

# PRODUCT DATA SHEET

## Sikadur<sup>®</sup>-31 C

### 2-PART EPOXY ADHESIVE FOR SIKADUR-COMBIFLEX<sup>®</sup> SYSTEM AND SIKA<sup>®</sup> DILATEC<sup>®</sup> SYSTEM

#### DESCRIPTION

Sikadur<sup>®</sup>-31 C is solvent-free, moisture tolerant, two part epoxy based thixotropic adhesive for bonding Sikadur-Combiflex<sup>®</sup> SG tape and Sika<sup>®</sup> Dilatec<sup>®</sup> tape to different substrates. It can be used for both internal and external use.

#### USES

Sikadur<sup>®</sup>-31 C may only be used by experienced professionals.

As adhesive for the Sikadur-Combiflex<sup>®</sup> System

As adhesive for the Sika<sup>®</sup> Dilatec<sup>®</sup> System

These systems are used for various applications such as:

- Expansion Joint treatment
- Construction Joint treatment
- Crack treatment
- Precast panels joint treatment

#### CHARACTERISTICS / ADVANTAGES

- Easy to mix and apply
- Suitable for both dry and damp concrete surfaces
- Excellent adhesion to many materials
- Solvent free
- Performs well within a wide temperature range
- Completely weather and water resistant
- Fast curing
- Root resistant
- Good resistance to many chemicals
- Thixotropic – suitable for over head and vertical applications
- No primer needed
- High mechanical resistance
- Good abrasion resistance

#### APPROVALS / STANDARDS

Central Food Technology Research Institute (CFTRI), Mysore

Conforms to: IS 9845 for food grade (compatibility with drinking water), ASTM D 2471.

#### PRODUCT INFORMATION

|                           |  |
|---------------------------|--|
| <b>Chemical Base</b>      | Modified, solvent free, fillerised 2-part epoxy resin  |
| <b>Packaging</b>          | Part A : 4.00 kg container x 2<br>Part B : 2.00 kg container x 2<br>Part A+B : 6.00 kg container x 2 ready to mix units      |
| <b>Colour</b>             | Part A: White<br>Part B: Black<br>Part A+B Mixed : Concrete Grey   |
| <b>Shelf Life</b>         | 12 months from the date of production  |
| <b>Storage Conditions</b> | Store in unopened, undamaged and sealed original packaging in cool and dry conditions at temperatures between +5°C and +40°C |
| <b>Density</b>            | Part A : 1.70 kg/l (at +27°C)<br>Part B : 1.90 kg/l (at +27°C)<br>Part A+B Mixed : 1.75 kg/l (at +27°C)                      |

## TECHNICAL INFORMATION

|                                  |   |  |              |
|----------------------------------|---|--|--------------|
| <b>Compressive Strength</b>      | <b>Curing Time</b>  | <b>Compressive Strength</b>                | (ASTM C 579) |
|                                  | 1 day   | ≥ 45 N/mm <sup>2</sup>                     |              |
|                                  | 7 days  | ≥ 48 N/mm <sup>2</sup>                     |              |
| <b>Tensile Adhesion Strength</b> | <b>Substrate</b>  | <b>Bond Strength</b>                       | (ISO 4624)   |
|                                  | Concrete (Dry)  | > 1.5 N/mm <sup>2</sup> (Concrete Failure) |              |
|                                  | Concrete (Wet / Damp)   | > 1.5 N/mm <sup>2</sup> (Concrete Failure) |              |
| <b>Chemical Resistance</b>       | <p>Long term to:<br/>Water, lime water, cement water, seawater, salt solutions, domestic sewage, bitumen, bitumen emulsion coatings etc.</p> <p>Temporary to:<br/>Light fuel oil, diesel, diluted alkali and mineral acids, ethanol, methanol, petrol etc.</p> <p>These chemical resistance indications may be used to determine the suitability of the sealing system. For more information, please consult Sika Technical Services.</p> |  |              |
| <b>Service Temperature</b>       | -30°C to +50°C  |  |              |

