BUILDING TRUST

SYSTEM DATA SHEET

Sikafloor® MultiDur ES-10 AP UV

High abrasion resistance self-smoothing flooring system with aliphatic polyurethane seal coat

DESCRIPTION

Sikafloor® MultiDur ES-10 AP UV is a self-smoothing, coloured, rigid flooring system based on epoxy resins followed by high abrasion resistance polyurethane top coat.

USES

Sikafloor® MultiDur ES-10 AP UV may only be used by experienced professionals.

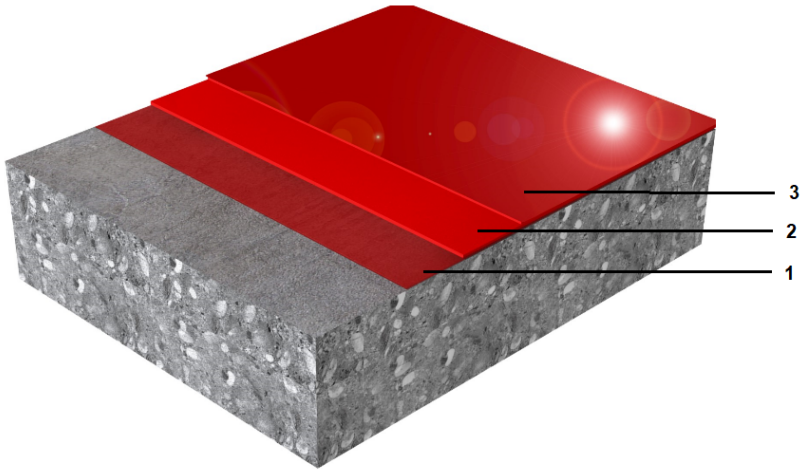
Self-smoothing flooring for concrete and cement screeds with normal to heavy duty e.g. production area, warehouse, storage and assembly halls, maintenance workshops, garages and loading ramps, etc.

CHARACTERISTICS / ADVANTAGES

- Improved scratch resistance
- Slight textured semi-gloss finish
- Good scratch resistance
- High chemical resistance
- High wear and mechanical resistance
- Good resistance to UV exposure
- Good yellowing resistance
- Easy application
- Low maintenance
- Transparent and wide range of RAL colour

SYSTEM INFORMATION

System structure



Layer	Product
1. Primer	Sikafloor®-161 HC
2. Self-smoothing topping	Sikafloor®-264 HC N
3. High abrasion resistance PU top coat	Sikafloor®-315

Composition	Epoxy and Aliphatic polyurethane
Appearance	Semi-gloss finish
Colour	Available in transparent and wide range of colours of seal coat. Please contact Sika representative for availability.
Minimum thickness	1 mm

TECHNICAL INFORMATION

Abrasion resistance	< 0.03 g	(GB/T 22374-2018)
Resistance to impact	Heavy Duty (1000 g / 1 m)	(GB/T 22374-2018)
Chemical resistance	Refer to the chemical resistance of Sikafloor®-315.	
Coefficient of Friction	> 0.5 (Dry friction of coefficient)	(GB/T 22374-2018)

APPLICATION INFORMATION

Consumption

Build-up	Product	Consumption
Primer	Sikafloor®-161 HC	0.35–0.50 kg/m²
Self-smoothing topping	Sikafloor®-264 HC N	0.90 kg/m²
Quartz filler	0.4 pbw quartz filler	0.40 kg/m²
Seal coat	Sikafloor®-315	0.128 kg/m² for DFT of approx. 0.08 mm

These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc. Lower consumption can cause roller marks, gloss differences and irregular

	surface structure, higher consumption result in water retention.
Ambient air temperature	+10 °C min. / +30 °C max.
Relative air humidity	30 % min. /75 % max. During curing the humidity should not exceed 75 % max. Adequate fresh air ventilation must be provided to remove the excess moisture from the curing product.
Dew point	Beware of condensation! The substrate and uncured floor must be at least +3 °C above the dew point to reduce the risk of condensation or blooming on the floor finish.
Substrate temperature	+10 °C min. / +30 °C max.

