TECHNOMELT

Technical Data Sheet

TECHNOMELT PUR 9340

Known as Terorehm 9720
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PRODUCT DESCRIPTION

TECHNOMELT PUR 9340 provides the following product characteristics:

Technology	Polyurethane
Product Type	Hotmelt
Application	Laminating and mounting

TECHNOMELT PUR 9340 is a high performance, moisture curing hot melt adhesive based on polyurethane. The uncured product is wax-like and demonstrates the following characteristics:

- Very good application properties (can be sprayed, roller coated and foamer).
- Relatively low melting and application temperatures (compared to conventional hot melt adhesives).
- Good wetting properties of the molten mass to many substrates.
- High initial strength after solidification.
- Can be activated by high frequency.

TECHNOMELT PUR 9340 cures by **moisture** forming a duroplastic material, demonstrating the following characteristics:

- High softening point above 100°C.
- Excellent flexibility at low temperatures.
- Good chemical resistance (e.g. to fuel-oil mixture, numerous plasticizers, solvents, aqueous surfactants, salt spray).
- Adhesion to many polar plastics (e.g. ABS, ABS/PC, PC, PVC, SMC, etc.) and - after pretreatment - also to nonpolar plastics (e.g. PE, PP, etc.); wood, foils (soft PVC, TPO) and textiles.

Application Areas:

The favourable properties in application and final state of TECHNOMELT PUR 9340 opens up a wide field of application for laminating and mounting in the areas:

- Automotive industry and sub-contractors
- Wood and furniture industry
- House hold appliances
- Textile and foil industry
- Electrical industry

TECHNICAL DATA

(as supplied)
Uncured:

Colour	light ivory
Odour	weak
Density, g/cm³	~1.8
Solid content, %	100
Viscosity (130 °C), Pa. s	7 to 13
Equipment	rotation viscosimeter Brookfield
Measuring system	Thermosel SP 27
Speed, rpm	5
Softening point, °C DIN 52011	48 to 56 °C
Reactivation time (**)	~4 h (at 23°C/ 50% rh)
Application temperature (***)	100 to 140°C (max. 160°C for a short period of time)
Consumption, g/m²	20 to 100 (depending on material combination and application system)

After curing:

Shore A hardness (Din 53505)	~85
Shear strength (based on DIN EN 1465):	
Substrates	beech Wood
Layer thickness	0.2 mm
Overlap	10 mm
Cross head speed	100 mm/min
tested at 20°C	~9 MPa
tested at 90°C	~7 MPa
tested at 100°C	~3 MPa
Tensile strength DIN 53504	~25 MPa
Elongation DIN 53504	~770 %

In service temperature range	-40 to 120°C
Short exposure (up to 1 h)	130°C

(*) When being cooled down TECHNOMELT PUR 9340 shows a non-tacky surface. Building up an intermediate stock with coated décor parts is possible creating no problems.

** Reactivation time is the period within which applied and cooled down adhesive can be heated up again and thus be reactivated. The reactivation time depends in a decisive degree on the environmental conditions: moisture, room temperature and humidity of the coated substrates. By increasing temperature and/or relative humidity up to more than 23°C resp. 50% rh the reactivation time will decrease strongly! At 30°C/ 75% for instance it will only be

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approximately two hours.

*** Application temperature among other things also depends on the substrate to be bonded. Because many common plastics contain internal accessory agents (slip additives, release agents, binding agents, etc.), they very often can only be bonded safely at very high temperatures (>150°C).
We urgently recommend trials prior to bonding!

DIRECTIONS FOR USE

Preliminary Statement:
Prior to use it is necessary to read the **Material Safety Data Sheet** for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed. Please also refer to the local safety instructions and contact Henkel for analytical support.

Pretreatment:
The bonding surfaces must be clean, dry and free of oil and grease.

Substrate temperature should not fall below 20°C during application.

Lower temperatures will lead to an early solidification of the adhesive and thus to a reduced open time, possibly the adhesive might even flake off.

If necessary the substrates may be prewarmed, however, longer open times and thus extended cycle times will have to be taken into consideration at temperatures above 45°C.

Application:
TECHNOMELT PUR 9340 can be applied from heatable cartridge guns, from usual tank melting equipment and from drums or hobbocks, using heatable equipment.
The material may be applied by nozzle, roller, foamable and sprayable systems.

Comments on Application:
Method/ Container

Cartridge pistol/ 310 mL aluminium cartridge:

- Adjusting application temperature (100 to 130°C); at short application periods (approx. 2 h) temperature may be up to 150°C.
- Cartridge must be pre-warmed for ca. 90 min in a heating box or heatable cartridge pistol (total content has to be molten); insert into pistol.
- Adhesive is applied as bead, film or by spraying to the substrate to be bonded (*).

Drum melting equipment/ 20-l-hobbock:

Adjust temperatures as follows:

- follower plate: 90°C
- pump: 100°C
- hose: 110°C
- pistol: 110 to 150°C (during malfunction 100°C)
- spray head: 130 to 150°C (temperatures are valid for continuous operation only)
- atomizing air: 130 to 160°C

Tank melting equipment/ 2.5-kg-tin:

Note:A layer of nitrogen or dried air will have to protect the hotmelt in these "open systems"! Tank temperature and thus also thermal strains has to be kept as low as possible, for the total amount of adhesive is kept liquid in the tank melters. Tank temperature: 100°C maximum, temperatures for hose and application components see above. Longer rest periods in the tank at high relative humidity can lead to minor foaming and skin formation of the hotmelt. Remedy: discharge hotmelts and fill tank with fresh material.

Roller coating/ several:

The instructions from above are also valid for the tank of the roller coating equipment.
Medium residence time of the material in the tank must not exceed 2 hours at 130°C maximum, because the hotmelt in the roller coater is exposed to humidity by the tank and by the rolls.
Tank must only be filled slightly above the temperature probe.
Tank temperature: 100 to 130°C.
For on-line operations the tank is filled via a pre-melter.
During interruptions temperature has to be decreased to approx. 100°C, washing the rolls with dried air or nitrogen.

Mode of application:

TECHNOMELT PUR 9340 is applied with all common systems as dots or beads or two-dimensional (roller coating, spraying) and with FoamMelt®.

(*) when coating substrates which differ strongly in thermal conductivity the substrate with the lower coefficient should always be coated (insulation effect)

® FoamMelt is a registered trade mark of Nordson GmbH

Cleaning:
As long as TECHNOMELT PUR 9340 is not cured application equipment can be cleaned with Purmelt Cleaner 02. (See separate Technical Data Sheet). Cured adhesive can only be removed mechanically.

Curing:
TECHNOMELT PUR 9340 cures exclusively by moisture and gains its final strength after 4 to 7 days, but exhibits high handling strength after the physical process of setting.

Curing is a chemical reaction depending on the following parameters:

- humidity in the rooms for application and storage (assure possibility of humidity access; the adhesive will react extremely slowly with parts being wrapped in plastic foils!)

- humidity of the substrates (carrier and decor)

- permeability of the substrates to be bonded

- application weight/layer of the adhesive film

If required, we will assist you to determine your specific process data.

Storage:

Frost-sensitive	no
Recommended storage temperature, °C	10 to 25
Shelf-life, months (in unopened original packaging)	12 months in cartridges 9 months in hobbock

Classification:
Please refer to the corresponding **Material Safety Data Sheets** for details on:

Hazards identification
Transport information
Regulatory information

ADDITIONAL INFORMATION

Disclaimer

Note:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.
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Reference 0.0