

PRODUCT DATA SHEET

SikaMelt®-603 IS

(formerly SikaMelt®-9603 IS)

Fast curing Polyurethane Hot Melt with high initial strength for textile lamination

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base	Polyurethane
Color (CQP001-1)	Transparent
Cure mechanism	Moisture curing
Density (uncured)	1.2 kg/l
Viscosity (by Brookfield)	at 70 °C 23 000 mPa·s
Softening temperature (CQP538-5)	30 °C
Application temperature	70 – 140 °C short term max. 1h 160 °C ^A
Curing time (CQP558-1)	2.5 h
Tensile strength (CQP036-3)	2.6 MPa
Shelf life	18 months

CQP = Corporate Quality Procedure

^{A)} Only valid for nozzle

DESCRIPTION

SikaMelt®-603 IS is a reactive polyurethane hot melt adhesive. It cures on exposure to atmospheric humidity. SikaMelt®-603 IS is designed for standard textile lamination processes and provides very good washing resistance. It offers a short curing time, which can be of additional benefit for certain applications.

PRODUCT BENEFITS

- High green strength
- Fast curing
- Very good wash and cleaning resistance
- Broad adhesion spectrum

AREAS OF APPLICATION

SikaMelt®-603 IS is suitable for permanent bonding of foam and membrane to high water repellent textiles. SikaMelt®-603 IS is especially designed to fulfill the requirements for lamination applications in the textile industry.

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

CURE MECHANISM

SikaMelt®-603 IS 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.

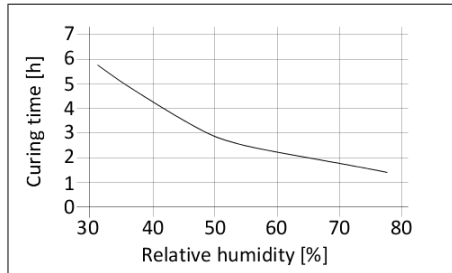


Diagram 1: Curing time for 500 µm film

CHEMICAL RESISTANCE

SikaMelt®-603 IS 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®-603 IS 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 changing the application temperature (see table Typical Product Data).

During breaks SikaMelt®-603 IS 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 guarantee 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 for cleaning purposes be swelled with SikaMelt®-001 and needs to be removed mechanically (see also cleaning instruction). SikaMelt®-603 IS 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 hand wipes such as Sika® Cleaner-350H or a suitable industrial hand cleaner and water.

Do not use solvents on skin.

STORAGE CONDITIONS

SikaMelt®-603 IS 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

Bag	2 kg
Pail	20 kg
Bag (cardboard)	22 kg
Drum	200 kg

Please contact our customer service, for information of what packaging sizes are sold in Denmark.

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

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

PRODUCT DATA SHEET

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