Product Information

Oct 2016

Ultradur® B 4406 G4

PBT (Polybutylene Terephthalate)

BASF We create chemistry

Email PDF Datasheet | Print/Save Version

Product Description

Ultradur B 4406 G4 is an injection molding grade with 20 % glass fibers for parts requiring enhanced fire resistance (eg relay housings, plug-and-socket connectors, switches, lighting components).

Applications

Typical applications include relay housings, plug-and-socket connectors, switches, and lighting components.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm³	1183	1.55
Viscosity Number, cm³/g	1628	112
Moisture, %	62	
(50% RH)		0.2
(Saturation)		0.4
RHEOLOGICAL	**ISO Test Method**	**Property Value**
Melt Volume Rate (250 °C/2.16 Kg), cc/10min.	1133	11
MECHANICAL	**ISO Test Method**	**Property Value**
Tensile Modulus, MPa	527	
23°C		8,200
Tensile stress at break, MPa	527	
23°C		125
Tensile strain at break, %	527	
23°C		2.6
IMPACT	**ISO Test Method**	**Property Value**
Charpy Notched, kJ/m^2	179	
23°C		9
Charpy Unnotched, kJ/m^2	179	
23°C		48
THERMAL	**ISO Test Method**	**Property Value**
Melting Point, °C	3146	223
HDT A, ° C	75	200
HDT B, ° C	75	223
Coef. of Linear Thermal Expansion, Parallel, mm/mm °C		.5 X10-4
ELECTRICAL	**ISO Test Method**	**Property Value**
Comparative Tracking Index	IEC 60112	200
Volume Resistivity (Ohm)	IEC 60093	>1E13
Dielectric Constant (100 Hz)	IEC 60250	3.9
Dielectric Constant (1 MHz)	IEC 60250	3.6
Dissipation Factor (100 Hz)	IEC 60250	70
Dissipation Factor (1 MHz)	IEC 60250	170
UL RATINGS	**UL Test Method**	**Property Value**
Flammability Rating, 0.4mm	UL94	V-0
Flammability Rating, 0.75mm	UL94	V-0
Relative Temperature Index, 0.75mm	UL746B	
Mechanical w/o Impact, °C		125
Mechanical w/ Impact, °C		120
Electrical, °C		140
Flammability Rating, 1.5mm	UL94	V-0
Relative Temperature Index, 1.5mm	UL746B	
Mechanical w/o Impact, °C		130
Mechanical w/ Impact, °C		120
Electrical, °C		140
Flammability Rating, 3.0mm	UL94	V-0
Relative Temperature Index, 3.0mm	UL746B	
Mechanical w/o Impact, °C		130
Mechanical w/ Impact, °C		120
Electrical, °C		140

Processing Guidelines

Material Handling

Max. Water content: 0.04%

To ensure optimum part performance, this product must be dried prior to molding and maintained at a moisture level of less than 0.04%. Dehumidifying or desiccant dryers operating at 100-120°C (212-248°F) for 4 hours drying time are recommended. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature 250-270°C (482-518°F)

Mold Temperature 60-100°C (140-212°F)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures
This product can be processed over mold temperatures of 60-100°C (140-212°F); however, for optimizing surface appearance, dimensional stability and part performance, mold surface temperatures of at least 80°C (176°F) are preferred.

Pressures
Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Back pressure can be utilized to provide uniform melt consistency and reduce trapped air and gas. A maximum of 10 bar (145 psi) is recommended due to the risk of excessive shear.

Fill Rate
Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing. Surface appearance is directly affected by injection rate.

Note

BASF Corporation
Engineering Plastics
1609 Biddle Avenue
Wyandotte, MI 48192

General Information: 800-BC-RESIN
Technical Assistance: 800-527-TECH (734-324-5150)
Web address: http://www.plasticsportal.com/usa

BASF
We create chemistry