

SikaMelt®-9181

Moisture Curing Polyolefine Hotmelt for Lamination Bonding

Technical Product Data:

Chemical base	Polyolefine reactive hotmelt
Colour	transparent-cloudy, milky
Solids content	100%
Reaction mechanism	Moisture curing
Density at 20 °C (DIN 53217) ¹⁾	0,88 kg / l approx.
Viscosity at 180 °C (Brookfield Thermosel)	8000 mPas approx.
Softening Temperature (DIN 52011: ring & ball) ¹⁾	146 °C approx.
Application temperature range	150 - 200 °C
Open time (500 µm film at 200 °C) (CQP 559-1)	45 sec. approx.
Green strength (CQP 557-1)	0,6 N / mm ² approx.
Curing time to final strength ²⁾ (CQP 558-1)	5 days approx.
Shore A hardness (DIN 53505) ¹⁾	57 approx.
Tensile strength (DIN 53504) ¹⁾	2 N / mm ² approx.
Elongation at break (DIN 53504) ¹⁾	450 % approx.
Heat resistance (CQP 569-1)	110 °C
Shelf life (under dry conditions at 5 - 25 °C)	6 months 4 months for cartridge

¹⁾ Based on ²⁾ At T = 20 °C, relative humidity = 55 %, on 500 µm thick film

Description

SikaMelt®-9181 versatile, reactive hotmelt assembly and lamination adhesive with short open time based on polyolefine. It cures with moisture of the air and forms an elastomer, which can not be melt anymore.

SikaMelt®-9181 is manufactured in accordance with the ISO 9001/14001 quality assurance system.

Product benefits

- Excellent adhesion to olefine substrates without pre-treatment
- High final strength and flexibility over a broad temperature range
- short open time
- High green strength
- Excellent ageing and heat resistance
- Useable for lamination process

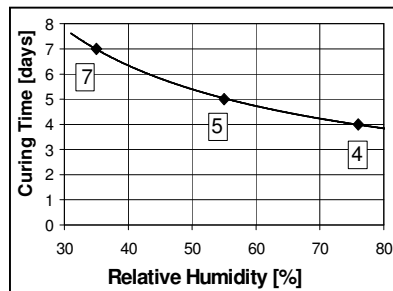
Areas of application

SikaMelt®-9181 has a relatively broad adhesion spectrum. It is suitable for permanent strong bonding of unpolar olefine substrates like polypropylene and polyethylene. SikaMelt®-9181 shows also good adhesion to some polar substrates like PA, PES and wood.

Area applications on substrate combinations like polymer and steel plates, which do not provide moisture permeability to the adhesive layer, are not possible with SikaMelt®-9181.

Cure mechanism

The formation of the SikaMelt®-9181 adhesive polymer is based on a cross-linking after reaction with moisture of the air (see diagram³⁾).



Curing time for 500 µm adhesive film³⁾ at 20 °C

The curing is not only dependent on the applied film thickness, but also on the moisture content of the air, temperature, moisture content and permeability of the substrates.

Chemical resistance

SikaMelt®-9181 is resistant to aqueous surfactant solutions, weak acids and caustic solutions. It is temporarily resistant to fuels, solvents and oils. As the chemical resistance depends on type and condition of the substrate, chemical concentration, exposure duration and temperature, a project adapted adhesive performance test is strongly recommended.

Method of application

SikaMelt®-9181 can be applied by heated piston-type cartridge gun, by appropriate melting equipment out of containers, and out of hobbocks or drums for film-, spot-, bond-line- or spray-application.

Split width 0,1-1 mm.

For the use in automatic application systems a suitable filter system is recommended.

Standstill periods for several hours or over night have to be avoided. During longer periods of interruption the equipment temperature has to be lowered to 120 °C. Clean the nozzles with a dry oil (available on request) in order to avoid blockage.

Surface preparation.

Bonding area must be clean, dry and free from grease, oil and dust. Adhesion can be improved by suitable substrate pre-treatment. Due to a variety of substrates and mechanical load requirements, technical consultations with our Technical Service are in any case advisable.

Cleaning up.

SikaMelt®-9181 in uncured state may be removed from tools and equipment with SikaMelt-9905 (see also manual "Cleaning of SikaMelt reactive polyolefine hotmelt application tools").

Once cured inside application equipment, the material can be swelled with SikaMelt-9901. After swelling there is a mechanical cleaning necessary.

Further information

Copies of the following publications are available on request:

- Material Safety Data Sheet
- Manual "Cleaning of SikaMelt® reactive polyolefine hotmelt application tools"

Packaging information

Hobbock	15 kg
Cartridge	0,25 kg

Important

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the actual Material 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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