Product Information

Ultraform® W 2320 003 PRO
Polyoxymethylene

BASF
The Chemical Company

Product Description

Ultraform W 2320 003 PRO can be used for functional parts in devices such as insulin pens or powder inhalers as well as for plug in connectors or medical device handles.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm	1183	1.40
Moisture, %	62	
(50% RH)		0.2
(Saturation)		0.8
RHEOLOGICAL	**ISO Test Method**	**Property Value**
Melt Volume Rate (- C/- Kg), cc/10min.	1133	25
MECHANICAL	**ISO Test Method**	**Property Value**
Tensile Modulus, MPa	527	
23C		2,800
Tensile stress at yield, MPa	527	
23C		65
Tensile strain at yield, %	527	
23C		7.5
Nominal strain at break, %	527	
23C		24
Ball Indentation, MPa	2039-1	145
Tensile Creep Modulus (1000h), MPa	899	1,350
IMPACT	**ISO Test Method**	**Property Value**
Charpy Notched, kJ/m^2	179	
23C		5
-30C		4
Charpy Unnotched, kJ/m^2	179	
23C		150
-30C		150
THERMAL	**ISO Test Method**	**Property Value**
Melting Point, C	3146	167
HDT A, C	75	100
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	IEC 60093	1E13
Surface Resistivity	IEC 60093	1E13
Dielectric Constant (1 MHz)	IEC 60250	3.8
Dissipation Factor (1 MHz)	IEC 60250	50

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
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