

## TECHNOMELT PA 652 N

August 2021

### PRODUCT DESCRIPTION

TECHNOMELT PA 652 N provides the following product characteristics:

<b>Technology</b>	Polyamide
<b>Product Type</b>	Hotmelt
<b>Condition</b>	Thermoplastic
<b>Appearance</b>	Amber
<b>Components</b>	One-component
<b>Cure</b>	Physical setting
<b>Application</b>	Molding
<b>Operating Temperature Range</b>	-40 to 100°C (Depends on application, without mechanical stress)
<b>UL Flammability Rating</b>	UL 94 V-0

TECHNOMELT PA 652 N 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.

TECHNOMELT PA 652 N is well suited to applications where excellent adhesion and cold temperature flexibility is essential to the assembly.

### TYPICAL MATERIAL PROPERTIES

#### Physical Properties

Density @ 20°C, g/cm <sup>3</sup>	0.98
Softening Point, °C ASTM E28 (in glycerine)	150 to 165
Melting viscosity, Brookfield - RVT, Spindle 27, ASTM D-3236, mPa·s (cP):	
@ 180°C	9,500
@ 190°C	7,000
@ 200°C	5,400
@ 210°C	3,500 to 4,500
Hardness, Shore A ISO 868/15s	77
Yield Strength, N/mm <sup>2</sup> ISO 527, Specimen No. 5 Cross-head-speed: 50mm/min	2.6
Break Strength, N/mm <sup>2</sup> ISO 527, Specimen No. 5 Cross-head-speed: 50mm/min	2.7
Elongation, % ISO 527, Specimen No. 5 Cross-head-speed: 50mm/min	400
Temperature creep resistance, °C	125

Henkel method 11	
Low Temperature Flexibility, °C ASTM D 3111	-50
Glass Transition, °C (T <sub>g</sub> ) by DSC, 2. Run	-45
Working Temperature, °C Depends on the application, without mechanical stress	-40 to 100

#### Electrical Properties

Volume Resistivity, ohm-cm	1×10 <sup>12</sup>
Dielectric Strength, kV/mm	>14

#### Adhesion Properties

Lap Shear Strength, ISO 4587:	
Steel	N/mm <sup>2</sup> 302 (psi) (43,790)
FR4	N/mm <sup>2</sup> 830 (psi) (120,350)

### 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.

#### Pretreatment:

The substrate should be clean, dry, free of dust, oil, grease and other contaminants.



**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.

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.

The standby temperature for the product is 90°C, but not for longer than 72 hours.

TECHNOMELT PA 652 N 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).

**Storage:**

When properly stored in a cool, dry location, with the container tightly closed when not in use, this product will have a shelf life of at least 24 months.

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**Conversions**

$$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$$

$$\text{kV/mm} \times 25.4 = \text{V/mil}$$

$$\text{mm} / 25.4 = \text{inches}$$

$$\text{N} \times 0.225 = \text{lb/F}$$

$$\text{N/mm} \times 5.71 = \text{lb/in}$$

$$\text{psi} \times 145 = \text{N/mm}^2$$

$$\text{MPa} = \text{N/mm}^2$$

$$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$$

$$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$$

$$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$$

$$\text{mPa}\cdot\text{s} = \text{cP}$$

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