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TEKNOR APEX

Chemlon® 104 H

Teknor Apex Company - Polyamide 66

General Information

Product Description

Chemlon® 104 H is an impact modified polyamide 66 (PA 66) designed for injection molding and extrusion. This toughened material offers strength and flexibility, even at low tempertures; and is available globally.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Heat Stabilizer	• Impact Modifier	
Features	• Good Toughness	• Low Temperature Toughness	
RoHS Compliance	• Contact Manufacturer		
Automotive Specifications	• 3M 11-0003-5762-1 [1] • FORD ESA-M4D267-A [1] • FORD ESB-M4D178-A2 [1] • FORD ESK-M4D178-A2 [1] • FORD WSB-M4D706-A [1] • FORD WSB-M4D706-A2 [1] • FORD WSK-M4D706-A [1] • FORD WSK-M4D706-A2 [1] • FORD WSS-M4D706-B1 [1] • GM GMP.PA66.015 Color: Natural [1] • GM GMW16447P-PA66-T2 [1] • STELLANTIS MS-DB-41 CPN3955 Color: NT001 Natural [1] • STELLANTIS MS-DB-41 Type PA CPN1826 Color: BK001 Black [1]		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties [2]

Physical	Nominal Value	Unit	Test Method
Density	1.10	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	2.2	%	
Flow	2.5	%	
Water Absorption (24 hr, 73°F)	0.80	%	ISO 62
Water Absorption (Saturation, 73°F)	2.5	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	334000	psi	ISO 527-1
Tensile Stress	7980	psi	ISO 527
Tensile Strain (Break)	30	%	ISO 527
Flexural Modulus	290000	psi	ISO 178
Flexural Stress	10900	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	7.1	ft·lb/in²	ISO 179/1eA
Charpy Unnotched Impact Strength	32	ft·lb/in²	ISO 179
Notched Izod Impact Strength (73°F)	7.1	ft·lb/in²	ISO 180

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	320	°F	ISO 75-2/B
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Unannealed	140	°F	
Melting Temperature	500	°F	
CLTE - Flow	3.9E-5	in/in/°F	ASTM D696
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+14	ohms·cm	ASTM D257
Dielectric Strength (0.118 in)	430	V/mil	ASTM D149
Comparative Tracking Index (CTI)	600	V	UL 746A
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.03 in)	HB		UL 94
Oxygen Index	22	%	ASTM D2863

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	176	°F
Suggested Max Moisture	0.20	%
Processing (Melt) Temp	509 to 559	°F
Mold Temperature	171 to 190	°F

Injection Notes

Maximum peak injection pressure should not exceed 80% of the machine's maximum pressure capability. Start with a holding pressure that is half the peak injection pressure. Perform a rheology curve in order to determine appropriate injection rate.

Extrusion	Nominal Value	Unit
Drying Temperature	176	°F
Suggested Max Moisture	0.20	%
Melt Temperature	509 to 559	°F
Die Temperature	509 to 559	°F
Screw L/D Ratio	25.0:1.0 to 30.0:1.0	

Extrusion Notes

For cylinder zones, use an ascending temperature profile that achieves the recommended melt temperature. The die temperature should be the same temperature as the melt or slightly higher. Suggested compression ratio is 3-4:1.

Notes

[1] Automotive site approvals apply for US manufactured compound only

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