Product Information

Ultradur®

B 4520 High Speed

09/2026

PBT

Product Information

Easy flowing injection molding grade for connectors and other technical parts.

Abbreviated designation according to ISO 1043-1: PBT

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.
Additional safety information can be found in the safety data sheets of the individual products.
Safety data sheets can be requested from the Ultraplaste Infopoint at ultraplaste.infopoint@basf.com.

Physical form and storage

Standard packaging includes the 25-kg-bag, the 1000 kg octabin (octagonal container) or the 1000 kg big bag. 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.

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67056 Ludwigshafen, Germany

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We create chemistry

Typical values for uncoloured product at 23 °C[1)]	Test method	Unit	Values[2)]
Properties			
Polymer abbreviation	-	-	**PBT**
Density	ISO 1183	kg/m³	**1300**
Viscosity number (solution 0,005 g/ml Phenol /1,2 Dichlorbenzol 1:1)	ISO 307, 1157, 1628	cm³/g	**115**
natural	-	-	**+**
black	-	-	**+**
Water absorption, equilibrium in water at 23°C	similar to ISO 62	%	**0.5**
Moisture absorption, equilibrium 23°C/50% r.h.	similar to ISO 62	%	**0.25**
Processing			
Melt volume-flow rate MVR at 250 °C and 2.16 kg	ISO 1133	cm³/10min	**50**
Melting temperature, DSC	ISO 11357-1/-3	°C	**223**
Melt temperature, Injection moulding/Extrusion	-	°C	**250 - 275**
Mould temperature, Injection moulding	-	°C	**40 - 70**
Melt volume-flow rate MVR at 250 °C and 2.16 kg	ISO 1133	cm³/10min	**50**
Flammability			
Burning behav. at thickness d = 1.5 mm	IEC 60695-11-10	class	**HB**
Burning Behav. at thickness d = 0.4 mm	IEC 60695-11-10	class	**HB**
Burning Behav. at thickness d = 0.4 mm	UL-94, IEC 60695	class	**HB**
Mechanical properties			
Tensile modulus	ISO 527-1/-2	MPa	**2200**
Yield stress, 50 mm/min	ISO 527-1/-2	MPa	**53**
Yield strain, 50 mm/min	ISO 527-1/-2	%	**3.5**
Nominal strain at break, 50 mm/min	ISO 527-1/-2	%	**>50**
Charpy unnotched impact strength (23°C)	ISO 179/1eU	kJ/m²	**190**
Charpy notched impact strength (23°C)	ISO 179/1eA	kJ/m²	**4**
Thermal properties			
HDT A (1.80 MPa)	ISO 75-1/-2	°C	**55**
HDT B (0.45 MPa)	ISO 75-1/-2	°C	**130**
Max. service temperature (short cycle operation)	-	°C	**200**
Electrical properties			
Electric strength K20/K20, (60*60*1 mm³)	IEC 60243-1	kV/mm	**36**

Footnotes
1) If product name or properties don't state otherwise.
2) The asterisk symbol '*' signifies inapplicable properties.

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