

TECHNOMELT PA 653 (e)

(Electronics) August 2016

PRODUCT DESCRIPTION

TECHNOMELT PA 653 (e) provides the following product characteristics:

Technology	Polyamide
Appearance	Amber
Product Benefits	<ul style="list-style-type: none">• Easy moldability• Good adhesion to a variety of substrates• Improved hydrolytic stability
Cure	Physical setting
Application	Molding compound thermoplastic
Typical Applications	Encapsulation
Operating Temperature	-40 to +100 °C

TECHNOMELT PA 653 (e) high performance thermoplastic polyamide is designed to meet low pressure molding process requirements. This product can be processed at low processing pressure due to its low viscosity, allowing encapsulation of fragile components without damage. This material produces no toxic fumes in process and provides a good balance of low and high temperature performance. TECHNOMELT PA 653 (e) is well-suited to applications where excellent adhesion and cold temperature flexibility are demanded.

LIQUID-STATE TYPICAL PROPERTIES

Viscosity, Brookfield - RVT, Spindle 27 @ 210 °C, mPa·s (cP)	4,500
Specific Gravity, g/cm ³	0.98
Softening Point, °C	160

SOLID-STATE PROPERTIES

Physical Properties

Hardness, Shore A ISO 868/15s	77
Yield Strength, N/mm ² ISO 527, Specimen No. 5 Cross-head-speed: 50mm/min	2.8
Break Strength, N/mm ² ISO 527, Specimen No. 5 Cross-head-speed: 50mm/min	3.2
Elongation, % ISO 527, Specimen No. 5 Cross-head-speed: 50mm/min	400
Temperature creep resistance, °C Henkel method MH 11	125
Low Temperature Flexibility, °C ASTM D 3111	-50

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet, (SDS).

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

Application:

Application Temperature: 180 to 230°C
Application System: Hot Melt Application System

- When bonding to a substrate with high thermal conductivity the use of a specific application temperature is required for good wetting. Do not heat the product above the specified application temperature range.
- The substrate surface should be free of dust and cleaned with a suitable solvent so that there is no fat and oil.
- TECHNOMELT PA 653 (e) may absorb moisture from the air. This will not be apparent in the solid form, but may cause bubbles on heating and could affect the bond quality. It is important, therefore, that containers are kept closed and sealed when not in use.

Cleaning:

Carbonized and set (non thermoplastic) material must be removed mechanically. Removal of the thermoplastic material from the hot apparatus can be achieved with solvent free cleaning system, such as Technomelt PA 62 (see separate technical information).

Packaging

This product comes granulated, packaged in multi-wall bags containing 40 pounds net.

Storage:

Store in a cool, dry location, with the container tightly closed. When not in used, this product will have a shelf life of at least 365 days at temperatures up to +35°C.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{psi} \times 145 = \text{N/mm}^2$
 $\text{MPa} = \text{N/mm}^2$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.



In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

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. 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1

Americas
+1.888.943.6535

Europe
+32.1457.5611

Asia
+86.21.3898.4800

For the most direct access to local sales and technical support visit: www.henkel.com/electronics