Product Data Sheet
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Roofing

Decothane Ultra

Higher solids, low odour, one component, UV-stable, versatile and easily applied liquid roof waterproofing

Product Description

Sika Liquid Plastics' Decothane Ultra is a high performance polyurethane coating with low odour used as for the Decothane Ultra 15, 20 and 25 systems.

Uses

- For Sika Liquid Plastics waterproofing systems including 15,20 and 25 systems
- For insulated and non-insulated roof designs
- For new construction and refurbishment projects

Characteristics / Advantages

- Low odour, one component polyurethane for sensitive sites
- Totally seamless, single pack liquid applied membrane
- Cold applied – eliminating the risk of fire during installation
- Higher solids, VOC compliant to 2004/42/CE
- BBA certified system
- Highest fire ratings once installed (BROOF (t4) (t1))
- Fast curing, develops early rain resistance
- Excellent adhesion to most conventional substrates*
- Easy and quick application
- Minimal disruption and low maintenance
- Elastic properties – tolerant of thermal movement
- Flexible, impact resistant membrane
- Can be applied all year round above 5°C
- Approved to ETAg 005 (Part 6)
- Product Guarantee and Final Inspection Certificate available if installed by a Sika Liquid Plastics Quality Assured Contractor

*please refer to Substrate Preparation for further information

Tests

Approvals / Standards

- British Board of Agrément (BBA) certified No. 14/5158 10 – 25 years
- European Technical Approval No. ETA – 14/0331
- External fire performance: BROOF (t4) & (t1) & classification under BS 476-3: 1958 EXT.F.AB.
- Odournet – Test Number 456- 2014

Product Data

Appearance

Pigmented liquid
White, Shale Grey, Cloud Grey and Slate Grey

Packaging

15 litres

Storage Conditions / Shelf Life

Store in original, unopened and undamaged sealed packaging in dry conditions at temperatures >0°C and < 25°C. Protect from frost.

A shelf-life of 9 months is achieved when stored in accordance with the above recommendations at a temperature of 20°C. Exposure to higher temperatures will reduce the shelf-life.

Reference should also be made to the storage recommendations of the material safety datasheet.
It is recommended that the product is stored under warm conditions (~20°C) immediately prior to application at temperatures below 10°C.

Chemical Base	One-component moisture-triggered Polyurethane	
Density	1.42 kg/L (+20 °C)	(EN ISO 2811-1)
Solid Content	~ 84.5 % by volume / ~ 88.0 % by weight	
Flash Point	+ 100°C	
Service Temperature	-30 to +80°C (intermittent)	

Resistance

Chemical Resistance	Strong resistance to a wide range of reagents including paraffin, petrol, fuel oil, white spirit, acid rain, detergents and moderate solutions of acids and alkalis. Some low molecular weight alcohols can soften the material. Contact Technical Services for specific recommendations. Salt spray to ASTM B117 (1000 hours continuous exposure) and prohesion testing to ASTM G85- 94; Annex A5 (1000 hours cyclic exposure).

System Information

Maximum Coverage Rates

Waterproofing Only

Ultra 15

Preparatory Layer	Substrate must be prepared according to specification – for further information please contact technical customer services	
Embedment Layer	Decothane Ultra	1.25 L/m^2
	Sika Reemat Premium	
Top Coat	Decothane Ultra	0.50 L/m^2

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Ultra 20

Preparatory Layer	Substrate must be prepared according to specification – for further information please contact technical customer services	
Embedment Layer	Decothane Ultra	1.25 L/m^2
	Sika Reemat Premium	
Top Coat	Decothane Ultra	0.75 L/m^2

Ultra 25

Preparatory Layer	Substrate must be prepared according to specification – for further information please contact technical customer services	
Embedment Layer	Decothane Ultra	1.5 L/m^2
	Sika Reemat Premium	
Top Coat	Decothane Ultra	1.0 L/m^2

Note: The application of the system must be approached as one operation. Always plan for reasonable progress of each coat. Work only so far in advance that the existing surface can be overcoated as the next operation. Finish the coating system completely before progressing to the next area. The ideal time between coats is within 48 hours.

