

Product Data Sheet

Delta Roof Guard QC

(DMS800)



A rapid curing one-component, liquid waterproofing membrane which is laid in a 2-layer system, enabling Delta Roof Guard Glass Fibre Reinforcement to be embedded in the base layer. Offering a faster curing time, as the 2-layer system will allow for inspection of the base layer prior to application of the top coat.

Delta Roof Guard QC (Quick Cure) is a one component liquid semi-thixotropic waterproofing composition, after polymerization gives an elastomeric, cold-applied polyurethane membrane. The membrane cures in a continuous and elastic form, as a totally adhered layer. This waterproofing layer guarantees total water tightness and withstands building movements.

This is a two-layer system, where the base coat is applied and while wet, the Delta Roof Guard Fibre Reinforcement is embedded in the base coat.

When the base coat has cured, inspect base coat for pin holes. If any repairs are required they must be fixed at this stage.

TECHNICAL DATA

Chemical Description	Single component aromatic polyurethane
Physical State	Liquid
Packaging	Metal container: 25kg
Non-Volatile Content (%)	43%
Flash Point	26°C
Available Colours	Grey Colour is unstable under sunlight. This discolouration takes place also in the treated Delta Roof Guard CP membrane (grey turns to green). This change does not impair the membranes mechanical properties.
Density	0.99 g/cm ³ (20°C)
Viscosity Approximate, Brookfield	20°C, s62, 100 rpm: 5 mPa.s
VOC Content	572 g/L, 57%
Storage	Keep at a temperature between 35°C, away from ignition sources and moisture
Use Before	12 months after manufacturing date

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Application

- Suitable for cold or warm roof construction
- Balconies and terraces
- Podium decks
- Car parks
- Infrastructure
- Walkways
- Ideal for new construction and refurbishment projects



Benefits

- BROOF(t4)
- BBA Approved
- Green Roof Approved
- Quick installation times – offering cost savings
- Avoiding inherent risks associated with hot works
- Seamless applications - no joints or fixings
- Exceptionally fast curing
- Compatible with a wide range of substrates
- Easy to maintain
- Minimal on-site disruption



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 final product

Final Appearance	Solid elastomeric membrane										
Colour	According to specification										
Hardness (Shore)	65-70 A (ISO 868)										
Density	1.3g/cm ³										
Tear Strength	14 N/mm (ISO 34-1, Method B)										
Water Vapour Permeability	μ >1000 (EN1931) 20g/m ² day										
Abrasion	14.3mg (Taber, 1000 cycles, CS-10, UNE 48250)										
Mechanical Properties	Maximum elongation 617% Tensile stress: 4.1 mPa (EN-ISO 527-3)										
	<table><thead><tr><th>Elongation (%)</th><th>Stress (mPa)</th></tr></thead><tbody><tr><td>100</td><td>2.0</td></tr><tr><td>200</td><td>2.8</td></tr><tr><td>300</td><td>3.0</td></tr><tr><td>400</td><td>3.4</td></tr></tbody></table>	Elongation (%)	Stress (mPa)	100	2.0	200	2.8	300	3.0	400	3.4
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Permanent Contact (0=worst, 5=best)

Chemical	Conditions	Result	
Chemical Resistance	Water	24h, 25°C	5
	Salt water	24h, 90°C	5
	Hydrochloric acid solutions	200g/l, 24h, 25°C	4
		200g/l, 24h, 80°C	4
		3g/l, 24h, 25°C	5
		3g/l, 24h, 80°C	4
	Sodium hydroxide	40g/l, 24h, 25°C	5
	Ammonia 3%	24h, 25°C	5
	Acetone	24h, 25°C	1
	Ethyl acetate	24h, 25°C	3
	Xylene	24h, 25°C	5
	Motor oil	24h, 25°C	5
Brake fluid	24h, 25°C	2	

Surface	Force (mPa)	
Adhesion	Concrete	2.0
	Ceramics	2.6
	Polyurethane foam	1.4

UV Resistance	Products includes anti UV additives. A colour change is expected due to its aromatic polyurethane composition. This discolouration does not affect its properties
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Thermal Resistance	Stable up to 120°C
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Fire Resistance	BROOF(t4) (external fire exposure test)
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Support Requirements

In order to achieve a good penetration and bonding, support must be:

1. Flat and levelled (Delta Roof Guard QC is self-levelling)
2. Compact and cohesive (pull off test must show a minimum resistance of 1,4 N/mm²)
3. Even and regular surface
4. Free from cracks and fissures. If any, they must be previously repaired
5. Clean and dry, free of dust, loose particles, oils, organic residues, or laitance

Recommended Environmental Conditions

Support temperature should be between 5°C and 30°C. At higher temperatures, specific precautionary measures must be taken. Please follow manufacturer advice. Air temperature must be between 5°C and 30°C. High temperature and moisture conditions can reduce the pot life and lead to bubble formation under the membrane surface, and a deficient appearance.

Mixing and Application Guidelines

Stir and homogenise the product before use. Some of the contents settle during storage and must be redispersed. Allow some minutes to release air bubbles. Stirring should be done at low speed, avoiding mechanical means to prevent bubbles. If needed, the product may be thinned with up to 5% of Delta Roof Guard PU Solvent, as a viscosity adjustment. Never use universal or unknown solvents (e.g. white spirit or alcohols). Apply by roller or brush. Once opened, contents should be used. Unused product will cure in drum.

Curing Time

Curing time is dependent on the environmental conditions. Curing rate increases with temperature and humidity rises. The following table gives a rough estimation of the curing time under diverse conditions for a 1mm coat.

Temperature	rh (%)	Dry to touch (h)
7	50	4
27	60	1

Return to Service

At usual conditions (25°C, 50%) the membrane achieves up to 90% of its final properties in 3 to 4 days. Final hardness is not achieved until 10 or 15 days. It is preferable to wait this time before permanent contact with water is allowed. Reapplication is possible as soon as the curing state of the first coat allows walking and working on it, and it should be done before 48 hours.

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Tool Cleaning

Delta Roof Guard QC can be cleaned with Delta Roof Guard PU Solvent, acetone, and alcohols. Once hardened, it cannot be dissolved. It is recommended to clean equipment as soon as possible.

Safety

Delta Roof Guard QC contains isocyanates and flammable solvents. Always follow the instructions provided in the material safety data sheet and take the precaution described there. As a general rule, suitable ventilation must be ensured, and all ignition sources must be avoided. This product is intended to be used only for the uses and in 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 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 there is some residual product in the containers, do not mix it with other substances without checking for possible dangerous reactions.

Other Information

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