

Product description

Easy flowing, glass fibre reinforced injection molding grade for parts requiring enhanced fire resistance (e.g. plug-and-socket connectors, switches).

Abbreviated designation according to ISO 1043-1: PBT FR (17)
CLASSIFICATION ACCORDING TO ISO 7792-1:
Molding Compound ISO 7792-PBT, MFGHLNR, 11-060, GF30

Product safety

Ultradur® melts are stable at temperatures up to 280°C and do not give rise to hazards due to molecular degradation or the evolution of gases and vapors. Like all thermoplastic polymers, however, Ultradur decomposes on exposure to excessive thermal stresses, e.g. when it is overheated or as a result of cleaning by burning off. At temperatures of > 290 °C can be emitted: carbon monoxide, tetrahydrofuran.

Under special fire conditions traces of other toxic substances are possible. Formation of further decomposition and oxidation products depends upon the fire conditions.

When Ultradur® is properly processed and there is adequate suction at the die no risks to health are to be expected. Further safety information see safety data sheet of individual product.

Safety data sheet could be ask for at the Ultra-Infopoint under tel: 0621/60-78780 or fax:0621/60-78730.

Physical form and storage

Standard packaging includes the 25-kg-bag and the 1000 kg octabin (octagonal container). Other forms of packaging are possible subject to agreement. All containers are tightly sealed and should be opened only immediately prior to processing. Further precautions for preliminary treatment and drying are described in the processing section of the brochure. The bulk density is about 0,7 to 0,8g/cm³.

Ultradur® can be stored for a longer period of time in dry, well vented rooms without causing problems in processing.

Ultradur® should generally have a moisture content of less than 0,04% when being processed.

In order to ensure reliable production, therefore, pre-drying should generally be the rule and the machine should be loaded via a closed conveyor system. Appropriate equipment is commercially available. Pre-drying is also for the addition of batches, e.g. in the case of inhouse pigmentation.

In order to prevent the formation of condensed water, containers stored in unheated rooms must only be opened when they have attained the temperature prevailing in the processing area. This can possibly take a very long time.

Measurements have shown that the interior of a 25-kg bag originally at 5°C had reached the temperature of 20°C in the processing area only after 48 hours.

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.

Product Information

Typical values for uncoloured product at 23 °C ¹⁾	Test method	Unit	Values ²⁾
Properties			
Polymer abbreviation	-	-	PBT-GF30 FR(17)
Density	ISO 1183	kg/m ³	1680
Processing			
Melt temperature, Injection moulding/Extrusion	-	°C	250 - 275
Mould temperature, Injection moulding	-	°C	60 - 100
Melt volume-flow rate (1)	ISO 1133	cm ³ /10min	10
Temperature (1)	ISO 1133	°C	250
Load (1)	ISO 1133	kg	2.16
Flammability			
Glow Wire Flammability Index(GWFI) @ 0.75 mm thickness	IEC 60695-2-12	°C	960
Burning Behav. at thickness 0.75 mm	UL-94, IEC 60695	class	V-0
UL 94	UL-94, IEC 60695	-	UL
Mechanical properties			
Tensile modulus	ISO 527-1/-2	MPa	11200
Stress at break	ISO 527-1/-2	MPa	143
Strain at break	ISO 527-1/-2	%	2
Flexural modulus	ISO 178	MPa	10300
Flexural strength	ISO 178	MPa	210
Charpy unnotched impact strength (23°C)	ISO 179/1eU	kJ/m ²	45
Charpy notched impact strength (23°C)	ISO 179/1eA	kJ/m ²	9
Thermal properties			
HDT A (1.80 MPa)	ISO 75-1/-2	°C	206
HDT B (0.45 MPa)	ISO 75-1/-2	°C	222

Footnotes

1) If product name or properties don't state otherwise.

2) The asterisk symbol "*" signifies inapplicable properties.

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