



Chemlon® HY2SM

Teknor Apex Company (Chem Polymer) - Polyamide 6

General Information

Product Description

HY2SM is a general purpose, unfilled, high viscosity injection moulding grade of nylon 6.

General

Material Status	• Commercial: Active
Availability	• Europe
Additive	• Lubricant
Features	• General Purpose • High Viscosity • Lubricated
Uses	• General Purpose
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.13	--	g/cm ³	ISO 1183
Molding Shrinkage ²	1.2 to 2.0	--	%	Internal Method
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	3.0	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	450000	145000	psi	ISO 527-2
Tensile Stress	10200	5800	psi	ISO 527-2
Tensile Strain (Yield)	6.0	25	%	ISO 527-2
Flexural Modulus	406000	145000	psi	ISO 178
Flexural Stress (3.5% Strain)	12500	4350	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength	5.2 ft-lb/in ²	No Break		ISO 179/1eA
Charpy Unnotched Impact Strength	No Break	No Break		ISO 179/1eU
Notched Izod Impact Strength	1.9	--	ft-lb/in ²	ISO 180/A
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	374	--	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	203	--	°F	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+15	1.0E+12	ohms	IEC 60093
Volume Resistivity	1.0E+17	1.0E+15	ohms·cm	IEC 60093
Electric Strength (0.118 in)	360	--	V/mil	IEC 60243-1
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.06 in, Teknor Apex test result	V-2	--		
Oxygen Index	25	--	%	ISO 4589-2

Processing Information

Injection	Dry	Unit
Drying Temperature	176	°F
Drying Time	20	hr
Rear Temperature	482 to 536	°F

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Injection	Dry	Unit
Middle Temperature	482 to 536	°F
Front Temperature	482 to 536	°F
Processing (Melt) Temp	482 to 554	°F
Mold Temperature	140 to 176	°F
Injection Rate	Fast	
Back Pressure	Moderate	
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).