Sikafloor®-510 N LPL
ABRASION AND UV RESISTANT POLYASPARTIC RESIN SYSTEM

**Description**
Sikafloor®-510 N LPL is a clear two-component, high solids, low VOC, low-viscosity, high strength, fast-curing, UV resistant, polyaspartic urethane coating system. Sikafloor® 510 N LPL is formulated to have an extended pot life and working time in elevated temperatures and humid conditions.

**Where to Use**
Sikafloor®-510 N LPL can be used as a concrete primer, binder, and sealer especially when fast cure times and UV resistance are required.

**Advantages**
- Resists a very wide range of organic and inorganic acids, alkalis, amines, salts and solvents.
- Cures quickly, allowing a rapid return to service, fast turnaround.
- Extended working time and reduced odour when compared to Sikafloor®-510.
- Durable, impermeable and seamless.
- Superior mechanical resistance.
- Excellent UV resistance.
- Excellent chemical resistance.
- Superior aesthetic finish.
- Low maintenance.
- VOC Compliant.
- Meets the requirements of CFIA and USDA for use in food plants.

**Technical Data**

<table>
<thead>
<tr>
<th>Packaging</th>
<th>Component A: 7.57 L (2 US gal.)</th>
<th>Component A: 18.9 L (5 US gal.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component B: 5.03 L (1.33 US gal.)</td>
<td>Component B: 12.6 L (3.33 US gal.)</td>
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<tr>
<td>Component A+B: 12.6 L (3.33 US gal.)</td>
<td>Component A+B: 31.5 L (8.33 US gal.)</td>
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<table>
<thead>
<tr>
<th>Colour</th>
<th>Clear</th>
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<tr>
<td>Yield</td>
<td>Smooth Finish Coating:</td>
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<tr>
<td>Prime coat: 3.9 - 4.9 m² / L (160 - 200 ft² / US gal.) at 0.20 - 0.25 mm (8 - 10 mils) wet film thickness (w.f.t.)</td>
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<tr>
<td>Wear coat: 2.6 - 3.3 m² / L (105 - 135 ft² / US gal.) at 0.30 - 0.38 mm (12 - 15 mils) wet film thickness (w.f.t.)</td>
<td></td>
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</tbody>
</table>

| Thinning Solvent - If required, use Sika® Urethane Thinner and Cleaner - maximum 5 % by volume (50 mL/L - 6.4 oz/US gal.). Contact Sika Canada for additional information. |

| Shelf Life | 1 year in original, unopened packaging. Store and transport dry at temperatures between 4 - 32 °C (40 - 90 °F). Condition product between at temperatures between 18 and 30 °C (65 and 86 °F) before using. |
| Working Time | Material Temperature | Time |
| 10 °C (50 °F) | ~ 40 minutes |
| 20 °C (68 °F) | ~ 30 minutes |
| 30 °C (86 °F) | ~ 20 minutes |

| Application Temperature | 4 °C min. 30 °C max. (40 °F min. 86 °F max.) |
| Waiting / Recoat Times | Before applying second coat of Sikafloor®-510 N LPL allow: |
| Cure Times | Ambient & Substrate Temperature | Minimum | Maximum |
| 20 °C (68 °F) and 50 % R.H. | ~ 90 minutes | ~ 24 hours |
| 20 °C (68 °F) and 50 % R.H. | ~ 4 hours | ~ 8 hours | ~ 5 days |

**Properties at 23 °C (73 °F) and 50% R.H.**
- **Tensile Strength ASTM C307** ~ 17.2 MPa (2500 psi)
- **Pull-off Strength ASTM D7234** > 2.7 MPa (> 400 psi) 100 % concrete failure
- **Elongation ASTM D638** 60 %
- **Shore D Hardness ASTM D2240** ~ 75
- **Abrasion Resistance - Taber Abraser ASTM D4060** (CS-17 wheel, 1,000 cycles / 1,000 g load) ~ 50 mg loss
- **Viscosity** ~ 450 cps (Components A + B Mixed)
- **Dynamic Coefficient of Friction (DCOF) ANSI A137.1 / BOT 3000e** ~ 0.25 Wet (smooth high gloss)
- **Chemical Resistance** Consult Sika Canada

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.
Priming for concrete substrate is required. Prime with either Sikafloor®-156 CA as a clear topcoat for a broadcast quartz or flake system:

Mixing Ratio - A:B = 3:2 by volume.

