Industry

Technical Data Sheet
Version 05/2004

SikaTherm-4210

Laminating Adhesive for Plastics

Technical Product Data:

Chemical Base	PUR synthetic resin dispersion
Colour	White
Solid content (CQP002-0)	45% approx.
Density (CQP006-3)	1,0 kg / l approx.
pH value (CQP004-0)	7 - 8
Viscosity, 20°C (Brookfield RVT, Sp. 3 / 5 Rpm)	6500 mPas approx.
Curing agent (hardener)	Typ: SikaCure -4900; -4901; -4901 BL; -4902 BE or -4909
Mix ratio	4 - 5 parts by weight curing agent to 100 parts by weight dispersion
Pot life	8 hours at least
Bonding process	Heat sealing or hot contact bonding
Coating weight	60 - 120 g / m² approx. wet, (depends on substrate)
Way of application	Spray gun, roll coating, brush or tooth-comb
Drying time (Flash off time before fitting) (CQP565-1)	At room temperature[1)] 30 min approx. in drying tunnel (at max. 40 - 50°C): 10 min approx.
Open time (20°C) (CQP567-1)	At least 2 hrs. after drying
Activation temperature	At least 70°C
Shelf life	6 Monate in unopened original container at the storage temperature of 5 - 25°C, SikaTherm is sensitive to frost, store above +5°C. In Winter only transport in thermocontainer.

[1)] At 23°C and 50% relative humidity

Description:

SikaTherm-4210 is a ready to use waterborne two component PUR dispersion adhesive with high initial strength and very good resistance against plasticizers.
SikaTherm-4210 is used in combination with the curing agent SikaCure-4900; -4901; -4901 BL -4902 BE or -4909.
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-4210 is manufactured in accordance with the ISO 9001/14001 quality assurance system.

Product benefits:

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

Cure mechanism:

In the curing process of SikaTherm-4210 the first step is drying, due to the evaporation of water. This physical process is followed by chemical crosslinking (in a polyadditional 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 the drying and the chemical reaction.

Areas of application:

SikaTherm-4210 in combination with SikaCure-4900; -4901; -4901 BL -4902 BE or -4909 is a high quality laminating adhesive. It can be processed by the heat sealing (application on one face) or by the hot contact bonding (application on both faces) procedure.

Important uses are in the automotive industry (door panels, vacuum coverings, instrument panels etc. or in the furniture manufacturing (front parts, panels) in the 3D laminating process.

Suitable substrates are plastics, wood, medium density fibreboard (MDF, manufactured of wood fibres), decorative and foamed foils, made of PVC, ABS, ASA, TPO or polyester and also foam backed textile coverings, carpets and floor covers.

SikaTherm-4210 delivers in combination with the curing agents SikaCure-4900; -4901; -4901 BL -4902 BE or -4909 excellent performance as adhesive for most synthetic and natural materials and is a customized problem solver in demanding applications.

Method of application:

Mixing. The usual mix ratio of SikaTherm-4210 (Resin dispersion), in combination with SikaCure (curing agent) is 100 parts by weight resin dispersion to 4 parts by weight curing agent. Slight increase of the curing agent amount to 5% results in an improved hydrolytic stability.

The curing agent is metered into the continuously stirred dispersion and then mixed with a mechanical mixer to obtain a homogeneous mixture. The pot life is 8 hours.

The processing temperature should exceed 18 °C.

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.

Application. The adhesive generally is applied with spraying gun (HVLP-System, nozzle 1,5 - 1,8 mm at 0,8-2,0 bar adhesive pressure) on the substrate.

Both ambient conditions as well as drying tunnel (temperature of the air should not exceed 40 - 50 °C) can be used for drying. Before the open time is over the parts are, according to the hot sealing or hot contact bonding procedure, fitted together and compressed to form the bond.

Cleaning of tools. Tap water is sufficient to clean the tools from uncured adhesive residues.

Cured adhesive can only be removed by mechanical means or suitable solvent.

Further information:

Copies of the following publications are available on request:

- Safety Data Sheet

Packaging information:

Pail	25 kg
PP Container	900 kg

Important:

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the actual Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Note:

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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

For specific advice concerning preparation of the substrates or the choice of appropriate application devices, please contact our Technical Service.

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