TEKNOR APEX

Chemlon® 66CF4

Teknor Apex Company - Polyamide 66

General Information

Product Description

66CF4 is a 20% carbon fibre filled grade of nylon 66. It offers outstanding strength and stiffness - coupled with low density and improved electrical conductivity of moulded parts. It is suitable for applications such as bearings and mechanical parts.

General			
Material Status	• Commercial: Active		
Availability	• Europe		
Filler / Reinforcement	• Carbon Fiber, 20% Filler by Weight		
Features	• High Stiffness	• High Strength	• Low Density
Uses	• Bearings	• Machine/Mechanical Parts	
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.22	--	g/cm³	ISO 1183
Molding Shrinkage [2]	0.20 to 1.0	--	%	Internal Method
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	2.2	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	2.18E+6	1.22E+6	psi	ISO 527-1
Tensile Stress	29000	21800	psi	ISO 527-2
Tensile Strain (Break)	4.0	4.1	%	ISO 527-2
Flexural Modulus	1.60E+6	1.09E+6	psi	ISO 178
Flexural Stress	37700	27600	psi	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Notched Izod Impact Strength	2.1	3.6	ft·lb/in²	ISO 180/A
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load				ISO 75-2/B
66 psi, Unannealed	> 392	--	°F	
Deflection Temperature Under Load				ISO 75-2/A
264 psi, Unannealed	> 392	--	°F	
CLTE - Flow	6.7E-6	--	in/in/°F	Internal Method
CLTE - Transverse	2.8E-5	--	in/in/°F	Internal Method
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Volume Resistivity	1.0E+12	--	ohms·cm	IEC 60093
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
0.06 in, Teknor Apex test result	HB	--		

Processing Information

Injection	Dry	Unit
Drying Temperature	176	°F
Drying Time	2.0	hr
Rear Temperature	536 to 563	°F
Middle Temperature	536 to 563	°F
Front Temperature	536 to 563	°F

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Chemlon® 66CF4

Teknor Apex Company - Polyamide 66

Injection	Dry	Unit
Processing (Melt) Temp	545 to 572	°F
Mold Temperature	194 to 212	°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).