BUILDING TRUST

PRODUCT DATA SHEET

# Sikafloor®-314 UL

(formerly MTop 314UL)

Epoxy based self-smoothening underlayment for industrial flooring.

## DESCRIPTION

Sikafloor®-314 UL is a three components, 1-5mm system based on epoxy resin specially designed to impart high mechanical strength and good chemical resistance to flooring systems. It is usually used as an intermediate self-smoothing screed before application of wearing layer.

## USES

Industrial self-smoothing floor underlayment screed on cementitious substrates for:

- Normal up to medium heavy wear
- Assembly halls
- Dry production areas
- Warehouses
- Workshops
- Garages
- Loading ramps
- Multi-storey and underground car park decks
- Aircraft hangars
- Food & beverage process areas
- Interior use only

## CHARACTERISTICS / ADVANTAGES

- Seamless and hygienic
- Good chemical and mechanical resistance
- Easy application
- Liquid proof
- Easily cleaned and maintained
- Low maintenance
- Does not support growth of bacteria and fungus

## PRODUCT INFORMATION

| | | |
|---|---|---|
| **Packaging** | Part A+B+C pre-batched | 24.0 kg set |
| | Part A (Neutral base) | 5 kg plastic container |
| | Part B (Hardener) | 1.94 kg plastic container |
| | Part C (Quartz filler) | 17.06 kg bag |
| **Shelf life** | 12 months from date of production | |
| **Storage conditions** | The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +10 °C and +30 °C | |
| **Density** | 1.85 kg/l at +27 °C | |
| **Solid content by volume** | 100 % | |

## TECHNICAL INFORMATION

| | | |
|---|---|---|
| **Shore D hardness** | > 85 | (ASTM D 2240) |
| **Compressive strength** | 70 MPa at 7 days | (ASTM C109) |
| **Flexural strength** | 15 MPa at 7 days | (BS 6319 part 3) |
| **Tensile strength** | 15 MPa at 7 days | (BS 6319 part 7) |
| **Tensile adhesion strength** | > 1.5 MPa (Concrete Failure) | (ASTM D4541) |
| **Chemical resistance** | Resistant to many chemicals. Contact Sika Technical Services for additional information. | |

## SYSTEM INFORMATION

**System structure**

1-3mm self-smoothening screed

| Aplication | Product |
|---|---|
| Primer | 1–2 × Sikafloor®-161 HC |
| Self-smoothening screed | Sikafloor®-314 UL |

## APPLICATION INFORMATION

**Consumption**

| Layer | Product | Consumption |
|---|---|---|
| Primer | Sikafloor®-161 HC/Sikafloor®-167 Primer | 0.30–0.50 kg/m2 |
| Self-smoothening screed | Sikafloor®-314 UL | 1.85 kg/m2/mm |

Note: These figures are theoretical and do not allow for any additional material required due to surface porosity, surface profile, variations in level, wastage or any other variations etc. Apply product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.

**Layer thickness**

1-3mm

**Ambient air temperature**

+10 °C min. / +35 °C max.

**Relative air humidity**

80 % r.h. max.

**Dew point**

Beware of condensation!
The substrate and uncured floor must be at least +3 °C above dew point to reduce the risk of condensation or blooming on the floor finish. Note: Low temperatures and high humidity conditions increase the probability of blooming.

**Substrate temperature**

+10 °C min. / +35 °C max.

**Substrate moisture content**

< 4 % pbw moisture content.
Test method: Sika®-Tramex meter, CM-measurement or Oven-dry-method.
No rising moisture according to ASTM (Polyethylene-sheet).

**Pot life**

25 mins at 27$^{0}$C

**Curing time**

**Waiting time / Overcoating**

Before applying of topping/coating

| Substrate temperature | Minimum | Maximum |
|---|---|---|
| +20 °C | 24 h | 3 d |
| +30 °C | 16 h | 3 d |

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

| Applied product ready for use | Substrate temperature | Foot traffic | Light traffic | Full cure |
|---|---|---|---|---|
| | +20 °C | ~12 h | ~4 d | ~7 d |
| | +30 °C | ~8 h | ~2 d | ~5 d |

Note: Times are approximate and will be affected by changing ambient and substrate conditions.

## BASIS OF PRODUCT DATA

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.

