



Chemlon® MDT10

Teknor Apex Company (Chem Polymer) - Polyamide 6

General Information			
Product Description			
MDT10 is a modified nylon 6 that offers ultra high impact strength coupled with good rigidity, with this impact resistance being retained 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	Nominal Value	Unit	Test Method
Density	1.08	g/cm³	ISO 1183
Water Absorption (Equilibrium, 73°F, 50% RH)	2.4	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	247000	psi	ISO 527-2
Tensile Stress (Yield)	6090	psi	ISO 527-2
Tensile Strain (Break)	140	%	ISO 527-2
Flexural Modulus	232000	psi	ISO 178
Flexural Stress ²	6670	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	No Break		ISO 179
Charpy Unnotched Impact Strength	No Break		ISO 179
Notched Izod Impact Strength	No Break		ISO 180
Unnotched Izod Impact Strength	No Break		ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	302	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	158	°F	ISO 75-2/A
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+12	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Electric Strength (0.118 in)	250	V/mil	IEC 60243-1
Relative Permittivity	3.10		IEC 60250
Comparative Tracking Index	> 600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		Internal Method
Oxygen Index	21	%	ISO 4589-2
Processing Information			
Injection	Nominal Value	Unit	
Drying Temperature	176	°F	
Drying Time	2.0	hr	
Rear Temperature	482 to 536	°F	
Middle Temperature	482 to 536	°F	
Front Temperature	482 to 536	°F	
Processing (Melt) Temp	< 572	°F	
Mold Temperature	104 to 176	°F	

Chemlon® MDT10
Teknor Apex Company (Chem Polymer) - Polyamide 6

Injection	Nominal Value	Unit
Injection Rate	Moderate	
Screw Speed	50 to 200	rpm

Injection Notes
Back pressure: Low
Injection pressure: High

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 At conventional deflection