

Starex BM-0320JK

Lotte Chemical Corporation - Acrylonitrile Butadiene Styrene

| Properties ¹ | | | |
|---|------------------|-----------------------|--------------|
| Physical | Nominal Value | Unit | Test Method |
| Density / Specific Gravity (Natural) | 1.04 | | ASTM D792 |
| Density (Natural) | 1.04 | g/cm ³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (220°C/10.0 kg) | 4.5 | g/10 min | ASTM D1238 |
| Melt Mass-Flow Rate (MFR) (220°C/10.0 kg) | 4.5 | g/10 min | ISO 1133 |
| Molding Shrinkage - Flow (0.126 in) | 3.0E-3 to 6.0E-3 | in/in | ASTM D955 |
| Molding Shrinkage - Across Flow (0.126 in) | 3.0E-3 to 6.0E-3 | in/in | ASTM D955 |
| Molding Shrinkage | | | ISO 294-4 |
| Across Flow : 0.0787 in | 0.30 to 0.60 | % | |
| Flow : 0.0787 in | 0.30 to 0.60 | % | |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus ² | 290000 | psi | ASTM D638 |
| Tensile Modulus | 290000 | psi | ISO 527-1/50 |
| Tensile Strength ² (Yield) | 6120 | psi | ASTM D638 |
| Tensile Stress (Yield) | 6380 | psi | ISO 527-2/50 |
| Tensile Elongation ² (Break) | 20 | % | ASTM D638 |
| Tensile Strain (Break) | 20 | % | ISO 527-2/50 |
| Flexural Modulus ³ | 292000 | psi | ASTM D790 |
| Flexural Modulus ⁴ | 326000 | psi | ISO 178 |
| Flexural Strength ³ | 8530 | psi | ASTM D790 |
| Flexural Stress ⁴ | 9860 | psi | ISO 178 |
| Impact | Nominal Value | Unit | Test Method |
| Charpy Notched Impact Strength ⁵ (73°F) | 14 | ft·lb/in ² | ISO 179/1eA |
| Notched Izod Impact (73°F, 0.250 in) | 5.5 | ft·lb/in | ASTM D256 |
| Notched Izod Impact Strength ⁵ (73°F) | 14 | ft·lb/in ² | ISO 180/1A |
| Unnotched Izod Impact Strength ⁵ (-22°F) | 8.1 | ft·lb/in ² | ISO 180/1U |
| Hardness | Nominal Value | Unit | Test Method |
| Rockwell Hardness (R-Scale) | 102 | | ASTM D785 |
| Rockwell Hardness (R-Scale) | 102 | | ISO 2039-2 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 264 psi, Unannealed, 0.252 in | 196 | °F | |
| Deflection Temperature Under Load | | | ISO 75-2/A |
| 264 psi, Unannealed, 0.157 in | 183 | °F | |
| Vicat Softening Temperature | 216 | °F | ISO 306/B50 |

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Processing Information

| Injection | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature | | |
| Desiccant Dryer | 176 to 194 | °F |
| Hot Air Dryer | 176 to 194 | °F |
| Drying Time | | |
| Desiccant Dryer | 2.0 to 3.0 | hr |
| Hot Air Dryer | 3.0 to 4.0 | hr |
| Suggested Max Moisture | < 0.10 | % |
| Rear Temperature | 392 to 428 | °F |
| Middle Temperature | 428 to 464 | °F |
| Front Temperature | 446 to 482 | °F |
| Nozzle Temperature | 446 to 482 | °F |
| Mold Temperature | 104 to 176 | °F |
| Injection Pressure | 7110 to 21300 | psi |
| Back Pressure | 71.1 to 284 | psi |
| Screw Speed | 50 to 150 | rpm |

Injection Notes

Hot Runner Temperature: 230 to 250°C