

Chemlon® 133 GH

Teknor Apex Company - Polyamide 66

Saturday, September 14, 2024

General Information

Product Description

Chemlon® 133 GH is a 33% glass fiber reinforced, heat stabilized polyamide 66 (PA 66) designed for injection molding. This high tensile strength material has a wide processing window, provides a good surface appearance, and is available globally.

General

| | | | |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East • Asia Pacific | • Europe • Latin America | • North America |
| Additive | • Heat Stabilizer | | |
| Features | • Good Processability • Good Surface Finish | • Good Thermal Stability • High Tensile Strength | |
| RoHS Compliance | • Contact Manufacturer | | |
| Automotive Specifications | • 3M 11-0003-5762-1 ¹ • CHRYSLER MS-DB-41 CPN1900 Color: BK001 Black ¹ • CHRYSLER MS-DB-41 CPN2224 Color: Non-matched Color ¹ | • FORD ESB-M4D133-A ¹ • FORD ESB-M4D89-A ¹ • FORD WSK-M4D663-A ¹ | • GM GMP.PA66.013 Color: Natural ¹ • GM GMW3038P-PA66-GF35H ¹ |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

ASTM & ISO Properties²

| Physical | Dry | Conditioned | Unit | Test Method |
|-----------------------------------|-------|-------------|-------------------|-------------|
| Density | 1.38 | -- | g/cm ³ | ISO 1183 |
| Molding Shrinkage | | | | ISO 294-4 |
| Across Flow | 0.30 | -- | % | |
| Flow | 0.10 | -- | % | |
| Water Absorption (24 hr, 23°C) | 0.60 | -- | % | ISO 62 |
| Water Absorption | | | | ISO 62 |
| Saturation, 23°C | 2.0 | -- | % | |
| Mechanical | Dry | Conditioned | Unit | Test Method |
| Tensile Modulus | 13600 | 8670 | MPa | ISO 527-2 |
| Tensile Stress | 189 | 126 | MPa | ISO 527-2 |
| Tensile Strain (Break) | 2.4 | 4.8 | % | ISO 527-2 |
| Flexural Modulus | 9000 | 6500 | MPa | ISO 178 |
| Flexural Stress | 260 | 169 | MPa | ISO 178 |
| Impact | Dry | Conditioned | Unit | Test Method |
| Charpy Notched Impact Strength | 7.0 | 10 | kJ/m ² | ISO 179 |
| Charpy Unnotched Impact Strength | 53 | 70 | kJ/m ² | ISO 179 |
| Notched Izod Impact Strength | | | | ISO 180 |
| 23°C | 7.0 | 10 | kJ/m ² | |
| Thermal | Dry | Conditioned | Unit | Test Method |
| Deflection Temperature Under Load | | | | ISO 75-2/B |
| 0.45 MPa, Unannealed | 255 | -- | °C | |
| Deflection Temperature Under Load | | | | ISO 75-2/A |
| 1.8 MPa, Unannealed | 240 | -- | °C | |
| Melting Temperature | 259 | -- | °C | |

Revision Date: 7/29/2024

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Teknor Apex Company - Polyamide 66

| Flammability | Dry | Conditioned | Unit | Test Method |
|-----------------------|-----|-------------|------|-------------|
| Flame Rating (0.8 mm) | HB | -- | | UL 94 |

Legal Statement

Dry

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Processing Information

| Injection | Dry | Unit |
|------------------------|------------|------|
| Drying Temperature | 80 | °C |
| Suggested Max Moisture | 0.13 | % |
| 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.

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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