

# Chemlon® MDT10

Polyamide 6

Teknor Apex Company (Chem Polymer)

## Message:

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 Information			
Features	Ultra-high impact resistance		
	Rigidity, high		
	Low temperature impact resistance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.08	g/cm <sup>3</sup>	ISO 1183
Water Absorption (Equilibrium, 23°C, 50% RH)	2.4	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1700	MPa	ISO 527-2
Tensile Stress (Yield)	42.0	MPa	ISO 527-2
Tensile Strain (Break)	140	%	ISO 527-2
Flexural Modulus	1600	MPa	ISO 178
Flexural Stress <sup>1</sup>	46.0	MPa	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	No Break		ISO 180
Unnotched Izod Impact Strength	No Break		ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	150	°C	ISO 75-2/B
1.8 MPa, not annealed	70.0	°C	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
Dielectric Strength (3.00 mm)	10	kV/mm	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

Injection	Nominal Value	Unit
Drying Temperature	80.0	°C
Drying Time	2.0	hr
Rear Temperature	250 - 280	°C
Middle Temperature	250 - 280	°C
Front Temperature	250 - 280	°C
Processing (Melt) Temp	< 300	°C
Mold Temperature	40.0 - 80.0	°C
Injection Rate	Moderate	
Screw Speed	50 - 200	rpm

#### Injection instructions

Back pressure: LowInjection pressure: HighNo drying is necessary unless the materials has been exposed to air for longer than three hours.

#### NOTE

1. At conventional deflection

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