Preliminary Datasheet

Ultramid®

B3XF3G6

09/2024

PA6-GF30 FR

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Product description

Glass fiber reinforced injection molding PA6 grade with improved flame retardance based on red phosphorus, giving outstanding mechanical and electrical properties for components requiring high stiffness.

Physical form and storage

The product is supplied in the form of granules with a bulk density of approx. 0.7 g/cm³. 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the containers should be stored in dry rooms and always carefully closed again after partial quantities have been withdrawn.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.

BASF South East Asia Pte Ltd
Guoco Midtown #18-01, 128 Beach Road, Singapore 189773

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Preliminary Datasheet [3)]

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Typical values for uncoloured product at 23 °C[1)]	Test method	Unit	Values[2)]
Properties			
Polymer abbreviation	-	-	**PA6-GF30 FR**
Density	ISO 1183	kg/m³	**1430**
Moisture absorption, equilibrium 23°C/50% r.h.	similar to ISO 62	%	**1.6 - 2**
Processing			
Melting temperature, DSC	ISO 11357-1/-3	°C	**220**
MVR 275 °C/5 kg	ISO 1133	cm³/10min	**25**
Melt temperature, injection moulding/extrusion	-	°C	**270 - 290**
Mould temperature, injection moulding	-	°C	**80 - 90**
Molding shrinkage (parallel)	ISO 294-4	%	**0.30**
Molding shrinkage (normal)	ISO 294-4	%	**0.80**
Thermal properties			
Deflection temp. under load 1.8 MPa (HDT A)	ISO 75-1/-2	°C	**200**
Deflection temp. under load 0.45 MPa (HDT B)	ISO 75-1/-2	°C	**215**
Coeff. of linear therm. expansion 23°C - 55°C (parallel)	ISO 11359-1/-2	E-6/K	**22**
Coeff. of linear therm. expansion 23°C - 55°C (normal)	ISO 11359-1/-2	E-6/K	**86**
Thermal conductivity, solid material (23°C)	DIN 52612-1	W/(m K)	**0.33**
Specific heat capacity, solid material (23°C)	-	J/(kg*K)	**1500**
Flammability			
UL 94 rating (thickness)	UL-94, IEC 60695	class (mm)	**V-0 (1.5)**
Electrical properties			**dry / cond.**
Volume resistivity	IEC 62631-3-1	Ohm*m	**1E13 / 1E10**
Surface resistivity	IEC 62631-3-2	Ohm	*** / 1E13**
Mechanical properties			**dry / cond.**
Tensile modulus	ISO 527-1/-2	MPa	**9850 / 6500**
Stress at break	ISO 527-1/-2	MPa	**150 / 95**
Strain at break	ISO 527-1/-2	%	**2.9 / 5.1**
Flexural modulus	ISO 178	MPa	**9600 / 5900**
Flexural strength	ISO 178	MPa	**226 / 150**
Charpy unnotched impact strength, 23°C	ISO 179/1eU	kJ/m²	**70 / -**
Charpy unnotched impact strength, -30°C	ISO 179/1eU	kJ/m²	**68 / -**
Charpy notched impact strength, 23°C	ISO 179/1eA	kJ/m²	**11 / 14**
Charpy notched impact strength, -30°C	ISO 179/1eA	kJ/m²	**9 / -**
Izod notched impact strength ISO 180/A (23°C)	ISO 180/A	kJ/m²	**11 / -**

Footnotes
1) If product name or properties don't state otherwise.
2) The asterisk symbol '*' signifies inapplicable properties.
3) The typical values of preliminary datasheets are not statistically firm.

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