Sikadur® UW Gel
Epoxy Resin Paste for Underwater Applications including Bonding, Sealing, Repair and Protection

Description
Sikadur® UW Gel is a two component, 100% solids, thixotropic epoxy resin paste formulated for underwater. It is proven in its application in submerged conditions where it bonds, seals, repairs and protects not only concrete and steel but many other materials.

Where to Use
■ The bonding of concrete, metals and rubber substrates.
■ Securing of injection ports into cracks and fissures prior to underwater injection works.
■ Sealing of crack surfaces as a capping resin prior to underwater injection works.
■ The repair and protection of substrates through brush application.

Advantages
■ Easy to mix and apply, supplied in pre-proportioned units.
■ High viscosity, thixotropic gel consistency suitable for underwater application.
■ Versatile, can be applied using a number of techniques suited to the purpose.
■ Extended pot life and slow initial set accommodates difficult conditions.
■ High bond characteristics prevent leakage of injection resins.

Technical Data

<table>
<thead>
<tr>
<th>Packaging</th>
<th>4 L (1.05 US gal) units</th>
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</thead>
<tbody>
<tr>
<td>Unit consists of Component A &amp; B</td>
<td></td>
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<tr>
<td>Colour</td>
<td>Component A: White</td>
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<tr>
<td></td>
<td>Component B: Black</td>
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<tr>
<td></td>
<td>Mixed (A + B): Grey</td>
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<tr>
<td>Yield</td>
<td>1 L = 1 m² of resin at 1 mm thick (1 US gal. = 231 in³)</td>
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<td></td>
<td>However this will vary with the profile of the surface.</td>
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<tr>
<td>Shelf Life</td>
<td>2 years in original, unopened packaging. Store dry. Do not allow to freeze.</td>
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<tr>
<td>Mix Ratio</td>
<td>A:B = 81:19 by weight, 4:1 by volume</td>
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</tbody>
</table>

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

| Specific Gravity | 1.2 kg/L |
| Viscosity        | Thixotropic Paste |
| Solids by weight | 100% |

| Pot Life         | 200 g |
|                 | Initial Set | 30 min |
|                 | Full Cure   | 72 hrs |

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.

How to Use Surface Preparation

General: Substrate preparation and surface conditions are typically compromised or not possible when working underwater. Achieving the best results and durable performance will be influenced by the stability of the substrate and the cleanliness of surfaces.

Concrete: When using Sikadur® UW Gel as a capping resin for injection of cracks, clean the concrete surface along the length of the crack and on either side to remove existing coatings or surface treatments, laitance, oil, grease, loose friable material and other such contaminants which will impede adhesion. Mechanical or manual methods are considered most suitable to remove deleterious material and provide an open, roughened texture. Where a deeply contaminated concrete exists, ie, containing oils, grease or similar such substances, chip out the affected substrate and remove preparation residue to achieve a suitable surface condition.

Steel: Where crack injection is to be undertaken, Sikadur® UW Gel is to be used as an adhesive for ports and tees and then as the capping resin and steel is present, try to clean the steel of accumulated contaminants and loose, unsound material. Mechanical or manual methods are considered most suitable to remove deleterious material and provide an improved surface.
Mixing

Prior to mixing, pre-stir Component A and Component B separately by drill and paddle or by hand to ensure all solids are evenly distributed and uniform colours and consistencies are produced.

Empty the two components into a clean, suitably sized container in which the material can be thoroughly mixed without loss. Thoroughly mix the combined components, preferably using a slow-speed drill (350 rpm) to minimise entrapping air. Use an Exomixer type mixing paddle (recommended model) or Sika paddle, suited to the volume of the mixing vessel. During the mixing operation, scrape down the sides and the bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing.

Mixing by hand is an accepted practice however, it is important to make certain that the two components are thoroughly mixed together. When completely blended Sikadur® UW Gel should be of a uniform grey colour (free from streaks) and of a paste consistency. Use the mixed material immediately.

Application

Sikadur® UW Gel is typically applied by brush. When using the material around injection ports before resin injection, apply evenly and ensure that while the ports are firmly adhered, there is no paste blocking the intended path of the resin.

When using the material for cap sealing along the length of the crack and before resin injection, ensure that complete coverage is achieved and all areas are fully sealed so as to prevent ‘break outs’ and subsequent resin leakage.

Curing

Allow Sikadur® UW Gel to cure sufficiently (usually 72 hours) before testing. The material cures underwater, the time of final cure being dependent upon the prevailing conditions, including substrate and water temperatures.

Clean Up

Uncured material can be removed with Sika® Equipment Cleaner. Cured product can only be removed mechanically. Wash soiled hands and skin thoroughly in hot soapy water or use Sika® Hand Cleaner towels.

Limitations

- Sikadur® UW Gel must not be thinned; solvents will prevent proper cure.
- Ensure components are correctly proportioned and mixed
- Lower temperatures will prolong cure time, higher temperatures will rapidly accelerate cure time.
- Sikadur® UW Gel is not intended as an aesthetic material; color may alter due to variations in exposure.

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 Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY