

## PRODUCT DATA SHEET

# Sikasil® AS-747 SL

Self-levelling potting compound for electrical components

## TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	Sikasil® AS-747 SL (A)	Sikasil® AS-747 SL (B)
Chemical base	2-component silicone	
Color (CQP001-1)	White, black	Transparent
	mixed	White, black
Cure mechanism	Polycondensation	
Cure type	Neutral, alkoxy	
Density (uncured)	1.29 kg/l	0.99 kg/l
Mixing ratio	A : B by volume A : B by weight	4 : 1 5 : 1
Viscosity (CQP029-6)	4 000 mPa·s	50 mPa·s
Consistency	Liquid	
Application temperature	ambient	5 – 40 °C
Snap time (CQP554-1)	30 minutes <sup>A</sup>	
Shore A hardness (CQP023-1 / ISO 48-4)	45	
Tensile strength (CQP036-1 / ISO 527)	1.0 MPa	
Elongation at break (CQP036-1 / ISO 527)	100 %	
Volume resistivity (DIN IEC 60093)	10 <sup>14</sup> Ω·cm	
Electrical strength (DIN IEC 60243-1)	15 kV/mm	
Thermal resistance (CQP 513-1)	0.3 W/m·K	
Service temperature (CQP513-1)	-40 – 150 °C	
Shelf life (CQP016-1)	12 months <sup>B</sup>	

CQP = Corporate Quality Procedure

<sup>A)</sup> 23 °C / 50 % r. h.<sup>B)</sup> stored below 25 °C**DESCRIPTION**

Sikasil® AS-747 SL is a 2-component, non-corrosive, fast-curing silicone potting compound for encapsulation of electronic parts.

**PRODUCT BENEFITS**

- Good flow property
- Good dielectric properties
- Good adhesion to most photovoltaic substrates
- Good performance under harsh environment conditions
- Low volatility
- UL 94 HB certified

**AREAS OF APPLICATION**

Sikasil® AS-747 SL can be used for encapsulation and protection of electronic components which may have to withstand harsh environmental conditions. It is designed for junction box potting in the photovoltaic industry. This product is suitable for experienced professional users only. Tests with actual substrates and conditions have to be performed ensuring adhesion and material compatibility.

## CURE MECHANISM

Sikasil® AS-747 SL starts to cure immediately after mixing the two components.

The speed of the reaction depends mainly on the temperature, i.e. the higher the temperature the faster the curing process. Heating above 50 °C could lead to bubble formation and is therefore not allowed.

The product may also be used in confined spaces but the outgassing by the curing process needs to be considered.

The mixer open time, i. e. the time the material can remain in the mixer without flushing or extrusion of product, is significantly shorter than the snap time indicated above.

## METHOD OF APPLICATION

### Surface preparation

Surfaces must be clean, dry and free from grease, oil and dust. Surface treatment depends on the specific nature of the substrates and is crucial for a long lasting bond.

### Application

The optimum temperature for substrate and product is between 15 °C and 25 °C.

Before processing Sikasil® AS-747 SL both components have to be mixed homogeneously and air-bubble-free in the correct ratio as indicated with an accuracy of ±10 %. Most commercially available metering and mixing equipment are suitable. For advice on selecting and setting up a suitable pump system, contact the System Engineering Department of Sika Industry.

Consider that the B-component is moisture-sensitive and must therefore only be exposed briefly to air.

## Removal

Uncured Sikasil® AS-747 SL may be removed from tools and equipment with Sika® Remover-208 or another suitable solvent. Once cured, the material can only be removed mechanically.

Hands and exposed skin have to be washed immediately using hand wipes such as Sika® Cleaner-350H or a suitable industrial hand cleaner and water.

Do not use solvents on skin.

## Overpainting

Sikasil® AS-747 SL cannot be overpainted.

## Application limits

To exclude materials influencing Sikasil® AS-747 SL, all materials such as gaskets, setting blocks, sealants, etc., in direct and indirect contact have to be approved by Sika in advance.

Where two or more different reactive sealants are used, allow the first to cure completely before applying the next one.

Sikasil® AS-747 SL may only be used for serial application after a detailed examination and written approval of the corresponding project details by Sika Industry.

## FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Industry.

Copies of the following publications are available on request:

- Safety Data Sheets
- General Guideline Structural Silicone Glazing with Sikasil® Adhesives

## PACKAGING INFORMATION

Sikasil® AS-747 SL (A)

Pail	10 kg
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Sikasil® AS-747 SL (B)

Pail	2 kg
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## BASIS OF PRODUCT DATA

All technical data stated in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## HEALTH AND SAFETY INFORMATION

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

## DISCLAIMER

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.

## PRODUCT DATA SHEET

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