

Chemlon® AF413

Teknor Apex Company (Chem Polymer) - Polyamide 66

Friday, June 30, 2017

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/cm ³	ISO 1183
Molding Shrinkage ²	0.80 to 1.6	--	%	Internal Method
Water Absorption Equilibrium, 73°F, 50% RH	2.1	--	%	ISO 62
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/in ²	ISO 179/1eA
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 66 psi, Unannealed	> 464	--	°F	ISO 75-2/B
Heat Deflection Temperature 264 psi, Unannealed	419	--	°F	ISO 75-2/A
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 0.06 in, Teknor Apex test result	HB	--		UL 94
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

Revision Date: 3/17/2014

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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).

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