean surface profile. Enviro Shield is suitable for use over new concrete, concrete blockwork, compressed and lightweight CFC sheeting and most masonry or stone surfaces.

**NOTE:** Do not apply Enviro Shield to any concrete that has received concrete curing compounds.

For further information on substrate preparation please consult EnviroSystems.

[customerservice@envirosystems.com.au](mailto:customerservice@envirosystems.com.au)





## MIXING

Add Enviro Shield Part B (grey liquid hardener) to the Enviro Shield Part A (base). Mix using slow speed (max 400 rpm) mechanical mixing equipment with a suitable paste type mixing paddle attached.

Mix for 5 minutes or until uniform. Allow to stand 5 minutes after mixing and then mix again for a minute. When using Enviro Shield as a primer, for increased penetration into porous materials such as blockwork, the first coat may be diluted up to 20% with water.

See table below for Mixing Rates.

	Dilution Rate	4L Kit	20L Kit
Water	5%	200ml	1L
	10%	400ml	2L
	20%	800ml	4L

## 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 refer to Application Rates table.

**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 are 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.

For further information regarding the application of Enviro Shield or the application of decorative coatings over Enviro Shield in moisture barrier applications, such as basements, or for project specific advice please consult EnviroSystems.

[customerservice@envirosystems.com.au](mailto:customerservice@envirosystems.com.au)

## APPLICATION RATES

Use	Rate WFT microns (per coat)	Number of Coats	Finished DFT
<b>Primer diluted, 20% water</b>	320 microns	1	140 microns
<b>Primer undiluted</b>	320 microns	1	160 microns

<b>Positive</b>	320 microns	1	160 microns
<b>Negative, up to 3m head</b>	320 microns	2	320 microns
<b>Negative, 3-25m head</b>	320 microns	3	480 microns

**NOTE:** WFT = Wet Film Thickness  
DFT = Dry Film Thickness  
1.0mm = 1000 microns

WFT Gauges are available from EnviroSystems upon request.

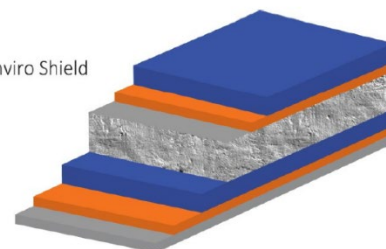
## EFFLORESCENCE

Efflorescence is caused by moisture ingress moving through a wall or floor, dissolving any mineral salts that may be present resulting in a mineral salt solution on the surface. When the water in the solution evaporates it leaves behind a white deposit.

Poor efflorescence control can lead to weakening of the concrete and eventually a reduction in the ability of the concrete to adhere and protect the reinforcement from corrosion.

### Recommended Efflorescence Control System

- Membrane
- Efflorescence Control - Enviro Shield
- Screed
- Membrane
- Primer - Enviro Shield
- Substrate



## RECOATING

Enviro Shield can be recoated after allowing it to dry for at least 4 hours (temp 23°C and 50% R.H.) and up to 3 days. If temperatures are lower and humidity is higher recoat window will be affected.

It is recommended for the applicator to confirm the temperature and humidity at application time to assist in determining whether curing has reached a sufficient stage for recoating.

## OVER COATING

If curing in ideal conditions, 23°C and 50% RH, over coating can be undertaken after 8 hrs. If curing in damp, rainy or cold conditions (<20°C), and with poor airflow, an extra curing time is recommended.



It is recommended for the applicator to confirm the temperature and humidity prior to over coating, to assist in determining whether curing has reached a sufficient stage and is ready to accept over coating.

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, 700X SL & 700X RW
- Enviro 780 UVS
- Enviro 200P Ultra
- Enviro 200P EXT
- Enviro 850 TC
- Enviro Clad
- HP Sprayed Elastomer Series

The over coating window (time from application) will ultimately depend on the prevailing environmental conditions. The maximum recommended overcoat window is 72 hours.

For further information regarding over coating of Enviro Shield please consult EnviroSystems. [customerservice@envirosystems.com.au](mailto:customerservice@envirosystems.com.au)

## PACKAGING & COLOURS

Enviro Shield is supplied in 20L kits (Part A: 10L & Part B: 10L) and 4L kits (Part A: 2L and Part B: 2L) and is proportioned ready for mixing. When cured Enviro Shield forms a low sheen, light grey film.

## CLEANING

Enviro Shield should be removed from all tools and equipment, as soon as possible with water. Cured material can only be removed mechanically.

## SHELF LIFE

Shelf life is 12 months in original unopened container provided it is stored between 7°C and 20°C. Do not store below 7°C. If unsure, please contact EnviroSystems for advice.

## COVERAGE

The coverage of Enviro Shield will depend upon substrate porosity and its condition. When prepared in accordance with the substrate preparation instructions above, the following average coverage rates should be expected.

<b>Prime Coat</b>	140 microns DFT -
<b>Diluted 20% with water</b>	0.32 litre/m <sup>2</sup> , 72m <sup>2</sup> per 20L kit

<b>Prime Coat Undiluted</b>	160 microns DFT - 0.32 litre/m <sup>2</sup> , 60m <sup>2</sup> per 20L kit
-----------------------------	---

<b>Positive Side</b>	160 microns DFT - 0.32 litre/m <sup>2</sup> , 60m <sup>2</sup> per 20L kit
----------------------	---

<b>Negative Side up to 3m head</b>	320 microns DFT - 0.66 litre/m <sup>2</sup> , 30m <sup>2</sup> per 20L kit
------------------------------------	---

<b>Negative Side up to 25m head</b>	480 microns DFT - 1.0 litre/m <sup>2</sup> , 20m <sup>2</sup> per 20L kit
-------------------------------------	--

## 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 by emailing [customerservice@envirosystems.com.au](mailto:customerservice@envirosystems.com.au)

## We're here to help you!

It is a good idea to keep a journal of your waterproofing job, whether big or small.

- Take pictures at all stages of your work, including preparation
- Record the quantity and description of products used with corresponding batch numbers
- Record dates and times of when you applied products, from start to finish

Please do not hesitate to contact us for any questions you may have.

EnviroSystems Technologies Pty Ltd

<b>Address</b>	295 Princes Highway, St Peters NSW 2044 Sydney, Australia
<b>Phone</b>	+61 2 8595 8699
<b>Fax</b>	+61 2 8595 8660
<b>Email</b>	<a href="mailto:customerservice@envirosystems.com.au">customerservice@envirosystems.com.au</a>
<b>Web</b>	<a href="http://www.envirosystems.com.au">www.envirosystems.com.au</a>

**ISSUE** 2  
**DATE** August 2017



### 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 EnviroSystems Technologies either verbally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not EnviroSystems Technologies are responsible for carrying out procedures appropriate to a specific application.