PRODUCT DATA SHEET

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StrataPrime HP

Humidity primer for use on damp wood & concrete substrates

Product overview

StrataPrime HP is a two-component water-based epoxy primer for use on substrates with a moisture content in excess of 4%, or where upward water pressure is expected after application. Once mixed, the product forms a crystalline material with high adhesion and tensile strength.

StrataPrime HP effectively blocks residual moisture flow and helps prevent any blistering of the polyurethane coating applied on top. It should not be used when any substrate moisture has a phreatic origin, with pressures greater than 1.5 N/mm^2.

Features & benefits

- Helps to minimises adhesion failures on damp substrates
- Avoids blistering due to water pressure from below
- Minimises air bubbles caused by water pressure that cannot be released
- Helps ensure substrate compatibility with single-component, moisture-cured polyurethane resins
- High adhesion and tensile strength

Substrate and environmental conditions

In order to achieve a good penetration, the supporting substrate must be clean and dry, free from dust, loose particles, oils, organic residues and laitance. The surface must also be flat, even and regular and any cracks or fissures must be repaired before installation can take place. The substrate must also be compact and cohesive, with any pull-off tests showing a minimum resistance of 1.4 N/mm^2.

The substrate temperature should be between 15°C and 45°C. Application under low temperature or high humidity conditions is not recommended. At higher temperatures, please consult Strata Technical Services as particular precautionary measures may be required.

Concrete surfaces must be previously prepared by sandblasting or any other suitable means. Remove all dust and loose material before priming.

Technical characteristics: pre-application

Properties	Unit / Description	
	Component A	Component B
Chemical description	Epoxy resin	Aqueous polyamine solution
Physical state	Liquid	Liquid
Packaging	Metal container: 1.4 kg, 5.2 kg	Plastic container: 3.6 kg, 12.8 kg
Non-volatile content	Approx 100%	31%
Flash point (ASTM D 93)	>100°C	>100°C
Colour	Colourless	Slightly yellow
Density (25°C)	1.14 g/cm^3	1.05 g/cm^3
Viscosity (5°C)	500 mPa.s	1,800 mPa.s
Viscosity (15°C)	300 mPa.s	500 mPa.s
Viscosity (25°C)	150 mPa.s	280 mPa.s
Viscosity (35°C)	70 mPa.s	170 mPa.s
VOC content	0	0
A/B mixing ratio	A=100 / B=244 by weight A=100 / B=266 by volume	
Mixture properties	Density: 1.07 g/cm^3 (23°C) Viscosity: 1,300 mPa-s (23°C) Non-volatile content: 51% Colour: Milky white	
Pot life (100 g/min)	90 hours @ 10°C 45 hours @ 25°C 30 hours @ 35°C	
Storage	Keep at a temperature between 10°C and 30°C as the product is sensitive to frost. Component A may crystallise if stored for extended periods under certain conditions. If this occurs, it can be restored by heating to 70°C - 80°C and stirring thoroughly	
Use before	Up to 12 months after date of manufacture	

Mixing and application

Stir and thoroughly homogenise components A and B using a low-speed stirrer. Once mixed correctly, the material will turns to a whitish, milky dispersion. After application, the milky layer should turn to a colourless film within one or two hours, depending on the temperature, humidity and thickness.

Apply 200 to 500 g/m^2 by brush or roller. Higher quantities may lead to white/translucent areas and poor appearance. On very absorbent substrates, dilution is allowed - use 10 to 20% water. On hot surfaces (e.g. recently exposed to sun), dampen the surface before starting application. Application in excess heat can lead to resin retraction upon water evaporation. Do not exceed the recommended application quantities. If some white spots appear after curing, they must be removed before application of following coats.

Recommended coverage rate

1). Diluted 10-20% in water – 300-500 g/m^2

2). Undiluted - 300-500 g/m^2

Curing time

Curing time will be dependent on environmental conditions. High temperature and low humidity favours the drying process. Please note that high humidity conditions can cause the initial milky film to remain white and sticky.

The following table gives the approximate curing time for 500 g/m^2 of applied product.

Environmental conditions	Dry to touch
25°C, 5% RH	6 hours
25°C, 5% RH	10 hours (milky)
35°C, 5% RH	2 hours
6°C, 5% RH	>100 hours
-15°C, 5% RH	>100 hours (always milky)

Reapplication

It is possible to apply a second coat of StrataPrime HP as soon as the first coat is dry to touch. Do not wait any longer than 24 hours after the first coat has been applied.

Tool cleaning

Component A can be cleaned from tools using any solvent recommended by Strata Waterproofing. Component B and the unreacted AB mixture can be cleaned with water.

Return to service

When used as a primer for polyurethane waterproofing projects where appearance is particularly important, we recommend allowing StrataPrime HP to fully cure and dry, by measuring the moisture content on the primer film if necessary. Please note that, if some of the initial water remains when a moisture-curing polyurethane is applied, some blisters may subsequently develop.

Technical characteristics: final product

Properties	Unit / Description
Final state	Solid hard film
Colour	Light yellow
Shore hardness (ISO 868)	64D
Solid film density	1.3 g/cm^3
Tear resistance	7.2 N/mm
Elongation at break	3.2%
Tensile strength (EN ISO 527-3)	39 MPa
Adhesion (concrete)	>4.9 MPa (Force - adhesion strength)
UV resistance	StrataPrime HP shows a very slight yellowing upon UV exposure, but this does not affect the product's mechanical properties.
Thermal resistance	Stable up to 80°C
Gloss (60°C)	14%

Chemical resistance - permanent contact

Chemical (3 days, 80°C)	Weight gain
Water	5%
Methoxypropyl acetate	25%
Isopropyl alcohol	15%
Skydrol	0%
Xylene	10%
Ammonia (3%)	10%
Acetone	35%
Diesel	5%
Hydrogen peroxide	10%
Sodium hydroxide (40 g/L)	10%
Bleach	5%
Sulphuric acid (10% / 50%)	30%
Acetic acid (10%)	15%

Chemical resistance - surface contact

Chemical (24 hr, room temp)	Result (0=not recommended, 5=ok)
Ethyl alcohol	5
Engine oil	5
Vinegar	5
Sulphuric acid (10% / 50%)	4
Isopropyl alcohol	5
Xylene	4
Ammonia (3%)	5
Diesel	5
Acetate acid (10%)	3
Bleach	5
Sodium hydroxide (40 g/L)	5
Acetone	2

Health and safety

StrataPrime HP contains epoxy components which are potentially sensitising. Always follow the instructions and safety precautions provided in the material safety datasheet. As a general rule, suitable skin and eye protection must be worn. This product is intended to be used only in the manner outlined on this datasheet, and should only be installed competent professional users.

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. If any residual product remains in the containers, do not mix it with other substances without checking for possible dangerous reactions. Never mix in volumes larger than 5 litres in order to prevent a potentially dangerous heat evolution.

Trouble shooting

Problem	Observation / Solution
Film remains white and sticky	Is the weather cold or humid? Cold or humid weather can cause a slow reaction rate. Remove / change the primer system

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.

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