

## **PRODUCT DATA SHEET**

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# SikaFast®-3131S/-3081N

## STRUCTURAL METHACRYLATE ADHESIVE

| Technical Data | <b>NOTE:</b> Results may differ based upon statistical variations depending upon temperature, application methods, test methods and actual site and curing conditions. | Comp. A: SikaFast®-3131S      | Comp. B: SikaFast®-3081N |
|----------------|--|-------------------------------|--------------------------|
|                | Chemical Base  | Toughened 2-component acrylic |                          |
|                | Colour - Mixed   | Natural                       | White                    |
|                |  | Straw                         |                          |
|                | Viscosity¹ (Brookfield T <sub>E</sub> @ 10 RPM)  | 350,000 cps                   | 150,000 cps              |
|                | Cure Mechanism   | Free radical polymerisation   |                          |
|                | Density (Typical)  | 0.96 kg/L                     | 1.29 kg/L                |
|                | Density - Mixed (Typical)  | 0.99 kg/L                     |                          |
|                | Mixing Ratio (Typical)  By volume By weight  | 10 : 1<br>7.4 : 1             |                          |
|                | Consistency - Mixed  | Non-sag paste                 |                          |
|                | Application Temperature (Approx)(product)  | 10 °C to 35 °C                |                          |
|                | Open Time (Typical) - Static Mixer 22 °C 35 °C   | 7 minutes<br>3 minutes        |                          |
|                | Gel Time (Typical at 22°C)   | 8 minutes                     |                          |
|                | Peak Exotherm (Typical) Time/Temperature   | 17 minutes/88 °C              |                          |
|                | Shore D-Hardness (Approx)  | 65                            |                          |
|                | Tensile Strength (Approx) ASTM D 4121  | 9 MPa                         |                          |
|                | Elongation at Break (Approx) ASTM D 4121   | 50 %                          |                          |
|                | Elastic Modulus (Approx) ASTM D 4121   | 100 MPa                       |                          |
|                | Service Temperature Range (Approx)   | -29 °C to 82 °C               |                          |
|                | Shelf Life - Stored below 22 °C away from sunlight   | Cartridges - 9 months         |                          |
|                | ¹ 22 °C and 50 % Relative Humidity   |                               |                          |

### Description

SikaFast®-3131S is a flexible, two-component acrylic adhesive with incorporated spacer shims (0.07 to 0.08 cm) designed to maintain uniform bondline thickness. SikaFast®-3131S is designed to efficiently transfer high loads and evenly distribute stresses. These characteristics distinguish SikaFast®-3131S from other acrylic adhesives that claim high strength and elongation. SikaFast®-3131S bonds many materials without surface preparation or priming and cures rapidly at room temperature.

#### **Product Benefits**

- High strength
- Fast-setting and -curing
- Spacers for bondline control
- High ductility
- Good damping properties
- Excellent adhesion to a wide variety of substrates with little or no surface preparation

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| Areas of Application             | SikaFast®-3131S is a 10:1, two-part structural adhesive designed to substitute or complement welding, riveting, clinching and other mechanical fastening techniques used in the manufacture of transportation vehicles. SikaFast®-3131S is suitable for bonding sidewall panels, roofs, floors and parts made of aluminium, stainless or galvanized steel and fibre reinforced polymers. Use only with SikaFast®-3081N or SikaFast®-3083N. This product is suitable for experienced professional applicators only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.  |  |
|----------------------------------|---|--|
| Cure Mechanism                   | SikaFast®-3131S cures by radical polymerisation. For an ideal curing process, both components must be homogeneousl mixed within the defined ratio. SikaFast®-3131S offers a short Open Time followed by fast curing. Despite the quic strength build-up, premature exposure to stresses must be avoided so as not to reduce its mechanical properties an lose adhesion. Adjustment of the bonded parts is possible within the Open Time.  |  |
| Chemical Resistance              | Cured SikaFast®-3131S has <b>good resistance</b> to alcohols, glycols, diluted acids and bases, water and crude oil. Cure product is <b>not resistant</b> to gasoline, kerosene and low molecular weight aldehydes and ketones. The above informatio is offered for general guidance only. Advice on specific applications will be given upon request. Actual chemical resistance of bonded components must be tested.  |  |
| Surface Preparation              | Surfaces must be clean, dry and free from grease, oil and dust. Remove all loose particles or residues by thoroug cleaning with, for example, an IPA wipe. Due to the diversity of substrates, preliminary testing is necessary. Advice of specific applications is available from the Technical Services Department of Sika Industry.  |  |
| Application                      | Insert the cartridge into the dispensing tool and attach a manufacturer-recommended static mixer. Bondline thickness should not exceed 3 mm. Larger bondlines are possible, but must be approved by Sika Technical Services. Suitability of adhesive must be determined by laboratory testing prior to application. Apply mixed adhesive to one substrate; mate with other material within the stated Open Time. <b>NOTE:</b> Cure data given in this Product Data Sheet are measured at 22 °C. Cooler temperatures slow the cure reaction, while higher temperatures hasten it. This must be considered when determining the suitability of this product for any application and assembly process. Application of stress to the bonded parts before the stated (or temperature-adjusted) fixture time can cause permanent destruction of the adhesive bond layer and result in failures. |  |
| Removal                          | Excess material can best be removed before curing with a dry wipe. Uncured SikaFast®-3131S may be removed from tool and equipment with a suitable solvent. Cured material can only be removed mechanically. A solvent wipe should follow mechanical removal if re-bonding is to be carried out.   |  |
| Over-painting                    | If over-painting is desired, the paint and paint process compatibility must be tested before use. SikaFast®-3131S shoul not be exposed to paint-baking temperatures until it has attained full cure. It should be understood that the hardness and film thickness of the paint may impair the elasticity of the adhesive and lead to cracking of the paint film over time Contact Sika Technical Services for additional advice.  |  |
| Further information              | Copies of the following publications are available upon request: Material Safety Data Sheet and Sika Pre-Treatment Chart  |  |
| Packaging                        | 12 x 490 ml dual cartridges.  |  |
| Value Bases                      | All technical data stated in this Product Data Sheet are laboratory test-based. Current measured values may vary due to factors beyond our influence.   |  |
| Health and Safety<br>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<br>FOR INDUSTRIAL USE ONLY  |  |

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

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