Product Information

Oct 2016

Ultraform® N 2310 P Q600

Polyoxymethylene

Product Description

Ultraform N 2310 P Q600 is a general-purpose injection molding POM grade containing special lubricant. Low frictional coefficient giving extremely low wear with otherwise unaltered mechanical properties.

Applications

Typical applications include spring elements, clips, gears and other applications requiring low friction and wear.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm³	1183	1.40
Mold Shrinkage, parallel, %	294-4	2.1
Mold Shrinkage, normal, %	294-4	2.1
Moisture, %	62	
(50% RH)		0.2
(Saturation)		0.8
RHEOLOGICAL	**ISO Test Method**	**Property Value**
Melt Volume Rate (190 °C/2.16 Kg), cc/10min.	1133	7.5
MECHANICAL	**ISO Test Method**	**Property Value**
Tensile Modulus, MPa	527	
23°C		2,600
Tensile stress at yield, MPa	527	
23°C		61
Tensile strain at yield, %	527	
23°C		10
Nominal strain at break, %	527	
23°C		30
Tensile Creep Modulus (1000h), MPa	899	1,300
Tensile Creep Modulus (1h), MPa	899	1,900
IMPACT	**ISO Test Method**	**Property Value**
Charpy Notched, kJ/m^2	179	
23°C		5.5
Charpy Unnotched, kJ/m^2	179	
-30°C		180
23°C		200
THERMAL	**ISO Test Method**	**Property Value**
Melting Point, °C	3146	166
HDT A, ° C	75	105
HDT B, ° C	75	95
Coef. of Linear Thermal Expansion, Parallel, mm/mm °C		1.1 X10-4
ELECTRICAL	**ISO Test Method**	**Property Value**
Comparative Tracking Index	IEC 60112	600
Volume Resistivity (Ohm)	IEC 60093	1E12
Surface Resistivity (Ohm-m)	IEC 60093	1E12
Dielectric Constant (100 Hz)	IEC 60250	3.8
Dielectric Constant (1 MHz)	IEC 60250	3.8
Dissipation Factor (100 Hz)	IEC 60250	10
Dissipation Factor (1 MHz)	IEC 60250	50
Dielectric Strength, KV/mm	IEC 60243-1	40

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, however 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature 190-230°C (375-446°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, however 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.

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

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