Chemlon® AF413

Polyamide 66

Teknor Apex Company (Chem Polymer)

Message:

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 Information				
Filler / Reinforcement	Glass fiber reinforced material, 15% filler by weight			
Additive	heat stabilizer			
Features	Thermal Stability			
Uses	High temperature application			
Processing Method	Injection molding			
Physical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Density	1.24	--	g/cm³	ISO 1183
Molding Shrinkage [1]	0.80 - 1.6	--	%	Internal method
Water Absorption (Equilibrium, 23°C, 50% RH)	2.1	--	%	ISO 62
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	5200	2500	MPa	ISO 527-2
Tensile Stress	95.0	55.0	MPa	ISO 527-2
Tensile Strain (Break)	4.0	6.0	%	ISO 527-2
Flexural Modulus	4700	2100	MPa	ISO 178
Flexural Stress	150	80.0	MPa	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength	11	36	kJ/m²	ISO 179/1eA
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, not annealed	> 240	--	°C	ISO 75-2/B
1.8 MPa, not annealed	215	--	°C	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
Dielectric Strength (3.00 mm)	18	--	kV/mm	IEC 60243-1
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating (1.50 mm, Teknor Apex test result)	HB	--		UL 94

Oxygen Index	25	--	%	ISO 4589-2

Injection	Dry	Unit
Drying Temperature	80.0	°C
Drying Time	2.0	hr
Rear Temperature	275 - 300	°C
Middle Temperature	275 - 300	°C
Front Temperature	275 - 300	°C
Processing (Melt) Temp	275 - 300	°C
Mold Temperature	80.0 - 90.0	°C
Injection Rate	Fast	
Back Pressure	Low	
Screw Speed	Moderate	

Injection instructions
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.

NOTE	
1.	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).

Recommended distributors for this material

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