

StrataPrime Porosity

Aromatic polyurethane primer resin for porous substrates

Product overview

StrataPrime Porosity is a single-component, aromatic, moisture-cured polyurethane resin for sealing and priming concrete and cementitious substrates.

This resin cures by air moisture giving a tough and flexible coating. It is an excellent polyurethane primer for substrates where porosity must be sealed with a penetrating resin.

Features & benefits

- One-component primer
- Moisture-cured
- Ideal for cementitious substrates
- Easy to install
- Can also be used on polyester / fibreglass slabs
- CE marked (EN 13813 SR-B2,0-AR0,5-IR14,7)

Technical characteristics: pre-application

Properties	Unit / Description
Chemical description	Moisture-cured, monocomponent resin, in organic solvent.
Physical state	Liquid
Packaging	Metal container: 4 kg, 20 kg
Non-volatile content	60%
Flash point (ASTM D 93)	36°C
Colour	Slightly yellow
Density (25°C)	0.95 g/cm³
Viscosity (10°C)	300 mPa.s
Viscosity (20°C)	170 mPa.s
Viscosity (30°C)	110 mPa.s
VOC content	393 g/l / 40%
VOC class as per 2004/42/EC	Product subclass: h2 Consolidating primers, solvent based Phase II limit from 01/01/2010: 500 g/l
Pot life (1 kg, 25°C, 60% hr)	2 hours
Storage	Keep at a temperature below 35°C, away from heat and ignition sources
Use before	Up to 12 months after date of manufacture

Technical characteristics: final product

Properties	Unit / Description	
Final state	Solid film	
Colour	Colourless to slightly yellow	
Shore hardness (ISO 868)	60D	
Elongation / Tensile stress	2%	25 MPa
	4%	35 MPa
	5%	36 MPa
Max elongation	5%	
Max tensile strength	36 MPa	
Tensile strength	4.1 MPa	
Adhesion (concrete)	50 MPa	
Abrasion (Taber, 1000 cycles, CS-10, UNE 48250)	19 mg	
Water absorption	<1% by weight	
UV resistance	StrataPrime Porosity is an aromatic PU-based product. It will turn to yellow when exposed to sunlight but this discolouration does not affect the product's mechanical properties.	
Thermal resistance	Stable up to 80°C	

Chemical resistance - permanent contact

Chemical (7 days, 80°C)	Result (0=worst, 5=best)
Water	5
Salt solution (saturated)	5
Xylenes	3
Ethyl acetate	2
Isopropyl alcohol	2
Sodium hydroxide (40 g/L)	5
Hydrogen peroxide (33%) - 7 days, 25°C	3
Sulphuric acid (10%)	4
Bleach	4
Ammonia (3%)	4
Diesel	4
Hydrochloric acid (3%)	3

Chemical resistance - surface contact

Chemical (24 hr, room temp)	Result (0=worst, 5=best)
Water	5
Ammonia (3%)	5
Isopropyl alcohol	1
Sodium hydroxide (40 g/L)	4
Hydrogen peroxide (33%)	5
Sulphuric acid (10%)	5
Xylene	4
Hydrochloric acid (5% HCl)	5
Ethyl acetate	1
Bleach	4
Diesel	4
Engine lubricant	5
Methyl ethyl ketone	0
Butyl acetate	2

Substrate and environmental conditions

In order to ensure good adhesion, the substrate must be cohesive and compact (min 1.5 N/mm² pull-off test), clean, dry, with no dust, laitance or loose material. If previous blisters are detected, they must be repaired before application.

The substrate temperature should be between 0°C and 30°C. Higher temperatures may give rise to bubble formation under the coating surface, or an uneven film due to the fast solvent evaporation.

Application

Apply StrataPrime Porosity by roller, brush or airless spraying equipment.

Although not strictly necessary, it is recommended that the entire contents of the can is used during application. If not, ensure that any remaining product is kept tightly sealed after use.

StrataPrime Porosity is supplied ready to use. However, it can also be diluted with up to 25% of recommended solvent if required during the application of the first coat. Non-recommended solvents must not be used for dilution. The typical application rate for this product is from 100 to 300 g/m².

Curing time

Curing time will be dependent on environmental conditions. The higher the temperature and humidity are, the faster StrataPrime Porosity will cure. The following table gives approximate values of curing for 500 g/m² (wet film).

Environmental conditions	Dry to touch
35°C, 90% RH	1 hour
25°C, 50% RH	4 hours
35°C, 20% RH	4 hours
7°C, 50% RH	8 hours

Reapplication

It is possible to apply a second coat or to resume the job with the following coating from the moment when it is dry to touch up to 48 hours afterwards. It is important to ensure all the solvent has disappeared, in order to avoid bubble development under the sealer surface.

Tool cleaning

Tools can be cleaned with a recommended solvent cleaner. Please contact Strata Technical Services for further guidance.

Health and safety

StrataPrime Porosity contains isocyanates and flammable solvents. Always follow the instructions provided in the material safety data sheet and take the precautions described there. As a general rule, suitable ventilation must be ensured during application and all ignition sources must be avoided. This product is intended for professional use only and should only be used in the way described on this datasheet.

Environmental considerations

Empty containers must be handled taking the same precautions as if they were full. Containers must be considered as hazardous waste, to be transferred to an authorized waste manager. Waste containers with small amounts of uncured product can be allowed to dry before sending to treatment.

Further information

The information contained in this datasheet, along with any advice provided (either written or verbal) through testing are based on our experience and do not constitute any product guarantee for the installer.

We recommend that all of the information provided is carefully studied before proceeding with application, and strongly advise that suitable tests are carried out onsite before application in order to determine the suitability and compatibility for the specific project.

The application, use and processing of our products are beyond our control, and therefore under the exclusive responsibility of the installer. As a result, the installer will be solely responsible for any damage derived from the partial or complete disregard of our guidance or the general mis-use of any of our materials.