

SikaTherm®-4800

Low Activation Temperature Lamination Adhesive

Technical Product Data

Chemical base	Polyurtehane polymer solution
Curing agent (hardener)	SikaCure®-4950 (blue), -8011/00 BC (transparent brown), -8100/00 C (transparent brown), -8101/00 CE (blue)
Colour (CQP ¹ 001-1)	Colorless, hazy
Cure mechanism	Poly additional
Density (uncured) (CQP 006-6)	0.8 kg/l approx.
Viscosity, 20°C / Brookfield RVT, Sp. 4/5 Rpm	1'000 mPas approx.
Solid content (CQP 002-2)	19% approx.
Mix ratio (hardener per weight)	7 - 10%
Application temperature	15 - 25°C (60 - 75°F)
Activation temperature	At least 60°C (140°F)
Pot life ²⁾	12 hours approx.
Drying time (CQP 565-1)	minimal ²⁾ min. 15 min approx. dried in drying tunnel at max. 50°C min. 3 min approx.
Open time ²⁾ (CQP 567-1)	2 hours approx.
Final bond strength ²⁾	3 days approx.
Shelf life (storage 5-25°C in sealed container) SikaTherm® is sensitive to frost, store above 5°C. SikaTherm®-4800 gelles at low temperatures; after warming up the container to room temperature and mixing the adhesive is suitable again. An excess of the recommended storage temperature during transport is not critical.	9 months after production

¹⁾ CQP = Corporate Quality Procedure

²⁾ 23°C (73°F) / 50% r.h.

Description

SikaTherm®-4800 is a ready to use solvent based two component PUR solution with high initial strength and very good resistance against plasticizers.

SikaTherm®-4800 is used in combination with the curing agent SikaCure® to improve the water and temperature resistance.

The two component system is a high performance contact- and laminating adhesive.

SikaTherm®-4800 is manufactured in accordance with ISO TS 16949 / ISO 14001 quality assurance system and the responsible care program.

Product Benefits

- Broad adhesion range on wood and plastics
- High initial strength
- Very high resistance against hydrolysis
- Very good resistance against heat and weathering

Areas of Application

Important area of application is the automotive industry (door panels, vacuum coverings, instrument panels etc.).

Suitable substrates are plastics, wood decorative and foamed foils made of PVC, ABS, ASA TPO or polyester and also foamed backed textile coverings, carpets and floor covers. SikaTherm®-4800 delivers in combination with the curing agent SikaCure®-4950, -8011/00 BC, -8100/00 C or -8101/00 CE excellent performance as adhesive for most synthetic and natural materials and is a customised problem solver in demanding applications.

Industry



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.

Cure Mechanism

In the curing process of SikaTherm®-4800 the first step is the drying, due to the evaporation of the solvent. This physical process is followed by chemical cross linking (in a polyaddition 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®-4800 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	25 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 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:
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