TECHNYL® ONE J 60X1 V30 BK

DOMO Engineering Plastics - *Polyamide 66/6T Copolymer*

General Information

Product Description

TECHNYL ONE J 60X1 V30 BK is a high temperature polyamide based on a non-halogenated flame retardant system, reinforced with 30% of glass fiber with best-in-class fire protection behavior, for injection moulding. A full yellow card is available with a UL94 V0 rating at 0.4 mm, unmatched thermal ageing properties (150°C electrical RTI - Relative Thermal Index), and outstanding electrical properties, including a high comparative tracking index (CTI 0 for 600 volts and higher). This product has superior electrical performance compared to traditional high-performance plastics. Its low corrosion ensures processing tools longevity. This Technyl is laser welding suitable. This product, based on a high fluidity matrix, offers strong benefits in term of productivity and design freedom.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Additive	• Flame Retardant		
Features	• Corrosion Resistant • Flame Retardant • Good Heat Resistance	• Halogen Free • High Flow • IR Laser Markable	• Laser Weldable • Low (to None) Phosphorus Content • Outstanding Surface Finish
Uses	• Electrical/Electronic Applications	• Wire & Cable Applications	
Agency Ratings	• EC 1907/2006 (REACH)	• EN 45545	• UL 94
RoHS Compliance	• RoHS Compliant		
Processing Method	• Injection Molding		
ISO Designation (ISO 16396)	• PA66/6T,GF30FR(40),M,S14-110		
Resin ID (ISO 1043)	• PA66/6T-GF30 FR(40)		

Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.41	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.90 to 1.0	--	%	
Flow	0.20 to 0.40	--	%	
Water Absorption (24 hr, 73°F)	0.60 to 0.65	--	%	ISO 62
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	1.60E+6	1.32E+6	psi	ISO 527-1
Tensile Stress (Break)	21000	16000	psi	ISO 527-2
Tensile Strain (Break)	2.5	3.3	%	ISO 527-2
Flexural Modulus	1.31E+6	1.16E+6	psi	ISO 178
Flexural Stress	33400	26800	psi	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	4.3	--	ft·lb/in²	
73°F	4.3	4.8	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	24	--	ft·lb/in²	
73°F	26	30	ft·lb/in²	
Notched Izod Impact Strength (73°F)	4.5	--	ft·lb/in²	ISO 180/1A
Unnotched Izod Impact Strength (73°F)	26	--	ft·lb/in²	ISO 180/1U
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**

Deflection Temperature Under Load (66 psi, Unannealed)	525	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	495	--	°F	ISO 75-2/A
Melting Temperature [2]	536	--	°F	ISO 11357-3
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	2.0E+15	--	ohms	IEC 62631-3-2
Volume Resistivity	1.0E+13	--	ohms·m	IEC 62631-3-1
Electric Strength	890	--	V/mil	IEC 60243-1
Comparative Tracking Index (CTI)	PLC 0	--		IEC 60112
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Burning Rate (0.0394 in)	< 3.9	--	in/min	FMVSS 302
Flame Rating				UL 94
0.016 in	V-0	--		
0.030 in	V-0	--		
0.06 in	V-0	--		
0.12 in	V-0	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.030 in	1760	--	°F	
0.06 in	1760	--	°F	
0.12 in	1760	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.030 in	1470	--	°F	
0.06 in	1470	--	°F	
Oxygen Index	45	--	%	

Processing Information

Injection	**Dry**	**Unit**
Drying Temperature	176	°F
Suggested Max Moisture	0.12	%
Rear Temperature	545 to 563	°F
Middle Temperature	554 to 572	°F
Front Temperature	554 to 572	°F
Mold Temperature	194 to 230	°F

Injection Notes

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew point minimum -20°C. Recommended time 2-4h, recommended water content maximum 0,15% (optimum 0,08%-0,12%)

Notes

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

[2] 10°C/min