

# Chemlon® 66CF4

Teknor Apex Company (Chem Polymer) - Polyamide 66

Friday, June 30, 2017

## 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

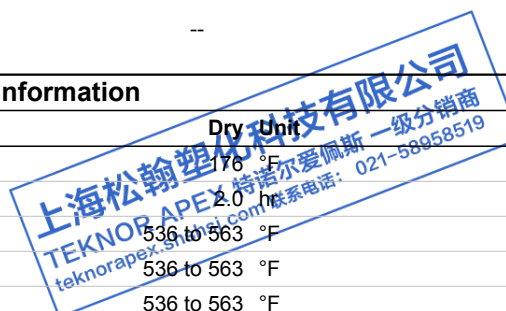
## ASTM & ISO Properties <sup>1</sup>

Physical	Dry	Conditioned	Unit	Test Method
Density	1.22	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage <sup>2</sup>	0.20 to 1.0	--	%	Internal Method
Water Absorption Equilibrium, 73°F, 50% RH	2.2	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	2.18E+6	1.22E+6	psi	ISO 527-2
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/in <sup>2</sup>	ISO 180/A
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 66 psi, Unannealed	> 392	--	°F	ISO 75-2/B
Heat Deflection Temperature 264 psi, Unannealed	> 392	--	°F	ISO 75-2/A
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 0.06 in, Teknor Apex test result	HB	--		UL 94

## Processing Information

### Injection

	Dry	Unit
Drying Temperature	170	°F
Drying Time	2.0	hr
Rear Temperature	536 to 563	°F
Middle Temperature	536 to 563	°F
Front Temperature	536 to 563	°F
Processing (Melt) Temp	545 to 572	°F



Revision Date: 3/17/2014

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Injection	Dry Unit
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

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 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).

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