

Infino HA-4400MP

LOTTE ADVANCED MATERIALS CO., LTD. - Polyphthalamide

Saturday, January 18, 2020

General Information

General

| | | | |
|------------------------|--|-----------------------------|-----------------|
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East • Asia Pacific | • Europe • Latin America | • North America |
| Filler / Reinforcement | • Mineral | | |

ASTM & ISO Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|--|---------------|-------------------|-------------|
| Density / Specific Gravity (Natural) | 1.44 | g/cm ³ | ASTM D792 |
| Density (Natural) | 1.44 | g/cm ³ | ISO 1183 |
| Molding Shrinkage - Flow (3.20 mm) | 0.10 to 0.30 | % | ASTM D955 |
| Molding Shrinkage - Across Flow (3.20 mm) | 0.30 to 0.50 | % | ASTM D955 |
| Molding Shrinkage | | | ISO 294-4 |
| Across Flow : 2.00 mm | 0.30 to 0.50 | % | |
| Flow : 2.00 mm | 0.10 to 0.30 | % | |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Strength ² (Yield) | 170 | MPa | ASTM D638 |
| Tensile Stress (Yield) | 175 | MPa | ISO 527-2/5 |
| Tensile Strength ² (Break) | 170 | MPa | ASTM D638 |
| Tensile Stress (Break) | 175 | MPa | ISO 527-2/5 |
| Tensile Elongation ² (Break) | 4.0 | % | ASTM D638 |
| Tensile Strain (Break) | 4.0 | % | ISO 527-2/5 |
| Flexural Modulus ³ | 8800 | MPa | ASTM D790 |
| Flexural Modulus ⁴ | 9000 | MPa | ISO 178 |
| Flexural Strength ³ | 240 | MPa | ASTM D790 |
| Flexural Stress ⁴ | 240 | MPa | ISO 178 |
| Impact | Nominal Value | Unit | Test Method |
| Charpy Notched Impact Strength ⁵ (23°C) | 10 | kJ/m ² | ISO 179/1eA |
| Notched Izod Impact | | | ASTM D256 |
| 23°C, 3.18 mm | 98 | J/m | |
| 23°C, 6.35 mm | 98 | J/m | |
| Notched Izod Impact Strength ⁵ (23°C) | 10 | kJ/m ² | ISO 180/1A |
| Hardness | Nominal Value | Unit | Test Method |
| Rockwell Hardness (R-Scale) | 100 | | ASTM D785 |
| Rockwell Hardness (R-Scale) | 100 | | ISO 2039-2 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 1.8 MPa, Unannealed, 6.40 mm | 275 | °C | |
| Heat Deflection Temperature | | | ISO 75-2/A |
| 1.8 MPa, Unannealed, 4.00 mm | 275 | °C | |

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Processing Information

| Injection | Nominal Value | Unit |
|------------------------|----------------|------|
| Drying Temperature | | |
| Desiccant Dryer | 80 | °C |
| Hot Air Dryer | 100 | °C |
| Drying Time | | |
| Desiccant Dryer | 4.0 | hr |
| Hot Air Dryer | 4.0 | hr |
| Suggested Max Moisture | 0.20 | % |
| Rear Temperature | 310 to 330 | °C |
| Middle Temperature | 320 to 330 | °C |
| Front Temperature | 320 to 330 | °C |
| Nozzle Temperature | 320 | °C |
| Mold Temperature | 120 to 150 | °C |
| Injection Pressure | 68.6 to 147 | MPa |
| Back Pressure | 0.490 to 0.981 | MPa |
| Screw Speed | 200 to 250 | rpm |

Injection Notes

Hot Runner Temperature: 330°C

Notes

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

² 5.0 mm/min

³ 2.8 mm/min

⁴ 2.0 mm/min

⁵ 4mm