

# Chemlon® MDF463

Polyamide 6

Teknor Apex Company (Chem Polymer)

## Message:

MDF463 is a 15% glass fibre reinforced grade of nylon 6 that contains an impact modification system which offers superior low temperature performance - along with a stabilisation package to enhance component life in severe environmental conditions. This grade offers a good balance of rigidity and toughness over a wide temperature range.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 15% filler by weight		
Additive	Impact modifier heat stabilizer		
Features	Impact modification Low Temperature Flexibility Low temperature impact resistance Thermal Stability		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.17	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage <sup>1</sup>	0.90 - 1.8	%	Internal method
Water Absorption (Equilibrium, 23°C, 50% RH)	1.8	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	4400	MPa	ISO 527-2
Tensile Stress	90.0	MPa	ISO 527-2
Tensile Strain (Break)	8.0	%	ISO 527-2
Flexural Modulus	3600	MPa	ISO 178
Flexural Stress	110	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	20	kJ/m <sup>2</sup>	ISO 179/1eA
Notched Izod Impact	22	kJ/m <sup>2</sup>	ISO 180/A
Unnotched Izod Impact Strength	> 45	kJ/m <sup>2</sup>	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	190	°C	ISO 75-2/B
1.8 MPa, not annealed	140	°C	ISO 75-2/A
Flammability	Nominal Value	Test Method	
Flame Rating (1.50 mm, Teknor Apex test result)	HB	UL 94	

Injection	Nominal Value	Unit
Drying Temperature	80.0	°C
Drying Time	20	hr
Rear Temperature	250 - 280	°C
Middle Temperature	250 - 280	°C
Front Temperature	250 - 280	°C
Processing (Melt) Temp	250 - 290	°C
Mold Temperature	60.0 - 80.0	°C
Injection Rate	Fast	
Back Pressure	Moderate	
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).

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