BUILDING TRUST

# PRODUCT DATA SHEET

## 2- PART RAPID EPOXY ADHESIVE FOR THE SIKADUR-COMBIFLEX® SG SYSTEM

## PRODUCT DESCRIPTION

Sikadur-Combiflex® CF Adhesive Rapid is a 2-part rapid epoxy based thixotropic adhesive for bonding the Sikadur-Combiflex® SG modified flexible Polyolefin (FPO) waterproofing tapes to different substrates. Internal and external use. Application temperature range +5 °C to +15 °C. It is part of the Sikadur-Combiflex® SG System.

## USES

As adhesive for:
- Adhesive for the Sikadur®-Combiflex® System

As a structural adhesive for:
- Concrete
- Masonry and bricks
- Steel
- Hard natural stone

## CHARACTERISTICS / ADVANTAGES

- Easy to mix and apply
- Excellent adhesion to many materials
- Performs well within a wide temperature range
- Good chemical resistance
- No primer needed
- High mechanical properties

## APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 1504-4 - Structural bonding

## PRODUCT INFORMATION

| | | |
|---|---|---|
| **Chemical Base** | Epoxy resin and selected fillers | |
| **Packaging** | Part A | 20 kg containers |
| | Part B | 10 kg containers |
| | Pallets of 600 kg: (20 × 20 kg Part A) + (20 × 10 kg Part B)<br>Refer to current price list for packaging variations. | |
| **Colour** | Resin-Part A | White |
| | Hardener-Part B | Dark grey |
| | Part A+B mixed | Light grey |
| **Shelf Life** | 24 months from date of production | |
| **Storage Conditions** | The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging. | |

| | | |
|---|---|---|
| **Density** | Part A | ~1,5 kg/l |
| | Part B | ~1,6 kg/l |
| | Mixed resin | ~1,5 kg/l |
| | All Density values at +23 °C. | |
| **Product Declaration** | EN 1504-4: Structural bonding | |

## TECHNICAL INFORMATION

**Compressive Strength** (ASTM D 695-96)

| Curing time | Curing temperature | | |
|---|---|---|---|
| | **+5 °C** | **+10 °C** | **+15 °C** |
| 3 days | ~26 N/mm² | ~34 N/mm² | ~45 N/mm² |
| 7 days | ~39 N/mm² | ~43 N/mm² | ~53 N/mm² |
| 14 days | ~41 N/mm² | ~50 N/mm² | ~55 N/mm² |

**Modulus of Elasticity in Compression** (ASTM D 695) (EN 13412)

~4`200 N/mm² (+5 °C)
~3`500 N/mm² (+23 °C)

**Tensile Adhesion Strength** (EN 1542)

| Substrate | Adhesion strength |
|---|---|
| Concrete dry | > 4 N/mm² * |
| Concrete (matt moist / damp) | > 4 N/mm² * |
| Steel (blast cleaned) | >10 N/mm² |

*failure in concrete

**Coefficient of Thermal Expansion** (EN ISO 1770)

~4,5 × $10^{-5}$ (±0,2 × $10^{-5}$) 1/K
(linear expansion between -20 °C and +40 °C)

**Chemical Resistance**

Refer to the Sikadur Combiflex® SG System data sheet or contact Sika Technical Services for specific information.

**Service Temperature**

-30 °C min. / +60 °C max.

## SYSTEM INFORMATION

**System Structure**

Refer to Sikadur Combiflex® SG System data sheet or contact Sika Technical Services for specific information.

## APPLICATION INFORMATION

| | |
|---|---|
| **Mixing Ratio** | Part A : B = 2 : 1 parts by weight or volume |
| **Consumption** | Refer to the Sikadur-Combiflex® SG System product data sheet. Depends on type of tape or strip. |
| **Product Temperature** | +5 °C min. / +15 °C max. |
| **Ambient Air Temperature** | +5 °C min. / +15 °C max. |
| **Dew Point** | Beware of condensation.<br>Steel substrate temperature during application must be at least 3 °C above dew point. |
| **Substrate Temperature** | +5 °C min. / +15 °C max. |
| **Substrate Moisture Content** | Cementitious substrates:<br>Substrate must be dry or matt damp (no standing water). Brush the adhesive well into the substrate if matt damp. |

**Pot Life**

| Temperature | Potlife* | Open time |
|---|---|---|
| +5 °C | ~65 minutes | ~75 minutes |
| +10 °C | ~45 minutes | ~65 minutes |
| +15 °C | ~25 minutes | ~45 minutes |

(EN ISO 9514)

If larger quantities are being mixed the temperature of the Sikadur-Combiflex® CF Adhesive Rapid will increase due to the chemical reaction, resulting in a reduced potlife.

| Temperature | Scratch Resistance |
|---|---|
| +5 °C | ~16 minutes |
| +10 °C | ~11 minutes |
| +15 °C | ~7 minutes |

**Waiting Time / Overcoating**

Sikadur-Combiflex® CF Adhesive Rapid may be overcoated with an epoxy coating. If this is required, do not smooth the adhesive with a 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**
Prior to mixing all parts, mix part A (resin) briefly using a mixing spindle attached to a slow speed electric drill (max. 300 rpm). Add part B (hardener) to part A and mix Part A+B continuously for at least 3 minutes until a uniformly coloured smooth consistency mix has been achieved. To ensure thorough mixing pour materials into a clean container and mix again for approximately 1 minute. Over mixing must be avoided to minimise air entrainment. Mix full units only. Mixing time for A+B = 4,0 minutes. Mix only the quantity which can be used within its pot life.

**Bulk packaging** (not pre-batched)
Mix each Part separately before mixing together. Add the Parts in the correct proportions into a suitable mixing pail and stir correctly using an electric low speed mixer as above for pre-batched units. For large volume mixing a suitable pan mixer can be used.

### APPLICATION METHOD / TOOLS

Refer to the relevant section in the Sika Method Statement: Sikadur Combiflex® SG System.

### CLEANING OF TOOLS

Clean all tools and application equipment with Thinner C immediately after use. Hardened or cured material can only be removed mechanically.

## FURTHER DOCUMENTS

- Sikadur Combiflex® SG System Data Sheet
- Sika Method Statement: Sikadur Combiflex® SG System

## LIMITATIONS

- Refer to the Sikadur Combiflex® SG System Data Sheet

## VALUE BASE

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 performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

## 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.

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