It is not good practice to plan breaks between coats of more than 14 days. For periods longer than this and in cases of accidental or unavoidable delay consult Sika Liquid Plastics for advice. Ensure each application/coat is clean and dry prior to overcoating

At no stage should the Sika Liquid Plastics system or waterproof coating in its finished or intermediate stage be used as a workspace or access floor without adequate protection.

Please note: the above rates are for smooth substrates only.

Typical Test Data - System

	Ultra 15	**Ultra 20**	**Ultra 25**
Dry Film Thickness (mm)	1.5	1.8	2.2
Tensile Strength (N/mm^2)	10	8.5	8.3
Tensile Load (N/25mm)	370	410	530
Tear Force (N)	47	54	66
Tear Strength (N/mm)	30	30	30
Tensile Elongation (%)	65	45	95
Water Vapour Transmission EN1931 Method B - g/m2/day	8.18	6.93	6.07

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Application Details

Substrate Quality

Cementitious substrates

New concrete should be cured for at least 28 days* and should have a pull off strength ≥1.5 N/mm^2. Inspect the concrete, including upstands, all areas should be hammer tested. Concrete must be suitably finished, preferably by wood float or steel pan. A power float finish is acceptable where the surface is prepared to avoid laitance (a tamped finish is not acceptable). The surface finish must be uniform and free from defects such as laitance, voids or honeycombing. The substrate must be of a suitable quality and condition to receive the system. Please refer to specification for further details.

*unless using DTE primer – see DTE Primer Technical Datasheet for further details

Brick and stone

Bricks, blocks and mortar joints must be sound and preferably flush pointed.

Slates, tiles, etc.

Ensure all slates/tiles are sound and securely fastened, replacing obviously broken or missing sections.

Asphalt

Asphalt contains volatiles which can cause bleeding and slight non-detrimental staining. The asphalt must be carefully assessed for moisture and/or air entrapment, grade and surface finish prior to any coating works being carried out.

Bituminous felt

Ensure that bituminous felt is firmly adhered or mechanically fixed to the substrate. Bituminous felt should not contain any badly degraded areas.

Single ply

Decothane Ultra should be used over existing Single Ply membranes only with Metal Primer to act as a migration barrier. Consideration should be given to the method of fixing and the anticipated life term

Bituminous coatings

Bituminous coatings should not have sticky or mobile surfaces, volatile mastic coatings, or old coal tar coatings.

Metals

Metals must be in sound condition.

Timber substrates

Timber and timber based panel roof decks are to be well constructed, in good condition, firmly adhered, and with sufficient fixings for the nature and location of the site.

Paints/Coatings

Ensure the existing material is sound and firmly adhered.

Existing Decothane Systems

The existing Decothane System should still be soundly adhered to the substrate.

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Substrate Preparation

Cementitious substrates

Laitance, other loose friable material and weak concrete must be completely removed and surface defects such as blowholes and voids must be fully exposed. In severe cases use abrasive blast cleaning, grinding or scarifying equipment to achieve a sound surface.

Repairs to the substrate, filling of joints, blowholes/voids and surface levelling must be carried out using appropriate products.

High spots must be removed e.g. by grinding.

Outgassing is a naturally occurring phenomenon of concrete that can produce pinholes in subsequently applied coatings. The concrete must be carefully assessed for moisture content, air entrapment, and surface finish prior to any coating work. Any requirement for priming must also be considered. Installing the membrane either when the concrete temperature is falling or stable can reduce outgassing. It is generally beneficial, therefore, to apply the embedment coat in the late afternoon or evening.

Brick and stone

Thoroughly clean by power wash and allow to dry. Where there is a risk of algal re-growth on absorbent surfaces use Liquid Plastics Biowash. Please refer to the Biowash Technical Datasheet for further information. Repair any spalling, flaking or other damage and replace any missing jointing.

Asphalt

Thoroughly clean using by power wash and allow to dry. All major cracks should be sealed to allow continuity of the Decothane System. Asphalt must be carefully assessed for moisture and/ or air entrapment, grade and surface finish prior to any coating works being carried out. Any priming requirement must also be considered.

