

Xytron™ U3020E

Envalior - Polyphenylene Sulfide

General Information

Product Description

Extrusion, Impact Modified

Despite the fact that the above-mentioned grade is an extrusion grade, when using it for an injection molding process, the document below describes the typical injection molding recommendations.

Design Challenge

Degradation & Stability | Chemical stability

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Additive	• Impact Modifier
Features	• Impact Modified
Processing Method	• Extrusion
Resin ID	• PPS-I

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.29	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/2.16 kg)	25	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/2.16 kg)	22	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.3	%	
Flow	1.2	%	
Water Absorption (24 hr, 73°F)	0.060	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ISO 527-1
--	413000	psi	
-40°F	479000	psi	
Tensile Stress (Yield)	9720	psi	ISO 527-2
Tensile Stress			ISO 527-2
Break	8700	psi	
Break, -40°F	7980	psi	
Tensile Strain (Yield)	5.0	%	ISO 527-2
Tensile Strain			ISO 527-2
Break	9.0	%	
Break, -40°F	2.0	%	
Flexural Modulus			ISO 178
--	392000	psi	
248°F	52200	psi	
320°F	34800	psi	
392°F	29000	psi	
Flexural Stress			ISO 178
--	13100	psi	
248°F	1740	psi	
320°F	1230	psi	
392°F	1020	psi	



Weldline Strain (0.16 in)	6.0 %	ISO 527-2
Weldline Strength (0.16 in)	9427 psi	ISO 527-2
Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		ISO 179/1eA
-22°F	1.7 ft·lb/in ²	
73°F	5.2 ft·lb/in ²	
Charpy Unnotched Impact Strength		ISO 179/1eU
-22°F	9.5 ft·lb/in ²	
73°F	No Break	
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	216 °F	ISO 75-2/A
Glass Transition Temperature ²	194 °F	ISO 11357-2
Melting Temperature ²	536 °F	ISO 11357-3
CLTE - Flow		ISO 11359-2
--	3.3E-5 in/in/°F	
-- ³	6.1E-5 in/in/°F	
CLTE - Transverse		ISO 11359-2
--	3.6E-5 in/in/°F	
-- ³	7.8E-5 in/in/°F	
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	> 1.0E+15 ohms	IEC 62631-3-2
Volume Resistivity	> 1.0E+13 ohms·m	IEC 62631-3-1
Electric Strength	1000 V/mil	IEC 60243-1
Relative Permittivity (5.00 GHz)	3.20	IEC 61189-2-721
Dissipation Factor (5.00 GHz)	2.3E-3	IEC 61189-2-721
Flammability	Nominal Value Unit	Test Method
Flammability Classification		IEC 60695-11-10, -20
0.12 in	V-0	
0.06 in	V-2	

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min

³ above T_g