Waiting time / Overcoating

Before applying Sikafloor®-315 on Sikafloor® self-leveling system allow:

Substrate temperature	Minimum	Maximum
+10 °C	30 hours	4 days
+20 °C	24 hours	3 days
+30 °C	16 hours	2 days

Applied product ready for use

Temperature	Tack free	Light traffic	Full cure
+10 °C	~30 hours	~48 hours	~6 days
+20 °C	~16 hours	~24 hours	~4 days
+30 °C	~12 hours	~18 hours	~3 days

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

IMPORTANT CONSIDERATIONS

- Do not thin Sikafloor®-315. Addition of thinners will slow the cure and reduce the ultimate properties of this product.
- Prior to application, measure and confirm Substrate Moisture Content, Ambient Relative, Humidity, Ambient and Surface Temperature and Dew Point. During installation, confirm and record above values at least once every 3 hours, or more frequently whenever conditions change (e.g. Ambient Temperature rise/fall, Relative Humidity increase/decrease, etc.).
- Do not apply Sikafloor®-264 HC N 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®-264 HC N to concrete substrate containing aggregates susceptible to ASR (Alkali Silica Reaction) due to risk of natural alkali redistribution below the Sikafloor®-264 HC N 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®-264 HC N/ Sikafloor®-315 must be protected from damp, condensation and water for at least 72 hours.
- For areas with limited exposure and normally absorbent concrete substrates priming with Sikafloor®-161 HC is not necessary for roller or textured coating systems.
- 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.
- For roller / textured coatings, uneven substrates as well as inclusions of dirt cannot and must not be covered by thin sealer coats. Therefore both substrate and adjacent areas must always be prepared and cleaned thoroughly prior to application.
- 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.
- Use Sikafloor®-264 HC N colour component for best performance.
- Typically not recommended for exterior slabs on grade where freeze/thaw conditions may exist.
- For consistent colour matching, ensure the Sikafloor®-264 HC N 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.
- Seal / Top coat consumption will vary depending on sand granulometry.

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

EQUIPMENT

Sikafloor® MultiDur ES-10 AP UV must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.

SUBSTRATE QUALITY

- 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.

SUBSTRATE PREPARATION

Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface to achieve CSP 3-6 according to the International Concrete Repair Institute. 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. High spots can be removed by grinding. All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.
Edge terminations: All free edges and working day joints whether at the perimeter, along gutters or at drains require extra anchorage to distribute mechanical and thermal stresses. This is best achieved by forming or cutting grooves in the concrete.

MIXING

Self-smoothing resin:

1. Prior to mixing all parts, mix separately Part A (resin) using a low speed single paddle electric stirrer (300 - 400 rpm).
2. Add Part B (hardener) to Part A and mix part A + B continuously for 1.0 minute until a uniform mix has been achieved. When Parts A and B have been mixed, using an electric double paddle mixer (> 700 W), pan type revolving, forced action mixer or other similar equipment (free fall mixers must not be used) gradually add the required granulometry of dried quartz sand.
3. Mix for a further 2.0 minutes until a uniform mix has been achieved.
4. 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.
5. 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 sand = ~5.0 minutes.

Polyurethane seal coat

1. Do not mix more material than can be applied within the working time limits at the actual site temperature.
2. Empty completely the Part A, into a clean mixing container large enough to accommodate the whole set.
3. Then mix with suitable paddle mixture, add the Part B.
4. Mix at low speed for 1 minute. Then, if pigmented version is required, add the part D. Mix for further 2 minutes.
5. Finally, add slowly (don't dump!) the part C (filler for textured surface) while mixing to avoid clumping. Mix for 2 minutes.
6. To ensure thorough mixing pour materials into another container and mix again to achieve a consistent mix.
7. Over mixing must be avoided to minimise air entrainment.
8. Note: Part C must be mixed in Un-Pigmented Set and Pigmented Set.

APPLICATION

Primer:
Make sure that a continuous, pore free coat covers the substrate. If necessary, apply two priming coats. Apply Sikafloor®-161/-161 HC by brush, roller or squeegee. Preferred application is by using a squeegee and then back rolling crosswise.

Levelling:
Rough surfaces need to be levelled first. Therefore use e.g. Sikafloor®-161/-161 HC levelling mortar (see PDS).

Self-smoothing topping:
Sikafloor®-264/-264 HC/-264 HC N as self-smoothing topping can be applied by pin rack, notch trowel back roll with spike roller crosswise.

Polyurethane seal coat:
Prior to application confirm relative air humidity and dew point. The floor should be divided into section sections that can be completed without stopping. Pour the mixture of Sikafloor®-315 onto the application area and spread it uniformly with smooth trowel. In order to get better appearance, texture and uniform glossy, the wet film thickness must be controlled in approx. 0.08 mm. Then, immediately, back roll the material using short pile roller. The roller should be wet in the roller tray or bucket and the excess coating is removed to avoid drips. If applied too thick, the material may blister, or have roller marks, if too thin; the coating will appear very flat in sheen.

CLEANING OF TOOLS

Clean all tools and application equipment with Sika® Thinner C immediately after use. Hardened and/or cured 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.

Sika India Pvt. Ltd.
620, Diamond Harbour Road
Commercial Complex II
Kolkata - 700 034
West Bengal, India

Contact:
Phone: +91 33 2447 2448
Fax: +91 33 2397 8688
info.india@in.sika.com
www.sika.in