

LOCTITE CR 6127 SB45 / LOCTITE CR 4301

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PRODUCT DESCRIPTION

LOCTITE CR 6127 SB45 / LOCTITE CR 4301 provides the following product characteristics:

Technology	Polyurethane
Product Type	PU Adhesive
Cure	Polyaddition
Condition	Solvent-free
Components	Two-component
Application	Assembly
Mixing Ratio, by weight Comp. A : Comp. B	90 : 10

LOCTITE CR 6127 SB45 / LOCTITE CR 4301 is a solvent-free two-component adhesive, based on polyurethane. The resin part (component A) contains organic compounds with hydroxyl groups, the hardener (component B) is based on isocyanates.

By mixing both components in a ratio by weight of 90:10 a hard elastic resin is achieved via a chemical reaction. The product exhibits no measurable change in volume after curing which show good mechanical properties. According UL-94 tested with V0.

Application Areas:

LOCTITE CR 6127 SB45 / LOCTITE CR 4301 is used for filling, coating and casting. The product adheres well to pretreated metals and plastics. It contains flame retardant additives. It is qualified for the casting of telecommunication articles (internal and external usage), transformers and other electrical and electronic equipment.

TECHNICAL DATA

Component A

LOCTITE CR 6127 SB45:

Color:	black
Consistency	liquid
Density, g/cm ³	1,50 ± 0,25
Viscosity, Brookfield - RVT, 20°C, 7.000 ± 1.000 mPa.s M-10	

Component B

LOCTITE CR 4301:

Color:	brown
Consistency	liquid
Density, g/cm ³	1,23 ± 0,05
Viscosity, Brookfield - RVT, 20°C, mPa.s * M-10	40 ± 10

Mixture (Component A + B):

Consistency	liquid
Viscosity, mPas	5,000 to 7,000
Pot life (210g, 23 °C), min* M-20	45 ± 10
Open Time, (23°C, 50 % rh), min* M-30	80 ± 20
Initial setting time (23 °C), hrs*	5 to 6
Final setting time (23°C), days	5 to 7
Tensile Shear Strength, MPa* EN 1465 / M-40 (St-St)	>2
Glass Transition, °C* DSC	1

All technical data based on Henkel test method. Data with * are specified.

TYPICAL PROPERTIES OF CURED MATERIAL

Shore hardness ISO 868	A 65 + 5
Coefficient of Thermal Expansion, 135 ppm/K	
Thermal Conductivity, W/mK ASTM E 1461-01	>0.7
Density (23°C), g/cm ³	1.5
Glass Transition Temperature, °C	1
Tensile Strength, N/mm ² ISO 527	>1.8
Elongation, % ISO 527	>50
E-Modulus, MPa ISO 527	~7
Water Absorption DIN EN ISO 175	24h/23°C, 0,11% 10d/23°C, 0,38% 0,5h/100°C, 0,20%

Electrical Properties

Specific Volume resistance, Ω cm VDE 0303 part 30	3,60 * 10 ¹³
Dielectric strength, kV/mm VDE 0303 part	>20
Dielectric loss factor tanδ / 50 Hz VDE 0303	0.02
Dielectric constant part 4/12.69	3.85
Tracking resistance, CTI 600M EN 60112	<1
Tracking resistance, CTI 600 EN 60112	<1

All technical Data are based on Henkel test methods. Information with * are specified.

DIRECTIONS FOR USE

Preliminary Statement:

Prior to use it is necessary to read the **Material Safety Data Sheet** for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed. Please also refer to the local safety instructions and contact Henkel for analytical support.

Pretreatment:

The substrate should be clean, dry, free of dust, oil, grease and other contaminants. Release agents must be cleaned off the surfaces of plastic sheets. Improved adherence is attained if the surface is roughened prior to application.

Application:

Adhesive components can be mixed manually or with two-component mixing equipment. The product may be applied e.g. by spatula. The adhesive is only applicable within a limited time (pot life). After this time the mixture gels and is not suitable for use. Therefore only the amount which can be applied within the pot life should be mixed.

The pot life depends on the quantity and temperature of the mixed batch. With larger quantities or increased temperatures, the pot life decreases. Lower temperatures, however, extend the pot life.

Adhesive components should not come into contact with moisture before or during application. Contact with moisture generates foaming. Therefore all packaging must always be sealed properly and protected against moisture.

Curing:

The filler in LOCTITE CR 6127 SB45 will settle upon prolonged storage. The resin must be thoroughly mixed before combining with LOCTITE CR 4301.

LOCTITE CR 6127 SB45 / LOCTITE CR 4301 can be cured at room temperature (above 15°C) or at higher temperatures (up to 60°C). The curing times are substantially reduced by increasing the temperature. Adding chemical catalysts (accelerators) also speeds up the curing reaction (i.e. pot life, open time). While curing, there should be adequate contact pressure (load pile, presses, and clamps) to hold the joint in place. The mechanical properties are additionally improved by tempering the material at 60°C for 4 hours.

Cleaning:

Fresh, uncured material (cleaning application equipment, substrate contamination etc.) can be removed with LOCTITE SF 8040; cured adhesive can only be removed mechanically.

Not for product specifications:

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

Classification:

Please refer to the corresponding **Safety Data Sheets** for details on:

Hazards identification
Transport information

Regulatory information

Storage:

Component A

Frost-Sensitive	No
Recommended storage temperature, °C	15 to 25

Component B

Frost-Sensitive	Yes
Recommended storage temperature, °C	15 to 25

ADDITIONAL INFORMATION

Disclaimer

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

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