



Chemlon® HY3

Teknor Apex Company (Chem Polymer) - Polyamide 6

General Information

Product Description

HY3 is a general purpose, unfilled, high viscosity injection moulding grade of nylon 6. It contains a nucleating agent to aid faster cycle times.

General

Material Status	• Commercial: Active		
Availability	• Europe	• North America	
Additive	• Nucleating Agent		
Features	• Fast Molding Cycle	• High Viscosity	• Nucleated
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	435000	145000	psi	ISO 527-2
Tensile Stress (Yield)	10200	5800	psi	ISO 527-2
Tensile Strain (Yield)	5.0	25	%	ISO 527-2
Flexural Modulus	406000	145000	psi	ISO 178
Flexural Stress	14500	5080	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength	5.2	--	ft·lb/in ²	ISO 179
Charpy Unnotched Impact Strength	No Break	No Break		ISO 179
Notched Izod Impact Strength	1.7	--	ft·lb/in ²	ISO 180
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	250	V/mil	IEC 60243-1
Relative Permittivity (1 MHz)	3.50	4.00		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 (0.06 in)	V-2	--		Internal Method
Oxygen Index	25	--	%	ISO 4589-2

Processing Information

Injection	Dry	Unit
Drying Temperature	176	°F
Drying Time	2.0	hr
Rear Temperature	482 to 518	°F

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Injection	Dry	Unit
Middle Temperature	482 to 518	°F
Front Temperature	482 to 518	°F
Processing (Melt) Temp	< 572	°F
Mold Temperature	140 to 176	°F
Injection Rate	Fast	
Screw Speed	50 to 200	rpm

Injection Notes

Back pressure: Low

Injection pressure: High

No drying is necessary unless the materials has been exposed to air for longer than three hours.

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, component shape and moulding conditions. The range values stated were 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).