Product Information

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Ultrason® E 3010
PESU (Polyethersulfone)

BASF
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Product Description

Ultrason E 3010 is an unfilled, higher viscosity injection molding and extrusion PESU grade, tougher and with improved chemical resistance.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm³	1183	1.37
Mold Shrinkage, parallel, %	294-4	0.85
Mold Shrinkage, normal, %	294-4	0.9
Moisture, %	62	
(50% RH)		0.8
(Saturation)		2.2
RHEOLOGICAL	**ISO Test Method**	**Property Value**
Melt Volume Rate (360 C/10 Kg), cc/10min.	1133	35
MECHANICAL	**ISO Test Method**	**Property Value**
Tensile Modulus, MPa	527	
23C		2,650
Tensile stress at yield, MPa	527	
23C		85
Tensile strain at yield, %	527	
23C		6.9
Ball Indentation, MPa	2039-1	154
IMPACT	**ISO Test Method**	**Property Value**
Izod Notched Impact, kJ/m²	180	
-30C		8
23C		8
Charpy Notched, kJ/m²	179	
-30C		8
23C		8
Charpy Unnotched, kJ/m²	179	
-30C		N
23C		N
THERMAL	**ISO Test Method**	**Property Value**
HDT A, C	75	207
Coef. of Linear Thermal Expansion, Parallel, mm/mm C		0.52 X10-4
ELECTRICAL	**ISO Test Method**	**Property Value**
Comparative Tracking Index	IEC 60112	125
Volume Resistivity (Ohm-m)	IEC 60093	>1E13
Surface Resistivity (Ohm)	IEC 60093	>1E15
Dielectric Constant (100 Hz)	IEC 60250	3.9
Dielectric Constant (1 MHz)	IEC 60250	3.8
Dissipation Factor (100 Hz), E-4	IEC 60250	17
Dissipation Factor (1 MHz), E-4	IEC 60250	140

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

Dielectric Strength, KV/mm	IEC 60243-1	34
UL RATINGS	**UL Test Method**	**Property Value**
Flammability Rating, 1.6mm	UL94	V-0
Relative Temperature Index, 1.6mm	UL746B	
Mechanical w/o Impact, C		190
Mechanical w/ Impact, C		180
Electrical, C		180
Flammability Rating, 3.0mm	UL94	V-0
Relative Temperature Index, 3.0mm	UL746B	
Mechanical w/o Impact, C		190
Mechanical w/ Impact, C		180
Electrical, C		180

Processing Guidelines

Material Handling
Max. Water content: 0.02%
Ultrason pellets can absorb moisture very rapidly and must be dried before processing. A vacuum or dry air oven operating at 130-150C (266-302F) is recommended. Circulating air ovens are unsuitable. Drying time is dependent on moisture level, however the materials must be dried at least 4 hours. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile
Melt Temperature 340-390C (644-734F)
Mold Temperature 140-180C (284-356F)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures
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.

Pressures
Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing. Surface appearance is directly affected by injection rate.

Note

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