

Product Information

Jan 2016

Ultradur® B 4520 High Speed **PBT (Polybutylene Terephthalate)**


[Email PDF Datasheet](#) | [Print/Save Version](#)
Product Description

Ultradur B 4520 High Speed is an unfilled, easy flowing, injection molding PBT grade.

Applications

Ultradur B 4520 High Speed is designed for connectors and other technical parts.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm ³	1183	1.30
Viscosity Number, cm ² /g	1628	115
Mold Shrinkage, parallel, %	294-4	1.8
Mold Shrinkage, normal, %	294-4	1.9
Moisture, %	62	
(50% RH)		0.25
(Saturation)		0.5
RHEOLOGICAL	ISO Test Method	Property Value
Melt Volume Rate (250 °C/2.16 Kg), cc/10min.	1133	50
MECHANICAL	ISO Test Method	Property Value
Tensile Modulus, MPa	527	
23°C		2,200
Tensile stress at yield, MPa	527	
23°C		50
Tensile strain at yield, %	527	
23°C		3.5
Nominal strain at break, %	527	
23°C		>50
IMPACT	ISO Test Method	Property Value
Charpy Notched, kJ/m ²	179	
23°C		4
Charpy Unnotched, kJ/m ²	179	
23°C		190
THERMAL	ISO Test Method	Property Value
Melting Point, °C	3146	223
HDT A, ° C	75	55
HDT B, ° C	75	130

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 degC (212-248 degF) at 4 hours drying time is 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 degC (482-518 degF)

Mold Temperature 40-80 degC (104-176 degF)

Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures

This product can be processed over mold temperatures of 40-80 degC (104-176 degF), although 80 degC (176 deg F) will result the best surface.

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

Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are

indicated or that other measures may not be required.

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>

