Ultradur® B 4300 G4 FC Aqua BK15136

PBT-GF20 BASF

Ultradur® B 4300 G4 FC Aqua bk15136 is suitable for plastic parts, where material approval regarding drinking water contact and direct food contact is a mandatory requirement.

The product is approved according to
· 21 CFR FDA §177.1660 "Poly(tetramethylene terephthalate)";
· European Food Contact European Food Contact Commission Regulation (EU) 10/2011;
· GMP (EC) N°2023/2006;

and suitable for drinking water contact in accordance with
· KTW-BWGL;
· WRAS (approval);
· ACS (disclosure of ingredients);
· NSF (disclosure of ingredients).

For questions regarding the compliance with further regulations, and certificates, please contact your local BASF representative or Plastics Safety (E-Mail: plastics.safety@basf.com).

The products can also be offered as BMBcert™ and/or Ccycled™. Due to the Massbalance approach the product properties do not change.

Abbreviated designation according to ISO 1043: PBT-GF20

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	16	cm³/10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-
Molding shrinkage, parallel	0.4	%	ISO 294-4, 2577
Molding shrinkage, normal	1.2	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	7000	MPa	ISO 527
Stress at Break	120	MPa	ISO 527
Strain at Break	3.5	%	ISO 527
Impact Strength (Charpy), +23°C	53	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	47	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	6	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	6	kJ/m²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Melting Temperature (10°C/min)	223	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	195	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	220	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	35	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	125	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	HB	class	UL 94
Thickness tested	1.5	mm	-
UL recognition	yes	-	-
UL recognition	yes	-	-
Oxygen index	19.5	%	ISO 4589-1/-2

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Dissipation Factor, 100Hz	23	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	190	E-4	IEC 62631-2-1
Surface Resistivity	>1E15	Ohm	IEC 62631-3-2
Electric Strength	37	kV/mm	IEC 60243-1
Comparative tracking index	275	-	IEC 60112

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.4	%	Sim. to ISO 62
Humidity absorption	0.2	%	Sim. to ISO 62
Density	1450	kg/m³	ISO 1183

Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Viscosity number	105	cm³/g	ISO 307, 1157, 1628

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	1190	kg/m³	-
Thermal Conductivity of Melt	0.19	W/(m K)	-
Spec. heat capacity of melt	1890	J/(kg K)	-
Ejection temperature	175	°C	-

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	260	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80 - 120	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.04	%	-
Melt temperature	250 - 275	°C	-
Mold temperature	60 - 100	°C	-

Characteristics

Processing
Injection Molding

Delivery form
Pellets, Black

Additives
Lubricants

Special Characteristics
Light stabilized or stable to light, UV stablized, Heat aging stabilized

Certifications
Food approval, Food approval 10/2011, Food Contact (FDA), Water contact, Water contact KTW, Water contact DVGW W270, NSF Approval

Injection Molding
PREPROCESSING
Pre/Post-processing, max. allowed water content: .04 %
Pre/Post-processing, Pre-drying, Temperature: 80 - 120 °C
Pre/Post-processing, Pre-drying, Time: 4 h

PROCESSING
injection molding, Melt temperature, range: 250 - 275 °C
injection molding, Melt temperature, recommended: 260 °C
injection molding, Mold temperature, range: 60 - 100 °C
injection molding, Mold temperature, recommended: 80 °C

Chemical Media Resistance

Acids
✔ Acetic Acid (5% by mass) (23°C)

Disclaimer

Liability Exclusion
These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

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- risk class III applications according to EU directive 93/42/EEC
- any bodily implant application for greater than 30 days
- any critical component in any medical device that supports or sustains human life.

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