

## Xytron™ G3020T

Envalior - Polyphenylene Sulfide

### General Information

#### Product Description

30% Glass Fiber Reinforced, Flame Retardant

Design Challenge

Degradation & Stability | Chemical stability

#### General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
Features	• Flame Retardant
Processing Method	• Injection Molding
Resin ID	• PPS-GF30

### Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density	1.55	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.65	%	
Flow	0.20	%	
Water Absorption (24 hr, 73°F)	0.050	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.050	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ISO 527-1
--	1.67E+6	psi	
-40°F	1.78E+6	psi	
248°F	812000	psi	
320°F	522000	psi	
392°F	406000	psi	
Tensile Stress			ISO 527-2
Break	25400	psi	
Break, -40°F	29000	psi	
Break, 248°F	11600	psi	
Break, 320°F	9430	psi	
Break, 392°F	7980	psi	
Tensile Strain			ISO 527-2
Break	2.1	%	
Break, -40°F	2.0	%	
Break, 248°F	3.5	%	
Break, 320°F	5.0	%	
Break, 392°F	5.4	%	
Flexural Modulus			ISO 178
--	1.60E+6	psi	
248°F	769000	psi	
320°F	609000	psi	
392°F	508000	psi	
Flexural Stress			ISO 178
--	32600	psi	



248°F	16700	psi	
320°F	11600	psi	
392°F	10900	psi	
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Charpy Notched Impact Strength (73°F)	4.3	ft·lb/in <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	24	ft·lb/in <sup>2</sup>	ISO 179/1eU
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load (264 psi, Unannealed)	509	°F	ISO 75-2/A
Glass Transition Temperature <sup>2</sup>	194	°F	ISO 11357-2
Melting Temperature <sup>2</sup>	536	°F	ISO 11357-3
CLTE - Flow			ISO 11359-2
--	1.0E-5	in/in/°F	
-- <sup>3</sup>	1.0E-5	in/in/°F	
CLTE - Transverse			ISO 11359-2
--	2.8E-5	in/in/°F	
-- <sup>3</sup>	6.7E-5	in/in/°F	
<b>Electrical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Volume Resistivity	> 1.0E+13	ohms·m	IEC 62631-3-1
Relative Permittivity (1 MHz)	3.70		IEC 62631-2-1
Dissipation Factor (1 MHz)	3.0E-3		IEC 62631-2-1

#### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 10°C/min

<sup>3</sup> above T<sub>g</sub>

