

# Chemlon® HY2SM

Polyamide 6

Teknor Apex Company (Chem Polymer)

Message:

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

General Information				
Additive		Lubricant		
Features		Lubrication		
		General		
		Viscosity, High		
Uses		General		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.13	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage <sup>1</sup>	1.2 - 2.0	--	%	Internal method
Water Absorption (Equilibrium, 23°C, 50% RH)	3.0	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	3100	1000	MPa	ISO 527-2
Tensile Stress	70.0	40.0	MPa	ISO 527-2
Tensile Strain (Yield)	6.0	25	%	ISO 527-2
Flexural Modulus	2800	1000	MPa	ISO 178
Flexural Stress (3.5% Strain)	86.0	30.0	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength	11 kJ/m <sup>2</sup>	No Break		ISO 179/1eA
Charpy Unnotched Impact Strength	No Break	No Break		ISO 179/1eU
Notched Izod Impact	4.0	--	kJ/m <sup>2</sup>	ISO 180/A
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	190	--	°C	ISO 75-2/B
1.8 MPa, not annealed	95.0	--	°C	ISO 75-2/A
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
Dielectric Strength (3.00 mm)	14	--	kV/mm	IEC 60243-1

Comparative Tracking Index	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.50 mm, Teknor Apex test result)	V-2	--		UL 94
Oxygen Index	25	--	%	ISO 4589-2
Injection	Dry	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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