

Infino HM-4300G

Lotte Chemical Corporation - Polyphthalamide

General Information

General

Filler / Reinforcement • Glass Fiber

Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|--|------------------|-----------------------|-------------|
| Density / Specific Gravity (Natural) | 1.41 | | ASTM D792 |
| Density (Natural) | 1.41 | g/cm ³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (330°C/2.16 kg) | 25 | g/10 min | ASTM D1238 |
| Melt Mass-Flow Rate (MFR) (330°C/2.16 kg) | 25 | g/10 min | ISO 1133 |
| Molding Shrinkage - Flow (0.126 in) | 3.0E-3 to 4.0E-3 | in/in | ASTM D955 |
| Molding Shrinkage - Across Flow (0.126 in) | 8.0E-3 to 9.0E-3 | in/in | ASTM D955 |
| Molding Shrinkage | | | ISO 294-4 |
| Across Flow : 0.0787 in | 0.80 to 0.90 | % | |
| Flow : 0.0787 in | 0.30 to 0.40 | % | |
| Ash Content | | | |
| -- | 30 | % | ASTM D5630 |
| -- | 30 | % | ISO 3451 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Strength ² (Yield) | 28400 | psi | ASTM D638 |
| Tensile Stress (Yield) | 29000 | psi | ISO 527-2/5 |
| Tensile Strength ² (Break) | 28400 | psi | ASTM D638 |
| Tensile Stress (Break) | 29000 | psi | ISO 527-2/5 |
| Tensile Elongation ² (Break) | 3.0 | % | ASTM D638 |
| Tensile Strain (Break) | 3.0 | % | ISO 527-2/5 |
| Flexural Modulus ³ | 1.35E+6 | psi | ASTM D790 |
| Flexural Modulus ³ | 1.45E+6 | psi | ISO 178 |
| Flexural Strength ³ | 35600 | psi | ASTM D790 |
| Flexural Stress ³ | 36300 | psi | ISO 178 |
| Impact | Nominal Value | Unit | Test Method |
| Charpy Notched Impact Strength ⁴ (73°F) | 3.8 | ft·lb/in ² | ISO 179/1eA |
| Notched Izod Impact | | | ASTM D256 |
| 73°F, 0.125 in | 1.5 | ft·lb/in | |
| 73°F, 0.250 in | 1.5 | ft·lb/in | |
| Notched Izod Impact Strength ⁴ (73°F) | 3.8 | ft·lb/in ² | ISO 180/1A |
| Hardness | Nominal Value | Unit | Test Method |
| Rockwell Hardness (R-Scale) | 120 | | ASTM D785 |
| Rockwell Hardness (R-Scale) | 120 | | ISO 2039-2 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 264 psi, Unannealed, 0.252 in | 563 | °F | |
| Deflection Temperature Under Load | | | ISO 75-2/A |
| 264 psi, Unannealed, 0.157 in | 563 | °F | |

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| Flammability | Nominal Value | Unit | Test Method |
|--------------------------------|---------------|------|-------------|
| Flame Rating (0.03 to 0.12 in) | | HB | UL 94 |

Processing Information

| Injection | Nominal Value | Unit |
|------------------------|-----------------|------|
| Drying Temperature | | |
| Desiccant Dryer | 176 to 212 | °F |
| Hot Air Dryer | 212 to 248 | °F |
| Drying Time | | |
| Desiccant Dryer | 4.0 | hr |
| Hot Air Dryer | 4.0 | hr |
| Suggested Max Moisture | 0.050 | % |
| Rear Temperature | 572 to 590 | °F |
| Middle Temperature | 590 to 608 | °F |
| Front Temperature | 608 to 644 | °F |
| Nozzle Temperature | 608 to 644 | °F |
| Mold Temperature | 248 to 284 | °F |
| Injection Pressure | 71100 to 356000 | psi |
| Back Pressure | 71.1 to 284 | psi |
| Screw Speed | 50 to 150 | rpm |

Injection Notes

Hot Runner Temperature: 320 to 340°C

Notes

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

² 0.20 in/min

³ 0.11 in/min

⁴ 4mm