Product Data Sheet

Delta Roof Guard Concrete Primer

(DMS802)

A two part water based epoxy primer (humidity primer) is a highly effective penetrative resin, which provides a sound, solid base prior to the application of Delta Roof Guard QC or Roof Guard CP. Delta Roof Guard Concrete Primer will improve adhesion to damp: wood and concrete substrates.

Moist surfaces are troublesome when treated with any synthetic resin, both because of immediate adhesion difficulties and problems arising afterwards because of the upward water pressure.

In many cases, material, and time constraints force applicators to work on less-than-optimal support conditions, and a moisture-addressed product is needed in order to:

- Improves adhesion
- Avoid blistering due to the water pressure from below (support saturation)
- Avoid air bubbles, due to the water vapour pressure which cannot be released (mostly encountered in elastic membrane treatments)
- Incompatibility of the support with one-component, moisture-cured polyurethane resins

Delta Roof Guard Concrete Primer is the best solution as a primer for waterproofing or flooring polyurethane application on supports when moisture content is between 4-12%. This product is not useful where ground water has a pressure greater than 1,5 N/mm2.

Delta Roof Guard Concrete Primer is a 2-component, water-based epoxy resin. Components, once mixed, are totally compatible with moist supports, and the resulting polymerized product is a crystalline material with high adhesion and tensile strength. It effectively blocks residual moisture flow and prevent blistering of the polyurethane coating applied on top.

This product is useful for any kind of waterproofing project, involving polyurethane sealing, such as:

- Roof and wall refurbishments
- Waterproofing treatment of tanks and other water management facilities
- Floorings in moisture-affected environments

Application

- Suitable for cold or warm roof construction
- Balconies and terraces
- Podium decks
- Car parks
- Infrastructure
- Walkways
- Ideal for new construction and refurbishment projects
- Humidity primer for damp timber/wood
- Humidity primer for damp concrete

Benefits

- BROOF(t4)
- BBA Approved
- Minimises adhesion failure
- Penetrates and binds weak concrete substrates
- Strengthens and seals ready for application of Delta Roof Guard CP or QC
- Quick installation times
- Avoiding inherent risks associated with hot works
- Seamless Applications - no joints or fixings
- Compatible with a wide range of substrates

Specifications

- BS 8102:2009 Type C Drained Protection
- J40 (Clause 290) Flexible Sheet Tanking/Damp Proofing
- J31 Liquid Applied Waterproof Coatings/130 Roof Coatings
- J31/10 Warm Deck Roof Coating
- J31/110 Cold Deck Roof Coating
- J31/120 Warm Deck Roof Coating
- J31/130 Inverted Roof Coating
- J31/5 Cold Deck Roof Coating
- J41 – Reinforced Bitumen Roof Coating

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TECHNICAL DATA

Information on the product before application

	Component A	Component B
Chemical Description	Epoxy resin	Aqueous polyamine
Physical State	Liquid	Liquid
Packaging	Metal container 5.2kg	Plastic container 12.8kg

Information on the product before application

	Component A	Component B
Non-Volatile Content (%)	Approx. 100%	31%
Flash Point	>100°C	>100°C
Colour	Colourless	Slightly yellow

Density

Temperature (°C)	Density (g/cm3)	Temperature (°C)	Density (g/cm3)
25	1.14	25	1.05

Viscosity Approximate Values, Brookfield

Temperature (°C)	Viscosity (mPa.s)	Temperature (°C)	Viscosity (mPa.s)
35	70	35	170
25	150	25	280
15	300	15	500
5	500	5	1800

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VOC	0	2g/L, 2%
A/B Mixing Ratio	A=100, B=244 by weight A=100, B=266 by volume	
Mixture Properties	Density: 1.07g/cm3 at 23°C Viscosity: 1300 mPa.s 23°C	
Pot Life	Temperature (°C)	Pot Life (mins)
	10	90
	25	45
	35	30
Storage	Protect product from frost. Keep between 5°C and 30°C. Component A, may crystalise if stored for protracted periods under certain conditions. If this occurs, it can be restored to its original condition by heating it to 70-80°C, and stirring it thoroughly	
Use Before	12 months after manufacturing date	

