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TEKNOR APEX

Chemlon® 60GS7HX

Teknor Apex Company (Chem Polymer) - Polyamide 6

General Information

Product Description

60GS7HX is a 35% glass bead reinforced grade of nylon 6 that offers good balance of mechanical performance coupled with an improved dimensional accuracy. This grade is also heat stabilised for good endurance at elevated service temperatures.

General			
Material Status	• Commercial: Active		
Availability	• Europe		
Filler / Reinforcement	• Glass Bead, 35% Filler by Weight		
Additive	• Heat Stabilizer		
Features	• Heat Stabilized	• Low Shrinkage	• Medium Rigidity
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.40	--	g/cm³	ISO 1183
Molding Shrinkage [2]	1.0 to 1.5	--	%	Internal Method
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	1.9	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	537000	--	psi	ISO 527-2
Tensile Stress	10900	5800	psi	ISO 527-2
Tensile Strain (Break)	3.0	--	%	ISO 527-2
Flexural Modulus	479000	160000	psi	ISO 178
Flexural Stress	18100	8700	psi	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength	2.4	4.8	ft·lb/in²	ISO 179/1eA
Charpy Unnotched Impact Strength	12 ft·lb/in²	No Break		ISO 179/1eU
Notched Izod Impact Strength	1.4	--	ft·lb/in²	ISO 180/A
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	392	--	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	176	--	°F	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	1.0E+14	1.0E+11	ohms	IEC 60093
Volume Resistivity	1.0E+16	1.0E+13	ohms·cm	IEC 60093
Electric Strength (0.118 in)	250	230	V/mil	IEC 60243-1
Comparative Tracking Index	500	--	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
0.06 in, Teknor Apex test result	HB	--		
Oxygen Index	23	--	%	ISO 4589-2

Processing Information

Injection	Dry	Unit
Drying Temperature	176	°F
Drying Time	20	hr

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Injection	Dry	Unit
Rear Temperature	464 to 536	°F
Middle Temperature	464 to 536	°F
Front Temperature	464 to 536	°F
Processing (Melt) Temp	482 to 527	°F
Mold Temperature	140 to 176	°F
Injection Rate	Fast	
Back Pressure	Low	
Screw Speed	Moderate	

Injection Notes

No drying is necessary unless the material has been exposed to air for longer than three hours. The appearance of splash marks on the surface of mouldings indicates excessive moisture is present.

Notes

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

[2] Mould shrinkage is significantly influenced by many factors including wall thickness, gating, moulding shape and processing conditions. The range values given are determined from specimen bar mouldings of 1.5mm to 4mm wall thickness. They are provided as a guide for comparison purposes only and no guarantee should be inferred from their inclusion. (Specimens measured in the dry state, 24 hours after moulding).