

Chemlon® 104 H

Teknor Apex Company - Polyamide 66

Saturday, September 14, 2024

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 temperatures; and is available globally.

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • Asia Pacific • 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 • CHRYSLER MS-DB-41 CPN3955 Color: NT001 Natural ¹ • CHRYSLER MS-DB-41 Type PA CPN1826 Color: BK001 Black 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
Forms	• Pellets
Processing Method	• Extrusion • Injection Molding

ASTM & ISO Properties²

Physical	Nominal Value	Unit	Test Method
Density	1.10	g/cm ³	ISO 1183
Molding Shrinkage	1.5 to 2.0	%	ISO 2577
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress	62.0	MPa	ISO 527
Tensile Strain (Yield)	5.0	%	ISO 527
Tensile Strain (Break)	35	%	ISO 527
Flexural Modulus	2250	MPa	ISO 178
Flexural Stress	85.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	9.0	kJ/m ²	
23°C	14	kJ/m ²	
Notched Izod Impact Strength (23°C)	17	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2/A
1.8 MPa, Unannealed	62.0	°C	
Melting Temperature	260	°C	
CLTE - Flow	7.1E-5	cm/cm/°C	ASTM D696

Revision Date: 4/27/2020

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchasers assume all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or by others. There is no warranty of merchantability and there are no other warranties for the products described.

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Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+14	ohms·cm	ASTM D257
Dielectric Strength (3.00 mm)	17	kV/mm	ASTM D149
Comparative Tracking Index (CTI)	600	V	UL 746A
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.8 mm)	HB		UL 94
Oxygen Index	22	%	ASTM D2863

Legal Statement

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	80	°C
Suggested Max Moisture	0.20	%
Processing (Melt) Temp	265 to 293	°C
Mold Temperature	77 to 88	°C

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	80	°C
Suggested Max Moisture	0.20	%
Melt Temperature	265 to 293	°C
Die Temperature	265 to 293	°C
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.

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