

# Ultrason® S 2010 G6 PSU (Polysulfone)



## Product Description

Ultrason S 2010 G6 is a 30% glass reinforced, medium viscosity injection molding PSU grade with high rigidity and strength.

## Applications

Typical applications include circuit breaker parts, lamp holders, heat shields, impellers, and printer cartridges.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm <sup>3</sup>	1183	1.46
Mold Shrinkage, parallel, %	294-4	0.29
Mold Shrinkage, normal, %	294-4	0.46
Moisture, %	62	
(50% RH)		0.2
(Saturation)		0.6
RHEOLOGICAL	ISO Test Method	Property Value
Melt Volume Rate (360 C/10 Kg), cc/10min.	1133	30
MECHANICAL	ISO Test Method	Property Value
Tensile Modulus, MPa	527	
23C		8,900
Tensile stress at break, MPa	527	
23C		125
Tensile strain at break, %	527	
23C		2.2
Ball Indentation, MPa	2039-1	193
IMPACT	ISO Test Method	Property Value
Izod Notched Impact, kJ/m <sup>2</sup>	180	
-30C		8.5
23C		8.5
Charpy Notched, kJ/m <sup>2</sup>	179	
-30C		8.5
23C		8.5
Charpy Unnotched, kJ/m <sup>2</sup>	179	
-30C		45
23C		40
THERMAL	ISO Test Method	Property Value
HDT A, C	75	185
Coef. of Linear Thermal Expansion, Parallel, mm/mm C		0.2 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	3.7
Dielectric Constant (1 MHz)	IEC 60250	3.7
Dissipation Factor (100 Hz), E-4	IEC 60250	10
Dissipation Factor (1 MHz), E-4	IEC 60250	60
Dielectric Strength, KV/mm	IEC 60243-1	45

<b>UL RATINGS</b>	<b>UL Test Method</b>	<b>Property Value</b>
Flammability Rating, 1.6mm	UL94	V-1
Relative Temperature Index, 1.6mm	UL746B	
Mechanical w/o Impact, C		160
Mechanical w/ Impact, C		140
Electrical, C		160
Flammability Rating, 3.0mm	UL94	V-0
Relative Temperature Index, 3.0mm	UL746B	
Mechanical w/o Impact, C		160
Mechanical w/ Impact, C		140
Electrical, C		160

**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 350-390C (662-734F)

Mold Temperature 150-190C (302-374F)

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. Minimal back pressure should be utilized to prevent glass breakage.

**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**

## Note

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