Product Information

Apr 2009

Ultraform® N 2200 G53 UNC Q600

Polyoxymethylene

BASF The Chemical Company

Product Description

Ultraform N 2200 G53 UNC Q600 is a 25% glass fiber reinforced POM injection molding grade with enhanced stiffness and toughness.

Applications

Typical applications include chain conveyors and automotive suspension components.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm³	1183	1.58
Mold Shrinkage, parallel, %	294-4	0.7
Mold Shrinkage, normal, %	294-4	1.4
Moisture, %	62	
(50% RH)		0.15
(Saturation)		0.9
RHEOLOGICAL	**ISO Test Method**	**Property Value**
Melt Volume Rate (190 °C/2.16 Kg), cc/10min.	1133	4
MECHANICAL	**ISO Test Method**	**Property Value**
Tensile Modulus, MPa	527	
23°C		8,800
Tensile stress at break, MPa	527	
-40°C		173
23°C		130
80°C		79
Tensile strain at break, %	527	
23°C		3
Tensile Creep Modulus (1000h), MPa	899	5,800
Tensile Creep Modulus (1h), MPa	899	7,500
IMPACT	**ISO Test Method**	**Property Value**
Charpy Notched, kJ/m²	179	
23°C		9
-30°C		8.5
Charpy Unnotched, kJ/m²	179	
23°C		55
-30°C		60
THERMAL	**ISO Test Method**	**Property Value**
Melting Point, °C	3146	168
HDT A, ° C	75	163
HDT B, ° C	75	165
Coef. of Linear Thermal Expansion, Parallel, mm/mm °C		0.3 X10-4
ELECTRICAL	**ISO Test Method**	**Property Value**
Comparative Tracking Index	IEC 60112	600

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

Volume Resistivity	IEC 60093	1E12
Surface Resistivity	IEC 60093	1E12
Dielectric Constant (100 Hz)	IEC 60250	4
Dielectric Constant (1 MHz)	IEC 60250	4
Dissipation Factor (100 Hz)	IEC 60250	20
Dissipation Factor (1 MHz)	IEC 60250	50
Dielectric Strength, KV/mm	IEC 60243-1	43

Processing Guidelines

Material Handling
Max. Water content: 0.15%
Product is supplied in polyethylene bags and drying prior to molding is not required. However, after relatively long storage or when handling material from previously opened containers, preliminary drying is recommended in order to remove any moisture which has been absorbed. If drying is required, a dehumidifying or desiccant dryer operating at 80 - 110 °C (176 - 230 °F) is recommended. Drying time is dependent on moisture level, but 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile
Melt Temperature 190-230 °C (375-445 °F)
Mold Temperature 60-120 °C (140-248 °F)
Injection and Packing Pressure 35-70 bar (500-1000psi)

Mold Temperatures
A mold temperature of 80-90 °C (176-194 °F) is recommended, but temperatures of as low as 45 °C (113 °F) and as high as 105 °C (221 °F) can be used where applicable.

Pressures
Injection speed must be optimized. A filling rate which is too high results in anisotropic mechanical properties, while a filling rate which is too low yields parts with poor surface finish. The tool must be vented to avoid burn marks and prevent mold deposits. 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. Minimal back pressure should be utilized to prevent glass breakage. recommended.

Fill Rate
Injection speed must be optimized. A filling rate which is too high results in anisotropic mechanical properties, while a filling rate which is too low yields parts with poor surface finish. The tool must be vented to avoid burn marks and prevent mold deposits.

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