

Product Data Sheet

Delta Roof Guard Colodur

(DMS813)



A high performance one-component aliphatic isocyanate-based polyurethane resin, that cures upon reaction with atmospheric moisture, giving a hard and flexible coatings with good abrasion, scratch and weather resistance. Colodur is an excellent surface protection for use over Delta Roof Guard membranes.

Pigmented Colodur will not allow UV light through. Clear Colodur allows UV light through. Delta Roof Guard Colodur can be delivered colourless or pigmented with standard colour. Colourless product can be pigmented on site by addition of suitable colour paste.

TECHNICAL DATA

Chemical Description	Solvent borne single-component aliphatic polyurethane
Physical State	Liquid
Packaging	Metal container: 4/20kg (Colourless) 5kg/25kg (pigmented)
Non-Volatile Content (%)	>50% (colourless) >70% (pigmented)
Flash Point	36°C (ASTM D 93)
Available colours	Colourless. Pigmented in white and grey. Other colours under request.
Density	Colourless: 0.95g/cm ³ (20°C) Pigmented 1.35 g/cm ³ (20°C)

Viscosity (mPa.s)

	Temperature	Colourless	Pigmented
Viscosity	5°C	890	1000
Brookfield	10°C	660	800
Approx.	20°C	410	600
	30°C	230	300

VOC (g/L i %)	VOC Content: 468.76g/l (colourless), 380g/l (pigmented)
VOC Class	Product subclass: i II solvent based single-component performance products Limit from 01/01/2010: 500g/l
Pot life	Colourless: 6 hours (1kg, 20°C, 50% rh) Pigmented: 2 hours (forms skin on surface)

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Application

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



Benefits

- BROOF(t4)
- BBA Approved
- Gives Protective UV Topcoat to Delta Roof Guard CP and QC
- Pigmented Colodur does not yellow on exposure to sunlight
- Scratch and weather resistance
- Upon reaction with atmospheric moisture gives a hard and flexible coating
- Quick installation time
- One-component



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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Storage	Keep at a temperature below 35°C, away from ignition sources and moisture. Product may be used up to 12 months (colourless) or 6 months (pigmented) after manufacture in its sealed original container.
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Information on the Final Product

Final Appearance	Solid elastomeric membrane
Colour	Colourless. White and grey pigmented Other colours available under request
Hardness (Shore)	53D (colourless) 60D (pigmented)
Mechanical Properties	Colourless Maximum elongation: 173% Tensile strength: 27.4 mPa Pigmented Maximum elongation: 70%
Water Vapour Permeability	2.7g/m ² Day (UNE EN ISO 7783)
Abrasion Resistance	11mg (taber, CS-10.1kg)
UV Resistance	UV Resistant. Aliphatic polyurethane are colour-stable, non-yellowing.
Slip Resistance	With quartz sand spread onto (0.4-0.9mm) at 1kg/m ³ class 3 as per UNE EN 12633-2003
Thermal Resistance/Use Temperature	Stable up to 80°C
SRI Index (ASTM E1980-01)	104.5-105.4 (white pigmented)

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DMS_Roof_Guard_Colodur_V5.1

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Chemical	Conditions	Results
Water	15d, 80°C	5
Salt water (saturated)	5d, 80°C	5
Hydrochloric acid (200g/l)	7d, 80°C	0
Hydrochloric acid (20g/l)	7d, 80°C	3 (discolouration)
Sodium hydroxide (40g/l)	28d, 80°C	4
Sodium hydroxide (4g/l)	28d, 80°C	5
Ammonia	28d, 80°C	5
Bleach, pure	28d, 80°C	3
Bleach (10% solution)	28d, 80°C	4
Xylene	7d, 80°C	0
Isopropyl alcohol	7d, 80°C	0
Engine oil	28d, 80°C	5
Acetic acid (6%)	24h	5
Hydrochloric acid (200g/l)	7d, 80°C	0
Hydrochloric acid (20g/l)	7d, 80°C	3 (discolouration)
Sodium hydroxide (40 g/l)	28d, 80°C	4

Support Requirements

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

1. Flat and levelled (the product 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. Support moisture should be less than 4%. Relative humidity of air should be less than 85% high moisture conditions can lead to bubble formation under the membrane surface.

Preparations

It is necessary to prepare all critical spots. Consult application documents provided by Delta Membrane Systems Limited. For all application on waterproofing membranes re-apply Delta Roof Guard following the relevant reapplication guidelines.

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Mixing

If necessary, dilute with up to 10% Delta Roof Guard PU Solvent for viscosity adjustment. Note: on non-porous substrates, do not dilute the first coat. Stir gently before use. Use low-speed stirring equipment to minimise air bubbles.

Application

Apply by roller, brush or airless spraying equipment. Although not strictly necessary, it is highly recommended to use all of the contents. If not, ensure total sealing of the remainder.

Note: Some roller materials are damaged by the solvent. If in doubt, is recommended to test before use.

For airless spraying equipment, viscosity is likely to need adjustment. Excess pressure, along with high temperature and humidity, may give rise to micro bubbles that makes the surface to look hazy.

For pigmented applications, mix the pigment paste with Delta Roof Guard Colodur by means of a low speed stirrer and wait some minutes to allow bubbles to disappear. Apply the pigmented colour normally. It is recommended to use all the pigmented mixture. Apply, as a general rule, to 200-500g/m²

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 200g/m² coat.

Conditions	Touch Dry (h)
16° C, 50% rh	4
20° C, 50% rh	3.5

Reapplication

A second coat of Delta Roof Guard Colodur can be applied when the first one is no longer sticky. Do not wait more than 24 hours for the next coat application to ensure good intercoat adhesion.

Return to service

At usual conditions (25°C, 50% rh) the membrane can be walked on (light traffic) in 24-48 hours. Depending on final use, it is recommended to wait 7-10 days for very heavy traffic. Final hardness development may take up to 15 days.

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Tool Cleaning

Delta Roof Guard Colodur can be cleaned with Delta Roof Guard Solvent, acetone and alcohols. Once hardened, it cannot be dissolved.

Cleaning and Maintenance

It may be necessary to reapply Delta Roof Guard Colodur layers if they are worn out due to traffic, weather, corrosion, etc. For stain removal, a surface treatment with Delta Roof Guard solvent or isopropyl alcohol may be attempted. Strong acids are totally inadequate. Some solvents may damage the membrane. If this happens, the affected area has to be cut and repaired with a new Delta Roof Guard Colodur application. A final treatment and periodic maintenance with protective wax is suggested.

Safety

Delta Roof Guard Colodur 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 authorised 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

Disclaimer: All data and information contained in these Product/Technical Data Sheets is up-to-date and correct as at the date of issue. The information given is suggested as guidance and should only be used for evaluating your specific application. Delta Membrane Systems Limited cannot control or anticipate the conditions under which this product may be used, each user should review the information in specific context of the planned use. The information contained in these Product/Technical Data Sheets should not be considered a warranty, expressed or implied, including but not limited to a warranty of merchantability or fitness for a particular purpose. In no event shall Delta Membrane Systems Limited be liable for any incidental or consequential damages resulting from the use, misuse or inability to use the product. This exclusion applies regardless of whether such damages are sought based on breach of warranty, breach of contract, negligence, strict liability in tort, or any other legal theory. When in doubt, contact Delta's Technical Team on 01992 523 523.

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