Sikadur®-55 SLV / SLV Slow-Cure
SUPER LOW-VISCOSITY AND MOISTURE INSENSITIVE, EPOXY RESIN CRACK HEALERS / PENETRATING SEALERS

Description
Sikadur®-55 SLV and SLV Slow-Cure are two-component, 100 % solids, moisture-tolerant, epoxy crack healers/penetrating sealers. They are available as a fast tack-free grade or as a long pot-life version, to accommodate minimum decommission or extended working times. They are of super-low viscosity and high-adhesive strength formulated specifically for sealing both dry or damp cracks and concrete surfaces.

Where to Use
- Structural repair of cracked concrete.
- Sealing surface of interior floor slabs and exterior, above-grade slabs from water, chloride and chemical attack.
- Sealing horizontal decks, patios, driveways, parking garages, and other structures exposed to pedestrian and pneumatic tire traffic.

Advantages
- Penetrate cracks by gravity down to 2 mils (0.05 mm/0.002 in) in width.
- Structurally improve concrete surfaces.
- SLV open to traffic in 6 hours, SLV Slow-Cure in 24 hours, at 23 °C (73 °F).
- Super low viscosity, low surface tension for excellent crack penetration.
- High bond strengths, even in damp cracks.
- Prolong life of cracked concrete.
- As penetrating sealers, reduce water absorption and chloride ion intrusion.
- Meets ASTM C881 and AASHTO M-235 specifications.*
- Approved by the Ministère des Transports du Québec (MTQ).*
- Approved by the Alberta Transportation (AT).*
- US Patent No. (pending) for ultra-low viscosity healer/sealer to strengthen cracked concrete*.
- Product recognized by the British Columbia Ministry of Transportation(BC MoT).

* SLV Slow-Cure conformance to specifications and approvals pending

Technical Data

Packaging
Sikadur-55 SLV: 11.35 L (3 US gal.) unit
[Component A: 7.57 L (2 US gal.) and Component B: 3.78 L (1 US gal.)]
Sikadur-55 SLV Slow-Cure: 3.05 L (0.80 US gal.) unit
[Component A: 2.1 L (0.55 US gal.) and Component B: 0.95 L (0.25 US gal.)]

Colour
Clear, amber

Yield
2.5 - 3.7 m²/L (100 - 150 ft²/US gal.) depending on application and substrate.

Shelf Life
2 years in original, unopened packaging. Store dry at temperatures between 4 and 35 °C (40 and 95 °F). Condition product between 18 and 24 °C (65 and 75 °F) before using.

Mix Ratio (by volume)
SLV A:B = 2:1
SLV Slow-Cure = 2.2:1

Properties at 23 °C (73 °F) and 50 % R.H.

Viscosity (Mixed)
SLV: 105 cPs; SLV Slow-Cure: 125 cPs

Pot Life (300 g)
SLV: 20 min approx.; SLV Slow-Cure: 70 min approx.

Tack-Free Time
4 °C (40 °F)/ > 11 h
15 °C (60 °F)/11 h
23 °C (73 °F)/6 h

Tensile Properties ASTM D638
7 days [23 °C (73 °F)]
Tensile strength 48 MPa (7100 psi)
Elongation at break 10 %

Bond Strength ASTM C882
Hardened concrete to hardened concrete (moist cure)
2 days 17 MPa (2500 psi)
14 days 17 MPa (2500 psi)

Hardened concrete to steel (moist cure)
2 days 10 MPa (1500 psi)
14 days 11 MPa (1600 psi)

Flexural Properties ASTM D790
7 days
Flexural strength 58 MPa (8500 psi)
Tangent modulus of elasticity 2.2 GPa (3.2 x 10⁵ psi)

Shear Strength ASTM D732
7 days 40 MPa (5800 psi)

Deflection Temperature ASTM D648
7 days 43 °C (110 °F)

Water Absorption ASTM D570
7 days (24 hr immersion) 0.60 %


**HOW TO USE**

**Surface Preparation**

Substrate must be clean, sound, and free of surface moisture. Remove dust, laitance, grease, oils, curing compounds, waxes, impregnations, foreign particles, coatings and disintegrated materials by mechanical means, i.e. low-pressure water cleaning, shotblasting, sandblasting (CSP 1 - 3). For best results, substrate should be dry. However, a saturated surface dry (SSD) condition is acceptable.

