



Chemlon® MDSF1

Teknor Apex Company - Polyamide 6

General Information

Product Description

MDSF1 is a 40% mixed glass fibre and glass sphere filled injection moulding grade of nylon 6.

General

Material Status	• Commercial: Active
Availability	• Europe
Filler / Reinforcement	• Glass Bead\Glass Fiber, 40% Filler by Weight
Features	• Good Surface Finish • High Rigidity • Low Shrinkage
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.46	--	g/cm ³	ISO 1183
Molding Shrinkage ²	0.80 to 1.5	--	%	Internal Method
Water Absorption Equilibrium, 73°F, 50% RH	1.8	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	1.04E+6	725000	psi	ISO 527-1
Tensile Stress	17400	13100	psi	ISO 527-2
Tensile Strain (Break)	2.0	3.0	%	ISO 527-2
Flexural Modulus	1.03E+6	566000	psi	ISO 178
Flexural Stress	26800	17400	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength	4.5	8.6	ft·lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength	17 ft·lb/in ²	No Break		ISO 179/1eU
Notched Izod Impact Strength	3.1	--	ft·lb/in ²	ISO 180/A
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load 66 psi, Unannealed	> 428	--	°F	ISO 75-2/B
Deflection Temperature Under Load 264 psi, Unannealed	428	--	°F	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+17	1.0E+14	ohms·cm	IEC 60093
Electric Strength (0.118 in)	360	230	V/mil	IEC 60243-1
Comparative Tracking Index	500	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating 0.06 in, Teknor Apex test result	HB	--		UL 94
Oxygen Index	24	--	%	ISO 4589-2

Processing Information

Injection	Dry Unit
Drying Temperature	176 °F
Drying Time	2.0 hr
Rear Temperature	500 to 554 °F

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Injection	Dry	Unit
Middle Temperature	500 to 554	°F
Front Temperature	500 to 554	°F
Processing (Melt) Temp	482 to 572	°F
Mold Temperature	158 to 194	°F
Injection Rate	Fast	
Back Pressure	Low	
Screw Speed	Moderate	

Injection Notes

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.

Notes

¹ Typical properties: these are not to be construed as specifications.

² 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).