Bituminous felt

Thoroughly clean using by power wash and allow to dry. Existing felt surfaces that are badly cracked, degraded or where blistering has occurred, should be locally removed back to a sound, straight cut, well adhered edge and replaced with Carrier Membrane **S-Vap.**

Single ply

The Single Ply should be prepared in accordance with the Specification provided for the individual project.

Bituminous coatings

Remove loose, degraded, tacky or mobile coatings. Apply the Decothane System directly.

Metals

Steelwork is ideally prepared to Sa2½ (Swedish Standard SIS 05: 5900 = 2nd quality BS4232 = S.S.P.C. grade SP10) OR as indicated by the blasting specification which may be of a higher standard. Where blasting to Sa2½ (Swedish Standard SIS 05: 5900 = 2nd quality BS4232 = S.S.P.C. grade SP10) is not permitted alternative blast media or clean metal preparation by pin hammer, etc. is acceptable. Less effective methods of preparation that leave corrosion in-situ may reduce expected life term.

Non-ferrous metals are prepared as follows. Remove any deposits of dust and oxidation and abrade to bright metal. Wire brushing can be used for soft metal such as lead. The surface must be clean and free from grease which, if present, must be removed with a proprietary solution. Wash with detergent, rinse and dry.

Timber substrates

Timber and timber based panel roof decks require a complete layer of Carrier Membrane prior to the application of the chosen system. The substrate should then be treated as a felt roof. Small timber protrusions may be treated directly, provided that the timber is of exterior quality, e.g. marine plywood, (see Substrate Priming for further information).

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Paints/Coatings

Remove loose or degraded coatings returning to a firm, feathered firm edge. Remaining coatings are only be overcoated if soundly adhered. Ensure the surface is clean and free from grease.

Existing Decothane Systems

Clean the membrane using a water jet at approximately 14N/mm^2 (2000 p.s.i) using detergent and rinse thoroughly. Thoroughly clean by power wash and allow to dry.

Note: For the Waiting Time/Overcoating please refer to the technical datasheet of the appropriate cleaner. Other substrates must be tested for their compatibility. If in doubt, apply a test area first.

Substrate Priming

Substrate	**Primer**
Cementitious Substrates	Liquid Plastics Concrete Primer
Brick and Stone	Not required
Slate, tiles etc	Not required
Asphalt	Not required, subject to surface assessment tests
Bituminous Felt	Not required
Single Ply	An adhesion and compatibility test should be carried out by Sika Liquid Plastics.
Bituminous Coatings	Not required
Metals	Liquid Plastics Metal Primer
Timber Substrates	Timber based roof decks require a Carrier Membrane layer of S-VAP. Consult Sika Technical for specific advice. For small areas of exposed timber (i.e. upstands) use Concrete Primer, (exposed timber should be Marine ply to BS 1088 or equivalent).
Paints	Subject to adhesion tests - Metal Primer for alkyd aluminium based solar reflective coatings
Existing Decothane	Liquid Plastics Reactivation Primer

Notes:
Volatile Asphalt, bitumen felt or bitumen coatings may require a coat of Sika Metal Primer to act as barrier. Consult Sika Technical for advice.

For the Coverage Rates/Waiting Time/Overcoating of any products other than Decothane Ultra please refer to the corresponding technical datasheet. Other substrates must be tested for their compatibility. If in doubt, apply a test area first.

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Application Conditions / Limitations

Air Temperature	+5°C min. / +40°C max.
Substrate Temperature	+5°C min. / +60°C max.
Substrate Moisture Content	Wood moisture equivalent (wme) (max): < 28% Please note: Reference should also be made to the appropriate primer technical datasheet.
Relative Air Humidity	20% min. / 85% max.
Dew Point	Beware of condensation. Surface temperature during application and cure must be a minimum of 3°C above dew point.

