

Sikadur[®] Blade Repair Kit-90

Two component epoxy resin system for structural laminate repairs

Technical Product Data

Properties	Resin (Comp. A)	Hardener (Comp. B)
Chemical base	Epoxy	Amine
Color mixed (CQP ¹ 001-1)	Colourless to amber	
Curing mechanism	Polyaddition	
Density (CQP 553-2)	1.17 g/cm ³ approx.	0.94 g/cm ³ approx.
Density mixed (calculated)	1.12 g/cm ³ approx.	
Mixing ratio	by weight 100 : 30	
Solid content	100%	100%
Viscosity ² , 25°C	850 mPa·s approx.	15 mPa·s approx.
	mixed 370 mPa·s approx.	
Application and processing temperature	5 - 35°C (65 - 95°F)	
Pot life ³	90 min. approx.	
Density of cured specimen ⁴ (ISO 1183)	1.17 approx.	
Shore D hardness ⁴ (ISO 868)	86 approx.	
Flexural E-Modulus ⁴ (ISO 178)	2700 MPa approx.	
Flexural strength ⁴ (ISO 178)	130 MPa approx.	
Tensile E-Modulus ⁴ (ISO 527)	2800 MPa approx.	
Tensile strength ⁴ (ISO 527)	85 approx.	
Elongation at break ⁴ (ISO 527)	5% approx.	
Compressive strength ⁴ (ISO 604)	120 MPa approx.	
Impact resistance ⁴ (ISO 179)	50 kJ/m ² approx.	
Heat distortion temperature ⁴ (ISO 75B)	120°C approx.	
Glass transition temperature ⁴ (ISO 11357)	115°C approx.	
Shelf life ⁵ (CQP 016-1)	12 months	

¹⁾ CQP = Corporate Quality Procedure

²⁾ Rotation, PP40, 0.5 mm, 150 min⁻¹

³⁾ 23°C (73°F) / 50% r.h.

⁴⁾ After 12 h curing at 120°C

⁵⁾ Stored between 5°C and 35°C in original, unopened packaging

Description

Sikadur[®] Blade Repair Kit-90 is a high T_g composite resin system for wet lay-up processing.

Sikadur[®] Blade Repair Kit-90 is manufactured in accordance with ISO 9001 / 14001, quality assurance system and with the responsible care program.

Product Benefits

- Approved by GL (Germanischer Lloyd)
- Good impregnation and non-draining properties
- High Heat Distortion Temperature (HDT)
- Fast curing
- High stiffness and strength
- Light weight packaging (MixPax)
- Premeasured quantities
- Resistant to crystallization at low temperature

Areas of Application

Sikadur[®] Blade Repair Kit-90 is designed for repair of damaged laminate structures of rotor blades. It is optimized for hand lay-up but can also be used for repair of patches by vacuum infusion. This product is suitable for professional experienced users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

* This product is currently in the field test phase and has not been finally released. Technical data stated herein is based on preliminary testing and experience and is subject to change. Product is only suitable for experienced users and only after suitable pre-testing. Subject to mandatory legal provisions, Sika's liability is limited to the replacement of the defective products.



Cure Mechanism

The curing of Sikadur® Blade Repair Kit-90 takes place by chemical reaction of the two components. Higher temperatures speed up the curing process and lower temperatures slow down the curing process.

Environmental Resistance

In case of expected chemical or thermal exposure, we recommend a project related testing. Consult the Technical Service Department of Sika Industry for advice.

Method of Application

Surface preparation

It is necessary to prepare the substrates prior to lamination to ensure optimal adhesion and strength. Based on the surface condition and type of material, physical or chemical pre-treatment may be required after the cleaning process.

Advice on specific applications is available from the Technical Service Department of Sika Industry.

Mixing

Open packaging and remove sealing strip. Retain plastic clip and use it to move resin (A) into the section containing the hardener (B). Repeat 4 - 6 times. Squeeze packaging vigorously for 30s to properly mix the two components. Carefully cut off the corner of the packaging and pour the resin into a cup. The resin is ready for use. Apply Sikadur® Blade Repair Kit-90 within pot life.

Note: Low application temperatures influence the mixing, application and processing properties. Refer to the corresponding Application Guideline for further information or consult Technical Department of Sika Industry.

Cleaning

Uncured Sikadur® Blade Repair Kit-90 may be removed from tools and equipment with Sika® Cleaner P. Once cured, the material can only be removed mechanically.

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

Storage Conditions

Sikadur® Blade Repair Kit-90 has to be kept between 5°C and 35°C in a dry place. Do not expose to direct sunlight. If crystallisation of resin occurs, heat the MixPax up to 60°C for at least 60 minutes.

Further Information

The following publications are available on request:

- Safety Data Sheet
- Additional Product Information for Sikadur® Blade Repair Kit-30 and -90
- Application Guideline for Sikadur® Blade Repair Kit-30 and -90

Packaging Information

Sikadur® Blade Repair Kit-90 (A+B)

MixPax	0.3 kg
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Value Bases

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.

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:
www.sika.ch
www.sika.com

Sika Schweiz AG
Business Unit Industry
Tüffenwies 16
CH-8048 Zurich
Switzerland
Tel. +41 58 436 40 40
Fax +41 58 436 55 30

