

Chemlon® 412 H

Teknor Apex Company (Chem Polymer) - Polyamide 6

Tuesday, December 19, 2017

General Information

General

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

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.13		ASTM D792
Melt Mass-Flow Rate (MFR) (235°C/1.0 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.014 to 0.018	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	11000	psi	ASTM D638
Tensile Elongation (Yield)	5.0	%	ASTM D638
Tensile Elongation (Break)	40	%	ASTM D638
Flexural Modulus	405000	psi	ASTM D790
Flexural Strength	15000	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F)	1.0	ft-lb/in	ASTM D256
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)	360	°F	ASTM D648
Deflection Temperature Under Load 264 psi, Unannealed	195	°F	ASTM D648
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 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.03 in)	V-2		UL 94
Oxygen Index	25	%	ASTM D2863

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	175	°F
Suggested Max Moisture	0.20	%
Suggested Max Re grind	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

Revision Date: 12/11/2008

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Injection	Nominal Value	Unit
Processing (Melt) Temp	465 to 510	°F

Notes

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

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