

**Product description**

Polyphthalamide, light colorable, with a high melting point, halogen-free flame-retardant, very low water absorption, good mechanical and dielectrical properties at elevated temperatures as well as excellent chemical resistance, soldering bath resistant. Colors available (e.g. Orange RAL 2003).

**Markets & applications**

Automotive: Automotive electrics & electronics (E&E), sensors, fuel cell, e-mobility  
E&E: Connectors, SMT (surface mount technology) applications, energy distribution  
Consumer goods: Home appliances, consumer electronics, cell phone parts

**Physical form and storage**

The product is supplied in the form of granules with a bulk density of approx. 0.7 g/cm<sup>3</sup>. Standard packs are bag and bulk container (octagonal IBC=intermediate bulk container made from corrugated board with a liner bag). Other packaging materials and shipping in road or rail silo wagons are possible by agreement. The containers should only be opened immediately before processing or drying. To ensure that the delivered product absorbs as little moisture as possible, the containers should be stored in dry rooms and always carefully closed again after partial quantities have been withdrawn. In principle, the product can be stored for a long period of time. Containers stored in cold rooms should be equalized to ambient temperature before opening in order to avoid condensation on the granules. Regardless of the storage conditions, the product should be pre-dried according to our recommendations and the machine should preferably be loaded using a closed conveyor system.

**Product safety**

In case processing is done under conditions as recommended (cf. processing data sheet) melts are thermally stable and do not generate hazards by molecular degradation or the evolution of gases and vapors. Like all thermoplastic polymers the product decomposes on exposure to excessive thermal load, e.g. when it is overheated or as a result of cleaning by burning off. Further information is available from the safety data sheet.

**Note**

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed. In order to check the availability of products please contact us or our sales agency.

## Processing Data Sheet

	Test method	Unit	Values
<b>Properties</b>			
Polymer abbreviation	-	-	PA9T-GF30 FR(40)
Density	ISO 1183	kg/m³	1440
Melt volume rate MVR 325 °C/5 kg	ISO 1133	cm³/10min	30
<b>Drying</b>			
Moisture, recommended <sup>1)</sup>	-	%	0.05
Dryer temperature <sup>2)</sup>	-	°C	120
Drying time <sup>3)</sup>	-	h	8
Moisture, max.	-	%	0.05
<b>Injection molding</b>			
Melt temperature range	-	°C	310 - 340
Melt temperature, optimal	-	°C	330
Mold temperature range	-	°C	100 - 160
Mold temperature, optimal	-	°C	140
Residence time, max.	-	min	5
<b>Machine Settings Injection Molding</b>			
Temperature hopper throat	-	°C	80
Cylinder temperature 1 (feed zone)	-	°C	310
Cylinder temperature 2 (compression)	-	°C	315
Cylinder temperature 3 (metering-zone, in front of the screw)	-	°C	320
Cylinder temperature 4 (nozzle)	-	°C	325
<b>Shrinkage</b>			
Molding shrinkage (parallel)	ISO 294-4	%	0.30
Molding shrinkage (normal)	ISO 294-4	%	1.00
Processing shrinkage, constrained, longitudinal (TM = 330 °C, TW = 140 °C) <sup>4)</sup>	-	%	0.5

### Footnotes

1) A slight increase in viscosity during processing is possible.

2) Dry air dryer; drying time is dependent on the initial moisture content of the granules, drying temperature and the dew point of the dried air.

3) In case of improper storage (e.g. open packages) drying time may have to be extended.

4) Model housing with central sprue, measures of the base: 107 x 47 x 1.5 mm.

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