+135-3858-6433 (GuangDong)
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TEKNOR APEX

Chemlon® AF413

Teknor Apex Company (Chem Polymer) - Polyamide 66

General Information

Product Description

AF413 is a 15% glass fibre reinforced nylon 66 that offers improved mechanical performance coupled with an improved surface finish. The grade is also heat stabilised and can be used at elevated temperatures.

General	
Material Status	• Commercial: Active
Availability	• Europe
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight
Additive	• Heat Stabilizer
Features	• Heat Stabilized
Uses	• High Temperature Applications
Processing Method	• Injection Molding

ASTM & ISO Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.24	--	g/cm³	ISO 1183
Molding Shrinkage [2]	0.80 to 1.6	--	%	Internal Method
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	2.1	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	754000	363000	psi	ISO 527-2
Tensile Stress	13800	7980	psi	ISO 527-2
Tensile Strain (Break)	4.0	6.0	%	ISO 527-2
Flexural Modulus	682000	305000	psi	ISO 178
Flexural Stress	21800	11600	psi	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength	5.2	17	ft·lb/in²	ISO 179/1eA
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	> 464	--	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	419	--	°F	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	1.0E+14	1.0E+12	ohms	IEC 60093
Volume Resistivity	1.0E+17	1.0E+15	ohms·cm	IEC 60093
Electric Strength (0.118 in)	460	--	V/mil	IEC 60243-1
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
0.06 in, Teknor Apex test result	HB	--		
Oxygen Index	25	--	%	ISO 4589-2

Processing Information

Injection	Dry	Unit
Drying Temperature	176	°F
Drying Time	2.0	hr
Rear Temperature	527 to 572	°F

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Injection	Dry	Unit
Middle Temperature	527 to 572	°F
Front Temperature	527 to 572	°F
Processing (Melt) Temp	527 to 572	°F
Mold Temperature	176 to 194	°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).