TECHNYL® PROTECT C 50H3 BK

DOMO Engineering Plastics - *Polyamide 6*

General Information

Product Description			
*Previously DOMAMID FR 6V0M BK TECHNYL PROTECT C 50H3 BK			
General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Flame Retardant	• Heat Stabilizer	
Features	• Flame Retardant • Halogen Free	• Heat Aging Resistant • Heat Stabilized	• Low (to None) Phosphorus Content
Uses	• Electrical/Electronic Applications		
Agency Ratings	• EC 1907/2006 (REACH)	• UL 94	
RoHS Compliance	• RoHS Compliant		
Processing Method	• Injection Molding		
ISO Designation (ISO 16396)	• PA6,FR(30),MH,S14-030		
Resin ID (ISO 1043)	• PA6 FR(30)		

Properties [1]

Physical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Density	1.16	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.85 to 1.1	--	%	
Flow	0.90 to 1.1	--	%	
Water Absorption (Equilibrium, 73°F, 50% RH)	2.9 to 3.0	--	%	ISO 62
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	493000	174000	psi	ISO 527-1
Tensile Stress (Yield)	11600	5800	psi	ISO 527-2
Tensile Stress (Break)	11600	5800	psi	ISO 527-2
Tensile Strain (Yield)	3.5	28	%	ISO 527-2
Tensile Strain (Break)	3.8	100	%	ISO 527-2
Flexural Modulus	406000	145000	psi	ISO 178
Flexural Stress	17400	8700	psi	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	1.2	--	ft·lb/in²	
73°F	1.4	4.8	ft·lb/in²	
Charpy Unnotched Impact Strength (73°F)	31	-0.48	ft·lb/in²	ISO 179/1eU
Notched Izod Impact Strength (73°F)	1.7	4.8	ft·lb/in²	ISO 180/1A
Unnotched Izod Impact Strength (73°F)	33 ft·lb/in²	No Break		ISO 180/1U
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	356	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	158	--	°F	ISO 75-2/A
Vicat Softening Temperature	401	--	°F	ISO 306
Melting Temperature [2]	430	--	°F	ISO 11357-3
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	1.0E+14	--	ohms	IEC 62631-3-2
Volume Resistivity	1.0E+16	--	ohms·m	IEC 62631-3-1

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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 (0.06 in)	V-0	--		UL 94

Processing Information

Injection	**Dry**	**Unit**
Drying Temperature	167 to 185	°F
Drying Time	2.0 to 4.0	hr
Dew Point	< -22	°F
Processing (Melt) Temp	446 to 482	°F
Mold Temperature	140 to 176	°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.

Notes

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

[2] 10°C/min

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