

Hi-Seal WP-44

Description

Happilac Hi-Seal WP-44 is a two component elastomeric polymer modified cementitious coating that provides a hard wearing, seamless, waterproof membrane for roofs, resurface concretes, masonry surfaces, foundation protection and most other constructed areas. It is also an effective barrier to waterborne salts and atmospheric gases.

Recommended For

Happilac Hi-Seal WP-44 is recommended for water retaining structures such as water reservoirs, canals, swimming pools, abattoirs, bathrooms, showers, podiums, terraces, balconies, immersed and subterranean areas. It is also suitable for used on pedestrian walkways in marine areas.

Priming

Detailing all critical areas such as joints, junctions, movement zones, penetration and drainage points are to be correctly sealed and detailed prior to membrane application.

Key Features

- It provides a unique durable membrane while maintaining flexible and permanent waterproofing properties.
- It is fast drying and possesses high adhesion and suitable for humid and cool environments to filling after 24 hours.
- It provides protection to concrete surfaces from carbonation and chloride attack. A 1mm coating provides anti carbonation cover equivalent to over 80cm of concrete.
- It can be applied to 24 hours old concrete, thereby giving immediate protection while conventional coating requires 7-28 days for curing of concrete.
- It is breathable and allows transmission of water vapor from interior of building.
- It is water based, free of solvents, non-toxic, non-flammable and suitable for contact with potable water.
- Its high elasticity can accommodate substrate dynamic cracks.
- It has crack bridging capability, even on existent cracks or cracks that might open after the product application.
- It is capable of accommodating substrate flexural stains.

Technical Details

Appearance	:	Liquid white, dry light grey
Drying based on ambient conditions at 25°C	:	
Recoat	:	2-4hours
Tilting or Toppings over	:	24 hours
Mixing ratio 1 parts liquid	:	3 parts powder (by volume)
Pot life	:	30 minutes at 40 degree C
Coverage	:	1.8kg/m ² in 2 coats at 1 mm thickness
Bond strength	:	≥2.0MPa
Compressive strength	:	23-25N/mm ²
Tensile strength	:	≥3.0MPa
Flexural strength	:	10-12N/mm ²
Adhesion to Concrete	:	1.5
Chloride ion diffusivity	:	Not measureable after 24 months testing
Layer Thickness for effective waterproofing	:	3-4mm in total(2mm max. per coat) water penetration under hydrostatic pressure
Positive hydrostatic pressure	:	Tested at 0.7MPa without absorption
Negative hydrostatic pressure	:	Tested at 0.1 MPa without leakage

Surface Preparation

Surfaces must be prepared thoroughly before commencing application. All substrates must be structurally sound, stable, dry and clean. Rough surfaces are to be filled or evened. All surfaces must be free from protruding surfaces, loose materials, curing membranes/agents, release agents, wax residues, foreign particles, algae and moss, grime, oils, animal fats or grease remains. Structurally unsound layers and surface contaminants are to be mechanically removed by abrasive blasting, blast tracking, grinding or equivalent methods.

Application Guide

Saturate the concrete surface with clean water; apply the first coat while the surface is still damp but free standing water. Apply using a short still bristle brush or roller at a minimum of 0.5-1mm per coat. Leave to dry for 2-4 hours. The second coat can be rubbed down with a soft dry sponge. Spray or trowel application is acceptable providing the mixing ratio is adjusted to achieve the right consistency.

Mixing:

Hi-Seal WP-44 part A (powder) should be added slowly to part B(liquid) during the mixing process which should be carried out using a mixing paddle attached to a slow speed power drill of 300 to 600 rpm. Mixing should remain for at least 2 minutes until the material becomes smooth in consistency even in color and free from lumps. Don't add water or rework a stiffened mix by adding water. Use mixed material within 30-40 minutes.

Cleaning:

Hi-Seal WP-44 should be removed from tools and equipment immediately after use with water. Hardened material can be removed mechanically.

Available Packs and Storage

The product is supplied in:

Hi-Seal WP-44 Powder:	15kg bag
Hi-Seal WP-44 Liquid:	5 liter can

The shelf life of product is as follows, provided the product is stored in a dry place in original sealed packing.

Powder component:	6 months
Liquid component:	12 months

Protect from direct sunlight and store at 5-30°C

Health and Safety Notes

- As with all chemicals, ample care should be taken during use and avoid unnecessary contact.
- In enclosed area , provide ventilation.
- Treat splashes to eyes and skin immediately within 15 minutes and obtain prompt medical attention.
- For detailed information on health and safety hazards and precautions for use of this product, we refer to the Material Safety Data Sheet (MSDS).

CAUTION: Scraping/sanding off previously painted surfaces may release lead dust or fumes. Lead is highly toxic; take protective measures thoroughly when rubbing off the old surfaces.