

Ultraform® N 2644 Z9 AT

Polyoxymethylene (POM)

Product Description

Ultraform N 2644 Z9 AT is an elastomer-modified injection molding POM grade for applications requiring low modulus. This grade has good acoustic damping.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm ³	1183	1.28
Mold Shrinkage, parallel, %	294-4	0.7
Mold Shrinkage, normal, %	294-4	0.9
Moisture, %	62	
(50% RH)		0.30
(Saturation)		1.1
RHEOLOGICAL	ISO Test Method	Property Value
Melt Volume Rate (190 C/2.16 Kg), cc/10min.	1133	12
MECHANICAL	ISO Test Method	Property Value
Tensile Modulus, MPa	527	
23C		770
Tensile stress at yield, MPa	527	
23C		23
Tensile strain at yield, %	527	
23C		32
Nominal strain at break, %	527	
23C		>50
IMPACT	ISO Test Method	Property Value
Charpy Notched, kJ/m ²	179	
-30C		5
23C		25
Charpy Unnotched, kJ/m ²	179	
-30C		N
23C		N
THERMAL	ISO Test Method	Property Value
Melting Point, C	3146	164
HDT A, C	75	60
Coef. of Linear Thermal Expansion, Parallel, mm/mm C		1.4 X10-4
ELECTRICAL	ISO Test Method	Property Value
Comparative Tracking Index	IEC 60112	600
Volume Resistivity (Ohm-m)	IEC 60093	1E9
Surface Resistivity (Ohm)	IEC 60093	1E13
Dielectric Constant (1 MHz)	IEC 60250	4.9
Dissipation Factor (1 MHz), E-4	IEC 60250	350

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 - 110C (176 - 230F) 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 180-210C (356-410F)

Mold Temperature 40-80C (104-176F)

Injection and Packing Pressure 35-70 bar (500-1000psi)

Mold Temperatures

A mold temperature of 40-80C (104-176F) is recommended.

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

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