TECHNOMELT

Technical Data Sheet

TECHNOMELT PA 638 (e)

(Electronics) June 2015

PRODUCT DESCRIPTION

TECHNOMELT PA 638 (e) provides the following product characteristics:

Technology	Polyamide
Appearance	Black
Product Benefits	• Easy moldability • Good adhesion to a variety of substrates • Excellent moisture resistance • Excellent environmental resistance • Simplified process flow
Application	Molding compound thermoplastic
Typical Applications	Encapsulation
Flammability Rating	UL 94 V0
Operating Temperature	-40 to +125 °C

TECHNOMELT PA 638 (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.

LIQUID-STATE TYPICAL PROPERTIES

Viscosity @ 210 °C, mPa·s (cP)	3,400
Specific Gravity @ 25 °C	0.98
Softening Point, °C	170 to 180

TYPICAL PROCESS DATA

Handling:

Molding Temperature, °C	200 to 240

TECHNOMELT PA 638 (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	90
Elongation , at break,%	400

Electrical Properties

Dielectric Constant / Dissipation Factor, IEC 60250:	
1MHz	3.6 / 0.076
1 GHz	2.7 / 0.023
1.8 GHz	2.9 / 0.042
Dielectric Strength, kV/mm	19
Volume Resistivity, ohms-cm	2.4×10^{13}

TYPICAL PERFORMANCE OF SOLID-STATE MATERIAL

Shear Strength

Lap Shear Strength , ISO 4587:

Steel	N/mm² (psi)	189 (27,405)
FR4	N/mm² (psi)	1,290 (187,050)

PERFORMANCE AND RELIABILITY DATA

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

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 638 (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

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa = N/mm²
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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Disclaimer

Note:

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