

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	ASTM Test Method	Property Value
Specific Gravity	D-792	1.4
Mold Shrinkage (1/8" bar, in/in)		0.02
Moisture, %	D-570	
(50% RH)		0.2
(Saturation)		0.8
MECHANICAL	ASTM Test Method	Property Value
Tensile Strength, Yield, MPa (psi)	D-638	
23C (73F)		61 (8,840)
Elongation, Yield, %	D-638	
23C (73F)		10
Flexural Modulus, MPa (psi)	D-790	
23C (73F)		2,340 (339,000)
Rockwell Hardness, R Scale	D-785	85
IMPACT	ASTM Test Method	Property Value
Notched Izod Impact, J/M (ft-lbs/in)	D-256	
-40C (-40F)		55 (1.0)
23C (73F)		64.1 (1.2)
THERMAL	ASTM Test Method	Property Value
Melting Point, C(F)	D-3418	166 (330)
Heat Deflection @ 264 psi (1.8 MPa) C(F)	D-648	99 (210)
Heat Deflection @ 66 psi (.45 MPa) C(F)	D-648	154 (309)
Coef. of Linear Thermal Expansion, mm/mm C (in/in F)	E-831	0.6 X10-4
ELECTRICAL	ASTM Test Method	Property Value
Volume Resistivity, 1.5 mm	D-257	1E12
Surface Resistivity, 1.5 mm	D-257	1E12

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 degC (176 - 230 degF) 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 degC (375-446 degF)
Mold Temperature 60-120 degC (140-248 degF)
Injection and Packing Pressure 35-70 bar (500-1000psi)

Mold Temperatures

A mold temperature of 80-90 degC (176-194 degF) is recommended, but temperatures of as low as 45 degC (113 degF) and as high as 105 degC (221 degF) 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.

