

TECHNOMELT PA 641 (e)

(Electronics) July 2015

PRODUCT DESCRIPTION

TECHNOMELT PA 641 (e) provides the following product characteristics:

Technology	Polyamide
Appearance	Blaze Orange
Application	Molding compound thermoplastic
Typical Applications	Encapsulation
Flammability Rating	UL 94 V0 @ 0.9 to 1.2 mm thickness
Operating Temperature	-40 to +125 °C

TECHNOMELT PA 641 (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 641 (e) is particularly useful in applications which require increased strength and hardness.

LIQUID-STATE TYPICAL PROPERTIES

Viscosity @ 225 °C, mPa·s (cP)	4,500
Specific Gravity @ 25 °C	0.98
Softening Point, °C	170 to 180

TYPICAL PROCESS DATA

Handling:

Molding Temperature, °C	210 to 240
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TECHNOMELT PA 641 (e) has been formulated to provide the best possible moldability and as wide a molding latitude as possible. Much of the final molding parameters will be determined by the mold design. Although molding and curing conditions will vary from situation to situation, recommended starting ranges are shown above.

SOLID-STATE PROPERTIES

Physical Properties

Shore Hardness, Shore A	92
Elongation, at break, %	800

Electrical Properties

Dielectric Constant / Dissipation Factor, IEC 60250:	
1MHz	3.4 / 0.061
1.8 GHz	2.8 / 0.013
Dielectric Strength, kV/mm	25
Volume Resistivity, ohms-cm	3.2×10^{12}

TYPICAL PERFORMANCE OF SOLID-STATE MATERIAL

Lap Shear Strength, ISO 4587:

Steel	N/mm ²	380
	(psi)	(55,100)
FR4	N/mm ²	1,340
	(psi)	(194,300)

PERFORMANCE AND RELIABILITY DATA

Surface Insulation Resistance (SIR) Testing IPC-TM-650	Pass
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GENERAL INFORMATION

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

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.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

TECHNOMELT PA 641 (e) will absorb moisture from the air. Material from opened containers should be transferred immediately into air tight containers. Material should be stored in sealed containers in a cool dry location in order to maximize shelf life.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Conversions

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

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.

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