

Sikasil® AS-787 SL

Self-levelling potting compound for electrical components

Technical Product Data

Properties	Component A Sikasil® AS-787 SL A	Component B Sikasil® AS-787 SL B
Chemical base	2 component silicone	
Color (CQP ¹ 001-1)	White, Black	Translucent
Color mixed	White, Black	
Cure mechanism	Polycondensation	
Cure type	Alkoxy	
Density (CQP 006-4)	1.26 kg/l approx.	0.97 kg/l approx.
Density mixed	1.22 kg/l approx.	
Mixing ratio	A:B by volume A:B by weight	10:1 13:1
Viscosity (CQP 029-6)	0.89 s ⁻¹	20 Pa·s approx.
Viscosity mixed	22 Pa·s approx.	
Consistency	Liquid	
Application temperature	5 – 40 °C	
Snap time ² (CQP 554-1)	8 min approx.	
Non-flow time ² (CQP 70-10)	13 min approx.	
Tack-free time ² (CQP 019-1)	35 min approx.	
Shore A-hardness (CQP 023-1 / ISO 868)	30 approx.	
Tensile strength (CQP 036-1 / ISO 37)	1.0 N/mm ² approx.	
Elongation at break (CQP 036-1 / ISO 37)	130 % approx.	
Volume Resistivity (DIN IEC 60093)	10 ¹⁴ Ω · cm approx.	
Electrical strength (DIN IEC 60243-1)	20 kV/mm approx.	
Relative permittivity (DIN VDE 0303 Part 4:1969-12)	3.5 F/m approx.	
Comparative Tracking Index CTI (DIN EN 60112)	600 V	
Thermal conductivity (DIN 52612)	0.2 W/m · K approx.	
Thermal resistance, short term 4h (CQP 513-1)	200 °C approx.	
Service temperature	-40 – 150 °C approx.	
Shelf life (storage below 25 °C) (CQP 016-1)	12 months	

¹⁾ CQP = Corporate Quality Procedure

²⁾ 23 °C / 50 % r.h.

Description

Sikasil® AS-787 SL is a two-part, non-corrosive, fast-curing, low-viscous silicone potting agent originally designed for the photovoltaic industry.

Product Benefits

- Short non-flow time
- Excellent flow properties
- Air free potting (complex cavities)
- Excellent adhesion to most photovoltaic substrates
- Good heat dissipation
- Superb dielectric properties
- Outstanding performance under harsh environment conditions
- Low volatility
- UL® certified: UL94 V-0, HWI 3, HAI 0, RTI ≥105°C (221°F)

Areas of Application

Sikasil® AS-787 SL is especially designed for potting of junction boxes used in photovoltaic systems. It is further suitable for encapsulation, protection and bonding of electronic components. The product is suitable for professional experienced users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.



Cure Mechanism

Sikasil® AS-787 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. To increase the curing speed Sikasil® AS-787 SL can be heated up to 50 °C (> 50 °C risk of bubble formation).

Since the curing process does not require moisture the products may also be used in confined spaces.

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 indicated snap time.

For further information contact the Technical Department of Sika Industry.

Application Limits

For specific information regarding compatibility between various Sikasil® products contact the Technical Department of Sika Industry. All materials in contact with Sikasil® AS-787 SL need to be approved by Sika prior use. Where two or more different reactive sealants are used, allow the first to cure completely before applying the next.

Sikasil® engineering sealants and adhesives may only be used in industrial assembly applications by experienced professionals and after a detailed examination. A written approval of the corresponding project details by the Technical Department of Sika Industry is recommended. The suitability of Sikasil® AS-787 SL for a specific application including compatibility and adhesion must be tested on original substrates and under actual conditions.

The above information is offered for general guidance only. Advice on specific applications will be given on request.

Method of Application

Surface preparation

Surfaces must be clean, dry and free from oil, grease and dust.

Advice on specific applications and surface pre-treatment methods is available from the Technical Department of Sika Industry.

Application

Before applying Sikasil® AS-787 SL both components have to be mixed homogeneously and air-free in the correct ratio as indicated (accuracy $\pm 10\%$). Most commercially available metering and mixing equipment are suitable. Contact the System Engineering of Sika Industry for specific advice.

The Sikasil® AS-787 SL B-component is moisture sensitive, therefore the exposure to air has to be reduced to an absolute minimum. For further information contact the Technical Department of Sika Industry.

Removal

Uncured Sikasil® AS-787 SL may be removed from tools and equipment with Sika® Remover-208 or another suitable solvent. To clean mixer and metering equipment use Sika® Mixer Cleaner.

Hands and exposed skin should be washed immediately using Sika® Handclean towels or a suitable industrial hand cleaner and water. Do not use solvents!

Further Information

Copies of the following publications are available on request:

- Safety Data Sheet
- General Guideline "Bonding and Sealing with Sikasil® AS Adhesives"
- Additional Product Information

Packaging Information

Drum (comp. A)	230 kg
Pail (comp. A)	20 kg
Pail (comp. B)	18 kg

Value Bases

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.

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.

Further information available at:

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www.sika.com

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