Technical Data Sheet

LOCTITE® PA 6682

February 2023

PRODUCT DESCRIPTION

LOCTITE® PA 6682 provides the following product characteristics:

Technology	Polyamide
Chemical Type	Hot melt adhesive
Cure	Physical Setting
Appearance	Clear
Components	One Component
Viscosity	Medium
Application	Molding, Encapsulation
Molding Temperature	190 to 230ºC (374 to 446)ºF
Operating Temperature Range	-25 to 105ºC (-13 to 221)ºF
Specific Benefits	• Easy Moldability • Good adhesion to a variety of substrates • Excellent moisture resistance • Excellent environmental resistance • Simplified process flow

LOCTITE® PA 6682 is a high-performance thermoplastic Polyamide designed for use in low pressure molding applications, especially in the area of medical devices.

ISO-10993

LOCTITE® PA 6682 has been tested to Henkel's test protocols based on ISO 10993 biocompatibility standards, as a means to assist in the selection of products for use in the medical device industry.

TYPICAL MATERIAL PROPERTIES

Physical Properties

Specific Gravity @ 23ºC ISO 1183	0.98
Softening point (in Glycerine), ºC ASTM E28	155
Melting Viscosity- RVT, mPa·s (cP) ASTM D3236: Spindle 27:	
@ 190°C	7,800
@ 200°C	4,300
@ 210°C	3,200
@ 220°C	2,000

TYPICAL MATERIAL PERFORMANCE

Physical Properties :

Shore Hardness, Durometer A ISO 868		90
Elongation, % ASTM D638		600
Low Temperature Flexibility, °C ASTM D3111		-25
Temperature Creep Resistance, °C ELTM 1020		135
Glass Transition Temperature (Tg), °C DSC Second run		-15
Water Absorption, 1 day, @ 23ºC, % ISO 62		0.9
Tensile Strength at break ASTM D638	N/mm² (psi)	7 (1,015)
Yield Strength ASTM D638	N/mm² (psi)	5.5 (800)
E-modulus ASTM D638	N/mm² (psi)	80 (11,600)

Electrical Properties:

Dielectric Constant / Dissipation Factor Open ended coaxial probe:	
@ 5 GHz	2.45/0.014
@ 10 GHz	2.55/0.012
@ 20 GHz	2.53/0.011
@ 30 GHz	2.52/0.011
@ 40 GHz	2.52/0.009
@ 50 GHz	2.5/0.009

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 their 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 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). 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.

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.

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 Specifications

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
N x 0.225 = lb/F
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
N/mm² = MPa
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Disclaimer

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