Application Instructions

Mixing	No mixing required
Application Method	Prior to the application of Decothane Ultra embedment coat the substrate must be prepared and the priming coat must have cured tack-free. For the waiting time/overcoating please refer to the technical datasheet of the appropriate primer. Apply first coat of Decothane Ultra Embedment Coat and roll in the Sika Reemat Premium whilst wet. Ensure there are no bubbles or creases and that the Sika Reemat Premium overlaps by a minimum of 5cm. Prior to the application of a second and third coat of Decothane Ultra the indicated waiting time in the table below should be achieved. Please note, always begin with details prior to waterproofing the horizontal surface. Please refer to the table on the previous page for coverage rates.
Application Tools	For best results apply Decothane Ultra by brush (for details and penetrations) or roller. Rollers should be disposable medium pile simulated sheepskin.
Cleaning of Tools	Clean all tools and application equipment with proprietary cleaning solvent immediately after use. Hardened and/or cured material can only be removed mechanically.
Pot Life	Decothane Ultra is designed for fast drying. High temperatures combined with high air humidity will increase the drying process. Thus, material in opened containers should be applied immediately. In opened containers, the material will form a film within 1 hour.

Curing Details

Applied Product ready for use

Temperature	Relative humidity	Rain resistant	Overcoating Time	Full cure
+5°C	50%	1 hour	overnight	24 hours
+10°C	50%	1 hour	8-10 hours	18-24 hours
+20°C	50%	1 hour	4-6 hours	12-18 hours

Note: Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

**Be aware that heavy rain or rain showers can physically mark or damage the still liquid coating*

Application at heavier than recommended thicknesses may result in a prolonged soft feel to the coating. This will eventually cure.

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Notes on Application / Limitations	Do not apply Decothane Ultra on substrates with rising moisture. Decothane Ultra is not Intended for permanent immersion under water. Material will dry at the surface in around 30 minutes depending on temperature. Always maintain a wet edge and finish surface as work proceeds. Going back to re-work areas that are partially dried may disrupt the surface. All colours are interchangeable. However, darker colours eg Slate or Cloud Grey are best suited for embedment or the Reemat. Lighter colours used as final coat will reduce solar heat gain into the roof build up. On substrates likely to exhibit outgassing, apply during falling ambient and substrate temperature. If applied during rising temperatures “pin holing” may occur. Substrate preparation is crucial to ensure durability. Please follow the instructions in the technical datasheet of the corresponding Primer and pretreatment. Applications of Decothane Ultra in confined spaces must be undertaken in accordance with material safety datasheet recommendations. Do not apply close to the air intake vents of running air conditioning units until either switched off or isolated as vapour may be drawn into the building. Decothane Ultra is not recommended for frequent traffic. If daily pedestrian traffic is unavoidable, Decothane Ultra shall be covered with appropriate elements such as tiles, stone plates, or wooden panels. Always use a Carrier Membrane between Decotherm Insulation Board and Decothane Ultra Areas with high movement, irregular substrates, or timber based roof decks require a complete layer of Carrier Membrane. Do not apply cementitious products (e.g. tile mortar) directly onto Decothane Ultra. Do not use grit salt and/or other de-icing agents between coats of Decothane during installation as this may interfere with the cure and inter-coat adhesion of the product. The application of the system must be approached as one operation. Always plan for reasonable progress of each coat. Work only so far in advance that the existing surface can be overcoated as the next operation. Finish the coating system completely before progressing to the next area. The ideal time between coats is within 48 hours. It is not good practice to plan breaks between coats of more than 14 days. For periods longer than this consult Sika Liquid Plastics for advice. Ensure each application/coat is clean and dry prior to overcoating At no stage should the Sika Liquid Plastics system or waterproof coating in its finished or intermediate stage be used as a workspace or access floor without adequate protection.
Value Base	All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.
Eu Regulation 2004/42/CE VOC Decopaint Directive	According to the EU Directive 2004/42/CE, the maximum allowed content of the VOC (product category 11A / i type sb) is 600/500g/l (limits 2007/2010) for the ready to use product. The maximum content of Decothane Ultra is <500g/l for the ready to use product
Health and Safety Information	For information and advice on the safe handling, storage and disposal of chemical products, please refer to the most recent Material Safety Data Sheet.

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Disclaimer

The information, and, in particular, the recommendations relating to the application and end-use of Liquid Plastics products, are given in good faith based on Liquid Plastics' current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Liquid Plastics' recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Liquid Plastics reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

Specification assistance

NBS is the industry standard specification system, which allows architects, specifiers and engineers to insert clauses into specifications by manufacturer and product, making the process quicker and more efficient. We are members of NBS Plus and therefore detailed up-to-date product information is readily available to create accurate specifications.

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