

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

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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 stabilized, 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