



Chemlon® 412 H

Teknor Apex Company - Polyamide 6

General Information

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Uses	• Automotive Applications		
Automotive Specifications	• FORD ESF-M4D314-A ¹		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ²

Physical	Nominal Value	Unit	Test Method
Density	1.13	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (235°C/1.0 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage	1.4 to 1.8	%	ISO 2577
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress	11000	psi	ISO 527
Tensile Strain (Yield)	5.0	%	ISO 527
Tensile Strain (Break)	40	%	ISO 527
Flexural Modulus	405000	psi	ISO 178/A
Flexural Stress	14900	psi	ISO 178/A
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength (73°F)	> 1.6	ft·lb/in ²	ISO 180/A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	118		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	356	°F	ISO 75-2/B
Deflection Temperature Under Load 264 psi, Unannealed	194	°F	ISO 75-2/A
Melting Temperature	420	°F	
CLTE - Flow	3.4E-5	in/in/°F	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+15	ohms·cm	ASTM D257
Dielectric Strength (0.118 in)	360	V/mil	ASTM D149
Comparative Tracking Index (CTI)	600	V	UL 746A
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.03 in)	V-2		UL 94
Oxygen Index	25	%	ASTM D2863

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Injection	Nominal Value	Unit
Drying Temperature	175	°F
Suggested Max Moisture	0.20	%
Suggested Max Regrind	25	%
Rear Temperature	425 to 455	°F
Middle Temperature	445 to 485	°F
Front Temperature	465 to 500	°F
Nozzle Temperature	465 to 510	°F
Processing (Melt) Temp	465 to 510	°F

Notes

¹ Automotive site approvals apply for US manufactured compound only

² Typical properties: these are not to be construed as specifications.