

Chemlon® 253 H

Polyamide 6

Teknor Apex Company (Chem Polymer)

Technical Data

Product Description

Chemlon® 253 H is a Polyamide 6 (Nylon 6) material. It is available in Asia Pacific, Europe, or North America for injection molding.

Important attributes of Chemlon® 253 H are:

- Flame Rated
- Good Toughness
- Heat Stabilizer
- Impact Modified
- Medium Viscosity

Typical application of Chemlon® 253 H: Automotive

General

Material Status	• Commercial: Active		
Literature ¹	• Technical Datasheet		
Search for UL Yellow Card	• Teknor Apex Company (Chem Polymer) • Chemlon®		
Availability	• Asia Pacific	• Europe	• North America
Additive	• Heat Stabilizer	• Impact Modifier	
Features	• Good Toughness • Heat Stabilized	• Impact Modified • Medium Viscosity	
Automotive Specifications	• FORD ESB-M4D178-A2	• GM GMP.PA6.005 Color: Black	• GM GMP.PA6.005 Color: Natural
Appearance	• Black	• Natural Color	
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity	1.11	1.11 g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (235°C/1.0 kg)	5.0 g/10 min	5.0 g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.015 to 0.019 in/in	1.5 to 1.9 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength	9500 psi	65.5 MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	5.0 %	5.0 %	
Break	50 %	50 %	
Flexural Modulus	320000 psi	2210 MPa	ASTM D790
Flexural Strength	12000 psi	82.7 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
-40°F (-40°C)	2.5 ft·lb/in	130 J/m	
73°F (23°C)	3.5 ft·lb/in	190 J/m	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed	140 °F	60.0 °C	
Melting Temperature	420 °F	216 °C	
CLTE - Flow	4.7E-5 in/in/°F	8.5E-5 cm/cm/°C	ASTM D696
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Volume Resistivity	1.0E+13 ohm·cm	1.0E+13 ohm·cm	ASTM D257
Dielectric Strength (0.118 in (3.00 mm))	300 V/mil	12 kV/mm	ASTM D149
Comparative Tracking Index (CTI)	600 V	600 V	UL 746
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating (0.0319 in (0.810 mm))	HB	HB	UL 94

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Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Oxygen Index	21 %	21 %	ASTM D2863

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	175 °F	79.4 °C
Suggested Max Moisture	0.20 %	0.20 %
Suggested Max Regrind	25 %	25 %
Rear Temperature	425 to 455 °F	218 to 235 °C
Middle Temperature	445 to 485 °F	229 to 252 °C
Front Temperature	465 to 500 °F	241 to 260 °C
Nozzle Temperature	465 to 510 °F	241 to 266 °C
Processing (Melt) Temp	465 to 510 °F	241 to 266 °C

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

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