## APPLICATION INFORMATION

|                                   |   |                        |                             |
|-----------------------------------|---|------------------------|-----------------------------|
| <b>Mixing Ratio</b>               | Part A : Part B = 2 : 1 (by weight)   |                        |                             |
| <b>Consumption</b>                | Sikadur®-31 C per metre length  |                        |                             |
|                                   | <b>Strip Width</b>  | <b>Strip Thickness</b> | <b>Adhesive Consumption</b> |
|                                   | 15cm  | 1mm                    | ~ 1.0 kg/m                  |
|                                   | 20cm  | 1mm                    | ~ 1.2 kg/m                  |
|                                   | 15cm  | 2mm                    | ~ 1.1 kg/m                  |
|                                   | 20cm  | 2mm                    | ~ 1.4 kg/m                  |
|                                   | 30cm  | 2mm                    | ~ 2.0 kg/m                  |
|                                   | *The consumption can vary dependent on site conditions (surface roughness, size of aggregate etc.).   |                        |                             |
| <b>Ambient Air Temperature</b>    | +10°C min. / +40°C max.   |                        |                             |
| <b>Relative Air Humidity</b>      | 85% max. (at +25°C)   |                        |                             |
| <b>Dew Point</b>                  | Avoid condensation.   |                        |                             |
| <b>Substrate Temperature</b>      | +10°C min. / +40°C max.   |                        |                             |
| <b>Substrate Moisture Content</b> | Cementitious substrates should be dry, max mat damp (surface dry). When applied to mat damp concrete, brush the adhesive well into the substrate.   |                        |                             |
| <b>Pot Life</b>                   | ~ 30 minutes at +27°C   |                        | (ASTM D 2471)               |
|                                   | If larger quantities are being mixed the temperature of Sikadur®-31 C will increase due to the exothermic chemical reaction, resulting in a reduced potlife.  |                        |                             |
| <b>Waiting Time / Overcoating</b> | Sikadur®-31 C may be overcoated with an epoxy coating. In this event do not smooth the adhesive with detergent. If waiting time between application of adhesive and overcoating is to be longer than 2 days, the adhesive must be blinded to excess with quartz sand immediately after application. |                        |                             |

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

#### Concrete/masonry/mortar/stone

Concrete and mortar must be at least 3–6 weeks old. Substrate surfaces must be sound, clean, dry or matt damp, free from standing water, ice, dirt, oil, grease, coatings, laitance, efflorescence, old surface treatments, all loose particles and any other surface contaminants that could affect adhesion of the adhesive.

#### Steel

Surfaces must be clean, dry, free from oil, grease, coatings, rust, scale, all loose particles and any other surface contaminants that could affect adhesion of the adhesive.

### SUBSTRATE PREPARATION

#### Concrete/masonry/mortar/stone

Substrates must be prepared mechanically using suitable abrasive blast cleaning, needle gunning, light scabbling, bush hammering, grinding or other suitable equipment to achieve an open textured gripping surface profile.

#### Steel

Surfaces must be prepared mechanically using suitable abrasive blast cleaning, grinding, rotating wire brush or other suitable equipment to achieve a bright metal finish with a surface profile similar to aluminium oxide paper medium grade. Avoid dew point conditions before and during application.

#### All substrates

All dust and loose material must be completely removed from all substrate surfaces before application of the product by vacuum / dust removal equipment.

### MIXING

#### Pre-batched units:

Mix parts A+B together for at least 2 minutes with a mixing spindle attached to a slow speed electric drill (max. 500 rpm) until the material becomes smooth in consistency and a uniform grey colour. Avoid aeration while mixing. Then, pour the whole mix into a clean container and stir again for approx. 1 more minute at low speed to keep air entrapment at a minimum. Mix only that quantity which can be used within its potlife.

### APPLICATION METHOD / TOOLS

Apply the mixed product by hard brush or trowel (for detailed application, please refer Sikadur®-Combiflex® System data sheet).

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#### Product Data Sheet

##### Sikadur®-31 C

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## FURTHER DOCUMENTS

Please refer to Sikadur-Combiflex® System and Sika® Dilatec® System data sheet.

## 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.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

## ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

## 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.