BUILDING TRUST

PRODUCT DATA SHEET

SikaMelt®-877

Long open time classification free polyurethane hot melt with high initial strength

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base		Polyurethane
Color (CQP001-1)		White – beige
Cure mechanism		Moisture curing
Density (uncured)		1.10 kg/l
Viscosity (by Brookfield)	at 130 °C	15 000 mPa·s
Softening temperature (CQP538-5)		70 °C
Application temperature		120 – 140 °C
	short term max. 1 h	150 °C [A]
Open time (CQP559-1)		Medium
Curing time (CQP558-1)		24 h
Green strength (CQP557-1)	after 30 min	0.4 MPa
Shelf life		9 months

CQP = Corporate Quality Procedure

[A] only valid for nozzle

DESCRIPTION

SikaMelt®-877 is a classification free reactive polyurethane hot melt adhesive with a long open time. Because of its high surface tack within open time SikaMelt®-877 is a versatile product for Automotive and Industrial lamination applications including sandwich panel bonding. SikaMelt®-877 offers a wide range of adhesion and is very robust while processessing. It cures on exposure to atmospheric humidity.

PRODUCT BENEFITS

- Classifiaction free
- Very long open time
- High green strength
- Broad adhesion range
- Very good ageing resistance

AREAS OF APPLICATION

SikaMelt®-877 is suitable for permanent bonding of polar plastics as well as for wood, foam, textiles, painted and primed steel. Non polar plastics like PP and PE can be bonded after proper physical pre-treatment. SikaMelt®-877 is designed for Automotive interior trim lamination as well as for various Industrial lamination applications. Its long open time and high initial strength makes SikaMelt®-877 highly suitable for Sandwich Panel Bonding.
This product is suitable for experienced professional users only. Tests with actual substrates and conditions have to be performed ensuring adhesion and material compatibility.

CURE MECHANISM

SikaMelt®-877 cures by reaction with atmospheric moisture. At low temperatures the water content in the air is lower, which will result in a lower curing speed (see diagram 1).
When bonding hydrophobic (e.g. PP) and/or moisture impermeable substrates a significantly longer curing time has to be taken into account.
This applies especially on assembly applications with an adhesive thickness > 100 µm.
For lamination applications of hydrophobic and/or moisture impermeable substrates the adhesive layer shall not exceed 100 µm. In such cases project related tests with original substrates and conditions are mandatory.

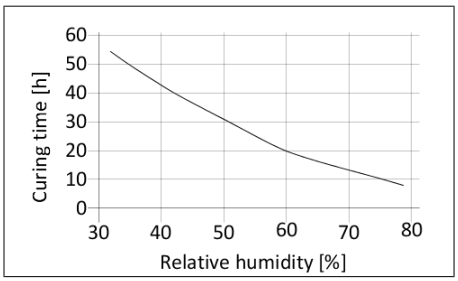

Diagram 1: Curing time for 500 µm film

CHEMICAL RESISTANCE

SikaMelt®-877 is resistant to aqueous surfactant, weak alkaline/acids solutions and temporarily resistant to fuels, solvents and mineral oils.
The chemical resistance is influenced by several factors such as chemical composition, concentration, period of exposure and temperature. Therefore a project related testing in case of chemical or thermal exposure is required.

METHOD OF APPLICATION

Surface preparation

Surfaces must be clean, dry and free from grease, oil and dust.
Based on the surface and type of material, a physical or chemical pre-treatment might be required. Type of pre-treatment must be determined by preliminary tests.
For metals best results are achieved, if substrates are heated up between 40 °C and 60 °C prior the assembly process.

Application

With adequate processing equipment SikaMelt®-877 can be applied as film, dot, bead or spray application. For automated applications a suitable filter system is required.
To meet the required application properties the adhesive viscosity can be adjusted by adapting the application temperature (see table Typical Product Data).
During breaks SikaMelt®-877 is to be processed as follows:
For breaks ≥ 1 h the heating needs to be lowered to 80 °C and for breaks ≥ 4 h the heating needs to be switched off.
To ensure a constant quality during the whole production process it is mandatory to protect the adhesive in the melting tank with nitrogen, carbon dioxide or dried air (to avoid possible reaction of the product with humidity).
At breaks or shut downs dip nozzle in dried oil in order to prevent curing of the adhesive (avoid blockage).
For advice on selecting and setting up suitable processing equipment contact the System Engineering Department of Sika Industry.

Removal

Equipment and application tools can be cleaned with SikaMelt®-009. Cured material can be swelled with SikaMelt®-001 and needs to be removed mechanically (see also cleaning instruction).
Uncured SikaMelt®-877 may be removed from tools and equipment with Sika® Remover-208 or another suitable solvent.
Hands and exposed skin have to be washed immediately using Sika® Cleaner-350H or a suitable industrial hand cleaner and water.
Do not use solvents on skin.

STORAGE CONDITIONS

SikaMelt®-877 has to be stored at temperature below 30 °C in a dry place.
For transportation purposes, the storage temperature can be exceeded for a period of max. 2 weeks up to 60 °C.

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Industry.
Copies of the following publications are available on request:

- Safety Data Sheets
- Cleaning Instruction
  For SikaMelt® PUR reactive hot melt equipment

PACKAGING INFORMATION

Pail	20 kg
Drum	200 kg

BASIS OF PRODUCT DATA

All technical data stated in this document 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.

DISCLAIMER

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.

Sika Deutschland CH AG & Co KG
Industry
Stuttgarter Straße 139
72574 Bad Urach
Tel. +49 7125 940-7692
verkauf.industry@de.sika.com
www.sika.de