



Chemlon® 60AIM

Teknor Apex Company (Chem Polymer) - Polyamide 6

General Information

Product Description

60AIM is an unfilled, lightly modified nylon 6 injection moulding grade that is designed for use where improved toughness, coupled with good rigidity, is required.

General

| | | |
|-------------------|----------------------|-------------------|
| Material Status | • Commercial: Active | |
| Availability | • Europe | • North America |
| Features | • Good Toughness | • Medium Rigidity |
| Processing Method | • Injection Molding | |

ASTM & ISO Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|---|---------------|-----------------------|-----------------|
| Density | 1.12 | g/cm ³ | ISO 1183 |
| Molding Shrinkage ² | | | Internal Method |
| 0.0591 in | 1.2 | % | |
| 0.157 in | 2.5 | % | |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 305000 | psi | ISO 527-2 |
| Tensile Stress (Yield) | 8410 | psi | ISO 527-2 |
| Tensile Strain (Yield) | 5.0 | % | ISO 527-2 |
| Tensile Strain (Break) | 30 | % | ISO 527-2 |
| Flexural Modulus | 348000 | psi | ISO 178 |
| Flexural Stress | | | ISO 178 |
| 3.5% Strain ³ | 7540 | psi | |
| -- ⁴ | 9430 | psi | |
| Flexural Strain - Yield | 8.0 | % | ISO 178 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact Strength | 4.3 | ft-lb/in ² | ISO 180 |
| Thermal | Nominal Value | Unit | Test Method |
| Heat Deflection Temperature (66 psi, Unannealed) | 356 | °F | ISO 75-2/B |
| Heat Deflection Temperature (264 psi, Unannealed) | 167 | °F | ISO 75-2/A |
| Flammability | Nominal Value | Unit | Test Method |
| Flame Rating (0.12 in, Teknor Apex test result) | HB | | UL 94 |
| Oxygen Index | 22 | % | ISO 4589-2 |

Processing Information

| Injection | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature | 176 to 212 | °F |
| Drying Time | 2.0 | hr |
| Rear Temperature | 446 to 500 | °F |
| Middle Temperature | 446 to 500 | °F |
| Front Temperature | 446 to 500 | °F |
| Processing (Melt) Temp | < 572 | °F |
| Mold Temperature | 140 to 176 | °F |
| Injection Rate | Fast | |
| Screw Speed | 50 to 200 | rpm |

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Injection Notes

Back pressure: Low

Injection pressure: High

No drying is necessary unless the materials has been exposed to air for longer than three hours.

Notes

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

² Mould shrinkage is significantly influenced by many factors including wall thickness, gating, component shape and moulding conditions. The range values stated were determined from specimen bar mouldings of 1.5mm to 4mm wall thickness. They are provided as a guide for comparison purposes only and no guarantee should be inferred from their inclusion. (Specimens measured in the dry state, 24 hours after moulding).

³ At conventional deflection

⁴ Yield