Application

**As a clear topcoat for a broadcast quartz or flake system:**
Apply using a squeegee and back roll Sikafloor®-510 N LPL to provide a uniform coverage without ponding at a thickness of 0.25 - 0.38 mm (10 - 15 mils) 2.6 - 3.9 m²/L (107 - 160 ft²/US gal.). If required, repeat this procedure for a second coat.

**As a stand-alone double broadcast quick cure decorative quartz and flake system:**

**Step 1: Primer** - Apply neat coat of Sikafloor®-510 N LPL on a prepared substrate as a primer using a squeegee and roller without ponding at 0.12 - 0.25 mm (5 - 10 mils) 3.9 - 7.8 m²/L (160 - 320 ft²/US gal.).

**Note:** When using Sikafloor®-510 N LPL as a primer, extra precaution has to be taken with regard to substrate preparation and moisture content, see product limitations for further details.

**Step 2: First Broadcast Application** - Apply using a squeegee and back roll Sikafloor®-510 N LPL to provide a uniform coverage without ponding at a thickness of 0.25 - 0.38 mm (10 - 15 mils) 2.6 - 3.9 m²/L (107 - 160 ft²/US gal.). Broadcast pre-blended decorative flakes or coloured quartz aggregates into the binder to saturation. Broadcast in a manner so that the flakes or coloured quartz aggregates fall vertically into the binder. Broadcast to rejection. Ensure that broadcast flakes/aggregates cover entire surface. Allow broadcast system to cure sufficiently to be able to resist foot traffic without damaging the surface. Remove excess flakes/aggregates from the surface by sweeping up and vacuuming, until surface is free of all loose particles and dust.

**Step 3: Second Broadcast Application** - Apply using a squeegee and back roll Sikafloor®-510 N LPL to provide a uniform coverage without ponding at a thickness of 0.25 - 0.38 mm (10 - 15 mils) 2.6 - 3.9 m²/L (107 - 160 ft²/US gal.). Broadcast pre-blended decorative flakes or coloured quartz aggregates into the binder to saturation. Broadcast in a manner so that aggregates fall vertically into the binder. Broadcast to rejection. Ensure that broadcast flakes/aggregates cover entire surface. Allow broadcast system to cure sufficiently to be able to resist foot traffic without damaging the surface. Remove excess flakes/aggregates from the surface by sweeping up and vacuuming, until surface is free of all loose particles and dust.

**Step 4: Finish Coat** - Apply using a squeegee and back roll Sikafloor®-510 N LPL to provide a uniform coverage without ponding at a thickness 0.25 - 0.38 mm (10 - 15 mils) 2.6 - 3.9 m²/L (107 - 160 ft²/US gal.). When required, repeat this procedure for a second coat.

Critical Recoat/ Overcoat Time

It is important to apply subsequent coats of this and other products within 6 to 24 hours (under normal curing conditions). If this coating is allowed to cure longer than the 24 hours before subsequent recoats, light sanding, vacuum cleaning and solvent wiping will be necessary. The floor surface should be sanded/abraded to the effect that a uniform dullness is achieved. There should be no gloss present on the floor after vacuuming and before applying the next coat.

Clean Up

Wash soiled hands and skin thoroughly in hot, soapy water or use Sika® Hand Cleaner towels. Uncured material can be removed with Sika® Urethane Thinner and Cleaner. Cured materials (Component A combined with Component B) can only be removed mechanically. In case of spill, ventilate area and contain spill. Collect with absorbent material and place in properly sealed container. Dispose of in accordance with current applicable local, provincial and federal regulations.
Limitations

