+135-3858-6433 (GuangDong)
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TEKNOR APEX

Chemlon® AT10

Teknor Apex Company (Chem Polymer) - Polyamide 66

General Information

Product Description

AT10 is a modified nylon 66 that offers ultra high impact strength coupled with good rigidity, with this impact resistance maintained at sub-zero temperatures.

The excellent impact performance also means that it may be possible to use mouldings prior to any conditioning.

General			
Material Status	• Commercial: Active		
Availability	• Europe	• North America	
Features	• High Rigidity	• Low Temperature Impact Resistance	• Ultra High Impact Resistance
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.09	--	g/cm³	ISO 1183
Molding Shrinkage [2]	2.0 to 2.4	--	%	Internal Method
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	2.1	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	261000	218000	psi	ISO 527-2
Tensile Stress (Yield)	6960	6090	psi	ISO 527-2
Flexural Modulus	261000	160000	psi	ISO 178
Flexural Stress [3]	7690	4350	psi	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength	24 ft·lb/in²	No Break		ISO 179
Charpy Unnotched Impact Strength	No Break	No Break		ISO 179
Notched Izod Impact Strength	38 ft·lb/in²	No Break		ISO 180
Unnotched Izod Impact Strength	No Break	No Break		ISO 180
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	302	284	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	158	140	°F	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	1.0E+12	1.0E+11	ohms	IEC 60093
Volume Resistivity	1.0E+13	1.0E+13	ohms·cm	IEC 60093
Electric Strength (0.118 in)	250	300	V/mil	IEC 60243-1
Relative Permittivity (1 MHz)	3.10	--		IEC 60250
Comparative Tracking Index	> 600	> 600	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating	HB	--		Internal Method
Oxygen Index	21	--	%	ISO 4589-2

Processing Information

Injection	Dry	Unit
Drying Temperature	176 to 212	°F
Drying Time	2.0	hr
Rear Temperature	509 to 545	°F

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Injection	Dry	Unit
Middle Temperature	509 to 545	°F
Front Temperature	509 to 545	°F
Processing (Melt) Temp	< 572	°F
Mold Temperature	68 to 104	°F
Injection Rate	Moderate	
Screw Speed	50 to 200	rpm

Injection Notes

Back pressure: Low
Injection pressure: Medium

No drying is necessary unless the materials has been exposed to air for longer than three hours.

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, component shape and moulding conditions. The range values stated were 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).

[3] At conventional deflection