**Mixing**

Pre-mix each component. Proportion 1 part component B to 2 parts component A by volume into a clean pail. Mix thoroughly for there (3) minutes with paddle on a low-speed drill (400 - 600 rpm) until uniformly blended. Mix only that quantity which can be used within its pot life.

**Application**

**To gravity feed cracks:** Sikadur®-55 SLV / SLV Slow-Cure are applied to horizontal surfaces by roller, squeegee or broom. Spread material over area and allow to pond over cracks. Let epoxy penetrate into cracks and substrate; remove excess leaving no visible surface film. For cracks greater than 3 mm (1/8 in) wide, fill crack with oven-dried sand before applying Sikadur®-55 SLV / Sikadur®-55 SLV Slow-Cure. Seal cracks from underside, when accessible, to prevent leakage.

A second treatment may be required on very porous substrates. Apply second treatment before broadcasting. After treatment, wait at least 20 minutes at 23 °C (73 °F); cover with light broadcast of a dry #24 or similar sand. Distribute evenly over the surface at a rate of 0.7 - 1 kg/m² (15 - 20 lb/100 ft²). Allow Sikadur®-55 SLV to cure for 6 hours minimum and Sikadur-55 SLV Slow-Cure for 24 hours minimum, at 23 °C (73 °F). Remove any loose sand and open to traffic.

**To pressure inject cracks:** Use automated equipment. Set appropriate injection ports. Seal ports and crack with Sikadur®-31 Hi-Mod Gel or Sika AnchorFix®-3001. When the epoxy adhesive seal has cured, inject Sikadur®-55 SLV or SLV Slow-Cure with steady pressure.

**Clean Up**

Uncured material can be removed with Sika® Epoxy Cleaner. Cured product can only be removed mechanically.

**Limitations**

- Do not thin: solvents will prevent proper cure.
- Minimum /maximum ambient and substrate temperature: 4 - 35 °C (40 - 95 °F).
- Minimum age of concrete: 21 - 28 days, depending on curing and drying conditions.
- Sealed concrete surface may appear “blotchy” due to differential absorption.
- Not designed to seal cracks subject to hydrostatic pressure.
- Not to be used as a film forming compound.
- Material is a vapour barrier after cure.
- Do not inject cracks > 6 mm (1/4 in).

**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**

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**Table: Compressive Strength ASTM D695, MPa (psi)**

<table>
<thead>
<tr>
<th></th>
<th>4 °C (40 °F)</th>
<th>15°C (60 °F)</th>
<th>23°C (73 °F)</th>
<th>32 °C (90 °F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 day</td>
<td>-</td>
<td>2.2 (320)</td>
<td>7.6 (1100)</td>
<td>33 (4800)</td>
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<tr>
<td>3 days</td>
<td>13 (2000)</td>
<td>45 (6500)</td>
<td>57 (8300)</td>
<td>55 (8000)</td>
</tr>
<tr>
<td>7 days</td>
<td>54 (7800)</td>
<td>71 (10400)</td>
<td>75 (10900)</td>
<td>57 (8300)</td>
</tr>
<tr>
<td>14 days</td>
<td>66 (9600)</td>
<td>75 (11000)</td>
<td>81 (11800)</td>
<td>68 (10000)</td>
</tr>
<tr>
<td>28 days</td>
<td>80 (11700)</td>
<td>82 (12000)</td>
<td>82 (12000)</td>
<td>68 (10000)</td>
</tr>
</tbody>
</table>

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**Table: Modulus of Elasticity ASTM D695**

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<tr>
<td>7 days</td>
<td>2.0 GPa (3.0 x 10⁶ psi)</td>
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<tr>
<td>VOC Content</td>
<td>0 g/L</td>
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</table>

Product properties above refer to Sikadur®-55 SLV only unless stated otherwise: results pending for Slow-Cure grade. 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.