

# Chemlon® MDM54

Polyamide 6

Teknor Apex Company (Chem Polymer)

## Message:

MDM54 is an injection molding grade nylon 6 approved by UL. It contains minerals, does not contain halogen and phosphorus, and has a flame retardant grade of V-2. It is mainly used in electrical equipment.

General Information				
Filler / Reinforcement	Mineral filler			
Features	Good coloring			
	Phosphorus content, low (to none)			
	Halogen-free			
	Flame retardancy			
Uses	Electrical/Electronic Applications			
Forms	Particle			
Processing Method	Injection molding			
Physical	Dry	Conditioned	Unit	Test Method
Density	1.29	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage <sup>1</sup>	0.90 - 1.6	--	%	Internal method
Water Absorption (Equilibrium, 23°C, 50% RH)	1.2	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	4200	1100	MPa	ISO 527-2
Tensile Stress				ISO 527-2
Yield	--	40.0	MPa	ISO 527-2
Fracture	77.0	--	MPa	ISO 527-2
Tensile Strain (Break)	5.0	7.0	%	ISO 527-2
Flexural Modulus	4000	2200	MPa	ISO 178
Flexural Stress				ISO 178
-- <sup>2</sup>	--	38.0	MPa	ISO 178
-- <sup>3</sup>	110	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength	5.5	23	kJ/m <sup>2</sup>	ISO 179
Notched Izod Impact	6.0	--	kJ/m <sup>2</sup>	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	78.0	73.0	°C	ISO 75-2/A
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+14	1.0E+11	ohms	IEC 60093

Volume Resistivity	1.0E+15	1.0E+11	ohms·cm	IEC 60093
Dielectric Strength (3.00 mm)	11	9.0	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	3.90	5.90		IEC 60250
Dissipation Factor (1 MHz)	0.020	0.080		IEC 60250
Comparative Tracking Index	> 600	> 600	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.50 mm)	V-2	--		UL 94
Glow Wire Flammability Index	960	--	°C	IEC 60695-2-12
Oxygen Index	24	--	%	ISO 4589-2
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	2.0		hr	
Rear Temperature	240 - 260		°C	
Middle Temperature	240 - 260		°C	
Front Temperature	240 - 260		°C	
Processing (Melt) Temp	< 300		°C	
Mold Temperature	60.0 - 80.0		°C	
Injection Rate	Fast			
Screw Speed	50 - 200		rpm	
Injection instructions				
背压:低注射压力:高如果材料在空气中暴露的时间不超过3小时,则无需干燥.				
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 1.5 mm to 4 mm 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).
2.	Break
3.	Yield

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