Chemlon® MD82

Polyamide 6

Teknor Apex Company (Chem Polymer)

Message:

MD82 is a UL recognised, V-0 rated, halogen & phosphorus free flame retardant, unreinforced injection moulding grade of nylon 6.

General Information	
Additive	heat stabilizer Flame retardancy
Features	Phosphorus content, low (to none) Thermal Stability Halogen-free Flame retardancy
Processing Method	Injection molding

Physical	Dry	Conditioned	Unit	Test Method
Density	1.18	--	g/cm³	ISO 1183
Molding Shrinkage [1]	1.1 - 1.5	--	%	Internal method
Water Absorption (Equilibrium, 23°C, 50% RH)	2.5	--	%	ISO 62
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	2900	2300	MPa	ISO 527-2
Tensile Stress	70.0	50.0	MPa	ISO 527-2
Tensile Strain (Break)	4.0	8.0	%	ISO 527-2
Flexural Modulus	3100	1500	MPa	ISO 178
Flexural Stress (3.5% Strain)	85.0	35.0	MPa	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength	> 100	> 100	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength	9.0	45	kJ/m²	ISO 179/1eU
Notched Izod Impact	3.0	--	kJ/m²	ISO 180/A
Unnotched Izod Impact Strength	No Break	--		ISO 180
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature (1.8 MPa, Unannealed)	80.0	75.0	°C	ISO 75-2/A
CLTE - Flow	6.0E-5	--	cm/cm/°C	Internal method
Thermal Conductivity	0.34	--	W/m/K	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**

Surface Resistivity	1.0E+14	1.0E+11	ohms	IEC 60093
Volume Resistivity	1.0E+18	1.0E+16	ohms·cm	IEC 60093
Dielectric Strength (3.00 mm)	15	12	kV/mm	IEC 60243-1
Relative Permittivity	4.00	4.70		IEC 60250
Dissipation Factor (1 MHz)	0.020	0.080		IEC 60250
Comparative Tracking Index	> 600	--	V	IEC 60112

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (0.630 mm)	V-0	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
1.00 mm	960	--	°C	IEC 60695-2-12
1.50 mm	960	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature				IEC 60695-2-13
1.00 mm	960	--	°C	IEC 60695-2-13
1.50 mm	960	--	°C	IEC 60695-2-13
Oxygen Index	36	--	%	ISO 4589-2

Additional Information

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Due to the thermal sensitivity of flame retarded products steps should be taken to limit hold up time and temperature for the material. Additional care should be taken during any interruptions to routine production and during any purging procedures in order to minimise degradation of the product.

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	240 - 250	°C
Mold Temperature	60.0 - 80.0	°C
Injection Rate	Fast	
Back Pressure	Low	
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).

Recommended distributors for this material

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