## FURTHER DOCUMENTS

- Sika Method Statement: Evaluation and Preparation of Surfaces for Flooring Systems
- Sika Method Statement: Mixing & Application of Flooring Systems
- Sika Method Statement: Sikafloor®-Cleaning Regime

## IMPORTANT CONSIDERATIONS

- Do not apply Sikafloor®-314 UL on substrates with rising moisture.
- Do not apply while ambient and substrate temperatures are rising, as pinholes may occur. Ensure there is no vapor drive at the time of application. Refer to ASTM D4263, may be used for a visual indication of vapor drive.
- Do not apply Sikafloor®-314 UL to concrete substrate containing aggregates susceptible to ASR (Alkali Silica Reaction) due to risk of natural alkali redistribution below the Sikafloor®-314 UL after application. If concrete substrate has or is suspected to have ASR (Alkali Silica Reaction) present, do not proceed. Consult with design professional prior to use.
- Do not blind the primer. Freshly applied Sikafloor®-314 UL must be protected from damp, condensation and water for at least 72 hours.
- Beware of air flow and changes in air flow. This may lead to introduction of dust, debris, and particles, etc. resulting in surface imperfections and other defects.
- Do not use for roller / textured coatings, or thin sealer coats. Use appropriate products from Sikafloor® MultiDur range.
- The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective
- Cracking. Any aggregate used with Sikafloor® systems must be non-reactive and oven dried. For best results, use Sika® Quartz product range.
- Typically not recommended for exterior slabs on grade where freeze/thaw conditions may exist.
- For consistent colour matching, ensure the Sikafloor®-314 UL in each area is applied from the same control batch numbers.
- Under certain conditions, underfloor heating combined with high point loading, may lead to indentations in the resin.
- If heating is required do not use gas, oil, paraffin or other fossil fuel heaters, these produce large quantities of both CO2 and H2O water vapour, which may adversely affect the finish. For heating use only electric powered warm air blower systems.

## ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

- The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm2) with a minimum pull off strength of 1.5 N/mm2.
- Substrates must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.
- Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface gripping surface profile suitable for the product thickness.
- High spots can be removed by grinding.
- Weak concrete must be removed and surface defects such as blow holes and voids must be fully exposed.
- Repairs to the substrate, filling of blowholes/voids and surface levelling must be carried out using appropriate products from the Sikafloor®, Sikadur® and Sikagard® range of materials.
- All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush or vacuum extraction equipment.

### MIXING

- Prior to mixing all parts, mix separately Part A (resin) using a low speed single paddle electric stirrer (300–400 rpm).
- Add Part B (hardener) to Part A and mix part A + B continuously for 2.0 minutes until a uniform mix has been achieved. When Parts A and B have been mixed, using an electric double paddle mixer (> 700 W) or other similar equipment (free fall mixers must not be used) gradually add the required quantity of the appropriate Sika® quartz filler.
- Mix for a further 1.0 minutes until a uniform mix has been achieved.
- To ensure thorough mixing, pour materials into another container and mix again to achieve a smooth consistent mix. Excessive mixing must be avoided to minimise air entrainment.
- During the final mixing stage, scrape down the sides

and bottom of the mixing container with a flat or straight edge trowel at least once to ensure complete mixing. Mix full units only. Mixing time for A+B+Sika® quartz = ~4.0 minutes

### APPLICATION

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

- Prior to application, confirm substrate moisture content, relative air humidity and dew point. If > 4 % pbw moisture content, Sikafloor® EpoCem® may be applied as a T.M.B. (temporary moisture barrier) system.

**Primer**

- Pour mixed Sikafloor®-167 Primer / Sikafloor®-161 HC primer onto the prepared substrate and apply by brush, roller or squeegee (most preferred) then back roller in two directions at right angles to each other.
- Ensure a continuous, pore free coat covers the substrate. If necessary, apply two priming coats.

**Self-smoothing underlayer**

- Pour mixed Sikafloor®-314 UL onto prepared substrate and spread evenly using a suitable trowel or pin leveller to the required thickness.
- Spike roller immediately in two directions at right angles to each other to remove trowel marks, aid air release, ensure an even thickness and obtain the required surface finish.
- A seamless finish can be achieved if a ‘wet’ edge is maintained during application.
- Confirm waiting /overcoating time has been achieved before applying subsequent products. Refer to individual Product Data Sheet.

### CLEANING OF TOOLS

Clean all tools and application equipment with xyline or suitable solvent immediately after use. Hardened material can only be removed mechanically.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

## LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's 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. Sika 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.

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