TECHNOMELT®

Technical Data Sheet

TECHNOMELT® PA 6344

May 2023

PRODUCT DESCRIPTION

TECHNOMELT® PA 6344 provides the following product characteristics:

Technology	Polyamide
Chemical Type	Hot melt adhesive
Cure	Physical setting
Appearance	Black
Components	One-component
Viscosity	Low
Application	Molding
Molding temperature	190° C to 230° C (374° F to 446° F)
Operating Temperature Range	0° C to 100° C (32° F to 212° F) Depends on application, without mechanical stress
Specific Benefits	• Easy moldability • Designed for molding compound applications • UV stability

TECHNOMELT® PA 6344 is a one-component Polyamide Hot Melt Adhesive designed to meet low pressure molding process requirements. This product can be processed at low molding pressure due to its low viscosity, allowing encapsulation of fragile components without damage.

Once applied TECHNOMELT® PA 6344 solidifies to form a barrier between electronics and the environment. It is a resilient encapsulant with good heat stability and moisture resistance. Typical applications include potting electronics modules, molding strain relief into wiring and encapsulation of sensors. It is a versatile adhesive for many substrates such as FR4, metals and many plastics including ABS, PC.

TECHNOMELT® PA 6344 is designed for use in exterior applications needing UV stability.

TECHNOMELT® PA 6344 has been tested to UL 94 V2 and carries an (f2) rating. Contact Henkel for details or consult the UL yellow card.

TECHNOMELT® PA 6344 may block in its original packaging due to its moderate softening point and aggressive tack.

TYPICAL PROPERTIES

Specific Gravity, g/cm^3	1.00
ASTM D792	
Softening point ° C	142
ASTM E28 (in glycerin)	
Melt Viscosity, @ 225°C, mPa·s	7000
ASTM D 3236 (RVT, spindle 27)	
Viscosity @ 200°C, mPa·s	18000
Viscosity @ 210°C, mPa·s	11000
Viscosity @ 240°C, mPa·s	3800

TYPICAL PERFORMANCE

Physical

Shore Hardness, Durometer A	80
ASTM D2240	
Elongation, %	700
ASTM D 638 Specimen no.5	
Cross-head-speed: 50 mm/min	
E-modulus, N/mm^2 (psi)	27.6 (4000)
ASTM D 638	
Low Temperature Flexibility, °C	0
ASTM D3111	
Temperature creep resistance, °C	120
Henkel Method MH 11	
Tg Glass Transition Temperature, °C	0
DSC Second run	
Water Absorption, %, 1 day, 23 °C	0.5
Water Absorption, %, 7 days, 23 °C	1.4

Strength

Tensile at break, N/mm^2 (psi)	4.8 (700)
ASTM D638, Specimen no.5	
Cross-head-speed: 50 mm/min	
Yield Strength, N/mm^2 (psi)	2.4 (350)
ASTM D638, Specimen no.5	
Cross-head-speed: 50 mm/min	

Electrical Properties

Dielectric Constant/Dissipation Factor:	
Open ended coaxial probe	
1 MHz	3.18/0.0729
1 GHz	2.84/0.0214
1.8 GHz	2.81/0.0188
5.0 GHz	2.78/0.0138
10 GHz	2.77/0.0099
20 GHz	2.76/0.0078
Dielectric Strength, kV/mm	23
ASTM D149	
Volume Resistivity, ohms-cm	4.8 x 10^{12}
ASTM D257	

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GENERAL INFORMATION
This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

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

Directions for use:

1. Use gloves to minimize skin contact. DO NOT use solvents for cleaning hands.
2. The surfaces of the substrate must be dry and free from oil, grease, and dust.
3. Material has been formulated to provide the best possible moldability and as wide a molding latitude as possible.
4. Much of the final molding parameters will be determined by the mold design.
5. Molding temperature will vary from situation to situation, range shown on this data sheet is a starting range for process development.
6. When potting to a substrate with high thermal conductivity the use of a specific application temperature is required for good wetting.
7. Do not heat the product above the specified application temperature range.
8. When the product is not in use do not apply heat, this will degrade the quality of the product and in extreme cases cause carbonization or charring.
9. Carbonized material must be removed mechanically.
10. Removal To internally clean the system add TECHNOMELT® PA 62 to reservoir and continue to purge material until it comes out clean, like fresh TECHNOMELT® PA 62. Check for availability in your region

Storage
Store product in the unopened container in a cool dry location. Storage information may be indicated on the product container labeling. TECHNOMELT PA 6344 is prone to blocking and bridging under standard storage conditions. It may need to be broken apart prior to use.

Optimal Storage: Up to 28° C. Storage above 35° C can adversely affect the ability to handle and dispense the material.

Material will absorb moisture from the air. Material from opened containers should be transferred immediately into airtight containers. Material should be stored in sealed containers in a cool location to maximize shelf life.
Drying may be necessary before use.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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 Henkel representative.

Product Specification
The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

Approval and Certificate
Please contact Henkel representative for related approval or certificate of this product.

Data Ranges
The data contained herein may be reported as a typical value. Values are based on actual test data and are verified on a periodic basis.

Temperature/Humidity Ranges: 23 °C / 50% RH = 23±2 °C / 50±5% RH

Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
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:
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