**Preliminary Datasheet**

# Ultradur®

## B 4330 G3 HR

09/2016

**PBT-I-GF15**

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### Product description

Injection-moulding grade containing 15% glass-fibres, for rigid,tough and dimensionally stable technical parts, used in applications with highest demands on hydrolysis resistance such es automotive connectors and housings for electronic units under the hood.
The black colored product Ultradur® B4330 G3 HR BK15045 has a LS coloration (Laser Sensitive) and can be marked with Nd:YAG lasers.

Abbreviated designation according to ISO 1043-1: PBT-I-GF15

### 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.

BASF SE
67056 Ludwigshafen, Germany

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## Preliminary Datasheet [3)]

| Typical values for uncoloured product at 23 °C[1)] | Test method | Unit | Values[2)] |
|---|---|---|---|
| **Properties** | | | |
| Polymer abbreviation | - | - | **PBT-I-GF15** |
| Density | ISO 1183 | kg/m³ | **1390** |
| Filler content: Glass fiber (GF), glass balls (GB), Mineral (M) | - | % | **GF15** |
| Viscosity number (solution 0,005 g/ml Phenole/1,2 Dichlorbenzol 1:1) | ISO 307, 1157, 1628 | cm³/g | **106** |
| natural | - | - | **+** |
| black | - | - | **+** |
| Water absorption, equilibrium in water at 23°C | similar to ISO 62 | % | **0.4** |
| Moisture absorption, equilibrium 23°C/50% r.h. | similar to ISO 62 | % | **0.20** |
| **Processing** | | | |
| Melt volume-flow rate MVR at 275 °C and 2.16 kg | ISO 1133 | cm³/10min | **23** |
| Melting temperature, DSC | ISO 11357-1/-3 | °C | **223** |
| Melt temperature, Injection moulding/Extrusion | - | °C | **250 - 275** |
| Mould temperature, Injection moulding | - | °C | **60 - 100** |
| Molding shrinkage (parallel) | ISO 294-4 | % | **0.90** |
| Molding shrinkage (normal) | ISO 294-4 | % | **1.15** |
| **Flammability** | | | |
| Burning Behav. at 1.6 mm nom. thickn. | IEC 60695-11-10 | class | **HB** |
| Burning Behav. at thickness d = 0.75 mm | IEC 60695-11-10 | class | **HB** |
| **Mechanical properties** | | | |
| Tensile modulus | ISO 527-1/-2 | MPa | **5300** |
| Stress at break | ISO 527-1/-2 | MPa | **100** |
| Strain at break | ISO 527-1/-2 | % | **3.5** |
| Charpy unnotched impact strength (23°C) | ISO 179/1eU | kJ/m² | **62** |
| Charpy unnotched impact strength (-30°C) | ISO 179/1eU | kJ/m² | **35** |
| Charpy notched impact strength (23°C) | ISO 179/1eA | kJ/m² | **10** |
| Charpy notched impact strength (-30°C) | ISO 179/1eA | kJ/m² | **6** |
| Flexural strength | ISO 178 | MPa | **160** |
| Flexural modulus | ISO 178 | MPa | **4900** |
| **Thermal properties** | | | |
| HDT A (1.80 MPa) | ISO 75-1/-2 | °C | **200** |
| HDT B (0.45 MPa) | ISO 75-1/-2 | °C | **220** |
| Max. service temperature (short cycle operation) | - | °C | **210** |
| Coefficient of linear thermal expansion, longitudinal (23-80)°C | ISO 11359-1/-2 | E-6/K | **30 - 60** |
| **Electrical properties** | | | |
| Volume resistivity | IEC 60093 | Ohm*m | **1E14** |
| Surface resistivity | IEC 60093 | Ohm | **1E15** |
| Comparative tracking index, CTI, test liquid A | IEC 60112 | - | **500** |

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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