- Sikafloor®-510 N LPL is best installed by skilled and experienced applicators. Consult Sika Canada for advice and recommendations.
- 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 three (3) hours, or more frequently whenever conditions change (e.g. Ambient Temperature rise / fall, Relative Humidity increase/decrease, etc.).
- Moisture content of concrete substrate must be ≤ 4 % by mass (pbw – part by weight) as measured with a Tramex®CME/CMExpert type concrete moisture meter on mechanically prepared surface according to this product data sheet (preparation to ICRI / CSP 3 - 4). Do not apply to concrete substrate with moisture levels exceeding 4 % by mass (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter. If moisture content of concrete substrate exceeds 4 % by mass (pbw – part by weight), as measured with Tramex® CME/CMExpert type concrete moisture meter, use Sikafloor®-1610, Sikafloor®-81 Epocem®-CA or Sikafloor®-22 NA PurCem®.
- ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex® CME/CMExpert type concrete moisture meter as described above.
- When relative humidity tests for concrete substrate are conducted per ASTM F2170 for project specific requirements, values must be ≤ 85 %. If values exceed 85 %, according to ASTM F2170, use Sikafloor®-1610, Sikafloor®-81 Epocem®-CA or Sikafloor®-22 NA PurCem®.
- Material temperature: Precondition material for at least 24 hours between 18 to 24 °C (65 to 75 °F)
- Ambient and substrate temperature (Min. / Max.) : 4 °C / 30 °C (40 °F / 86 °F)
- Mixing and application attempted at material, ambient and/or substrate temperature conditions inferior to 18 °C (65 °F) will result in a decrease in product workability and slower cure rates.
- Ambient humidity (Minimum / Maximum): 30 % / 75 % (during application and curing). Note: Low Relative Ambient Humidity may result in slower cure.
- Beware of condensation! The substrate must be at least 3 °C (5 °F) above the Dew Point to reduce the risk of condensation, which may lead to adhesion failure or “blushing” on the floor finish. Be aware that the substrate temperature may be lower than the ambient temperature.
- Mixing: Do not hand mix Sikafloor® materials. Mechanically mix only.
- If Sikafloor®-510 N LPL is used as a primer, apply the coating to the prepared substrate using a squeegee and backroll to provide uniform coverage. Ensure that the substrate is pore- and pinhole-free and provides uniform and complete coverage over the entire substrate. If necessary, apply an additional coat to ensure the substrate is pore- and pinhole-free and provides uniform and complete coverage over the entire substrate.
- Do not apply while ambient and substrate temperatures are rising, as pinholes may occur. Ensure there is no vapour drive at the time of application. Refer to ASTM D4263, may be used as a visual indication for vapour drive.
- Freshly applied material should be protected from dampness, condensation and water for at least 72 hours.
- Use of clear UV resistant top coat may not prevent discoloration of underlying coatings.
- Do not apply Sikafloor® to concrete substrate containing aggregates susceptible to ASR (Alkali Silica Reaction) due to risk of natural alkali redistribution below the Sikafloor® product 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.
- Any aggregate used with Sikafloor® systems must be non-reactive and oven-dried.
- This product is not designed for negative side waterproofing.
- Typically not recommended for exterior slabs on grade where freeze/thaw conditions may exist.
- Use of unvented heaters and certain heat sources may result in defects (e.g. blushing, whitening, debonding, etc.).
- Beware of air flow and changes in air flow. Introduction of dust, debris, and particles, etc. may result in surface imperfections and other defects.
- Published Dynamic Coefficient of Friction (DCOF) wet and dry test results are approximate values based on laboratory test samples produced in a controlled environment following the application instructions published on the product data sheet. Resin flooring products are hand applied finishes subject to minor variations in surface texture due to influences partly beyond Sika Canada’s control. Substrate profile, environmental conditions, variable regional aggregate size, shape and gradation, aggregate distribution, uniformity of applied resin mil thickness, and application technique can all affect the final DCOF test results achieved. Adequate provision should be made by the client throughout the selection and installation process to ensure the finished surface texture meets the end user’s traction requirements.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

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, within their shelflife. 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 recommendations, or from any other advice offered. The Information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

Sikafloor®-510 N LPL
CSC Master Format™ 09 67 00
FLUID-APPLIED FLOORING

SiKA CANADA INC.
Head Office
601, avenue Delmar
Pointe-Claire, Quebec
H9R 4A0

Other locations
Toronto
Edmonton
Vancouver

1-800-933-SIKA
www.sika.ca

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Certified ISO 9001 (CERT-0102780)