

SikaTherm®-4225

Water based high-performance contact and sealing adhesive
(particularly for leather and synthetic leather)

Technical Product Data

Chemical base	Polyurethane
Curing agent (hardener)	SikaCure®-4900; -4901; 4901 BL; -4902 BE or 4909
Colour (CQP ¹ 001-1)	White
Cure mechanism	Polyaddition
Density (uncured) (CQP 006-6)	1.0 kg/l approx.
pH-Value (CQP 004-1)	7 - 8.5
Viscosity, 20°C / Brookfield RVT, Sp. 4 / 5 rpm	13'000 mPas approx.
Solid content (CQP 002-2)	42 - 48% approx.
Mix ratio (hardener per weight)	4 - 5%
Application temperature	15 - 25°C (60 - 75°F)
Activation temperature	sealing bonding contact bonding
	at least 60°C (140°F) at least 45°C (115°F)
Pot life (20°C)	8hours at least
Coverage (typical value) ²	80 - 120 g/m ² , wet
Drying time (CQP 565-1)	minimal ² dried in drying tunnel at max. 50°C
	45 min. approx. 10 min. approx.
Open time ² (CQP 567-1)	At least 2 h after the end of flash-off time
Shelf life (storage between 5°C and 25°C in sealed container) SikaTherm® is sensitive to frost, store above +5°C. An excess of the recommended storage temperature during transport is not critical	6 months after production

¹ CQP = Corporate Quality Procedure

² 23°C (73°F) / 50% r.h.

Description

SikaTherm®-4225 is a ready to use waterborne two component PUR dispersion adhesive with high initial strength and very good resistance against plasticizers, fat and oil for contact bonding or sealing application. This two component system has excellent adhesion to the plastic materials and after complete curing (approx. 3 days) it has very good heat and weathering resistance.

SikaTherm®-4225 is manufactured in accordance with ISO TS 16949 / ISO 14001 quality assurance system and the responsible care program.

Product Benefits

- Easy processing
- Solvent free
- Broad adhesion range on plastics in combination with leather and synthetic leather
- High initial strength
- Easy positioning of the parts to fit
- Very good resistance against heat and weathering
- Very high resistance against hydrolysis

Areas of Application

Important fields are bonding of decor material (particularly leather and synthetic leather) in interior linings for automobiles.

Suitable substrates are fibre boards of wood, cotton, hemp, sisal and plastic substrates (e.g. ABS, ABS/PC, PP / pre-treated, GFK, epoxy, PUR) in combination with decor materials like leather, synthetic leather, foils, (e.g. PVC, TPO, ABS, ASA, polyester) as well as cover fabrics from textiles, foam backed textiles, carpets and floor covers.

This product is suitable for professional experienced users only. Test with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Industry



Cure Mechanism

In the curing process of SikaTherm®-4225 the first step is the drying, due to the evaporation of the solvent. This physical process is followed by chemical cross linking (in a poly additional reaction) with the curing agent. At room temperature the chemical curing is completed in about 72 hours. Higher temperatures increase, lower ones decrease the speed both of drying and the chemical reaction.

Method of Application

Surface preparation

The adhesion surfaces must be clean, dry and free of oils and fats. Release agents from the surface of the plastic parts must be removed with the help of suitable cleaners. To obtain wetting and good adhesion, the surface tension of plastic parts must be at least 38 mN/m.

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

Mixing

The curing agent is metered into the continuously stirred solution and then mixed with a mechanical mixer to obtain a homogeneous mixture. Care should be taken to avoid air inclusion.

Application

The adhesive generally is applied with roller, brush or spray gun (nozzle 1.5 - 1.8 mm at 0.8 - 2.0 bar adhesive pressure) on the substrate. For automated application a suitable filter system is required.

Both ambient conditions as well as drying tunnel (temperature of the air should not exceed 50°C) can be used for drying. Before the open time is over the parts are, according to the hot sealing bonding procedure, fitted together and compressed to form the bond. For advice on selecting and setting up a suitable pump system please contact the System Engineering Department of Sika Industry.

Removal

Uncured SikaTherm®-4225 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 should be washed immediately using Sika® Handclean Towel or a suitable industrial hand cleaner and water. Do not use solvents!

Further Information

Copies of the following publications are available on request:

- Material Safety Data Sheets
- Polyurethane Dispersion Guidelines

Packaging Information

Pail	4 kg
Pail	25 kg

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 should refer to the actual Material 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