Information on the final product

Final State	Solid, hard, firm
Colour	Light yellow
Hardness (Shore)	64D
Mechanical Properties	Max. elongation: 3.2% Tensile strength: 30 mPa (EN-ISO 527-3)
Tear Strength	7.2 N/mm
Solid Film Density	1.3g/cm3
UV Resistance	This product shows a very slight yellowing upon UV exposure, without loss of mechanical properties

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Permanent Contact (3 days 80°C)

	Chemical	Weight Gain %
Chemical Resistance	Water	5
	Methaxypropyl acetate	25
	Isopropyl alcohol	15
	Skydrol	0
	Xylene	10
	Ammonia (3%)	10
	Acetone	35
	Diesel	5
	Hydrogen peroxide	10
	Sodium hydroxide (40g/L)	10
	Bleach	5
	Sulphuric acid (10%)	30
	Sulphuric acid (30%)	30
	Sulphuric acid (50%)	30
	Acetic acid (10%)	15

Surface Contact (24h, room temperature 5=ok, 0=not recommended)

Chemical	Result
Water	5
Ethyl alcohol	5
Engine oil	5
Vinegar	5
Hydrogen peroxide	5
Sulphuric acid (10%)	4
Sulphuric acid (30%)	4
Sulphuric acid (50%)	4
Isopropyl alcohol	5
Xylene	4
Ammonia (3%)	5
Diesel	5
Methoxipropyl acetate	5
Acetic acid (10%)	3
Bleach	5
Sodium hydroxide	5
Acetone	2
Skydrol	5

	Surface	Adhesion Strength (mPa)
Adhesion Strength	Concrete	>4.9
Use Temperature		Stable up to 80°C
Gloss (60°)		14%

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Tool Cleaning

Component A can be cleaned using Delta Roof Guard PU Solvent. Component B and the unreacted AB mixture can be cleaned with water.

Mixing

Stir and homogenise thoroughly components A and B together using a low-speed stirrer. When mixed correctly, the product will have a **whitish, milky dispersion**. The milky white layer when cured will become a **colourless film**. Cure time can be between 7-8 hours, depending on temperature, humidity, and thickness.

Application

Apply 200 to 500g/m2, 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), moist the surface before starting application. Application in excess 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.

Please note, that the moisture content of the damp wood/concrete must be no more than between 4-12%.

Curing Time

Data for a 500g/m2 application. High temperature and low humidity favour the drying process. High humidity conditions make the initial milky film to remain white and sticky.

Conditions	Dry to touch (h)
16°C, 50% rh	8
20°C, 50% rh	7

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Reapplication

A second coat may be applied, if needed, from the moment when the first coat is dry to touch, and not later than 24 hours.

Return to Service

When used as a primer for polyurethane waterproofing or flooring jobs where appearance is important, it is recommended to ensure Delta Roof Guard Concrete Primer is fully cured and dry, by measuring the moisture content on the primer film if necessary. If some of the initial water remains when a moisture-curing polyurethane is applied, some blisters may develop.

Safety

Epoxy components are potentially sensitising. Always follow instruction provided in the Material Safety Data Sheet. As a general rule, suitable skin and eye protection must be worn. This product is intended to be used only for the uses and the way here described. This product is to be used only by industrial or professional users. It is not suitable for DIY-type uses.

Environmental Precautions

Empty containers must be handled with the same precautions as if they were full. Treat empty containers as hazardous waste and transfer them to an authorised waste manager. If the contains still have some material left, do not mix with other product before considering the risk of potentially dangerous reactions. Never mix in volumes larger than 5 litres in order to prevent a dangerous heat evolution.

Other Information

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