

Starex WR-9370

Lotte Chemical Corporation - Acrylonitrile Styrene Acrylate

General Information

General

Uses • Automotive Applications

Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|--|------------------|-----------------------|--------------|
| Density / Specific Gravity (Natural) | 1.07 | | ASTM D792 |
| Density (Natural) | 1.07 | g/cm ³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (220°C/10.0 kg) | 3.0 | g/10 min | ASTM D1238 |
| Melt Mass-Flow Rate (MFR) (220°C/10.0 kg) | 3.0 | g/10 min | ISO 1133 |
| Molding Shrinkage - Flow (0.126 in) | 4.0E-3 to 7.0E-3 | in/in | ASTM D955 |
| Molding Shrinkage - Flow (0.0787 in) | 0.40 to 0.70 | % | ISO 294-4 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 319000 | psi | ISO 527-1/50 |
| Tensile Strength ² (Yield) | 7110 | psi | ASTM D638 |
| Tensile Stress (Yield) | 7110 | psi | ISO 527-2/50 |
| Tensile Stress (Break) | 5510 | psi | ISO 527-2/50 |
| Tensile Elongation ² (Break) | 65 | % | ASTM D638 |
| Tensile Strain (Break) | 18 | % | ISO 527-2/50 |
| Flexural Modulus ³ | 334000 | psi | ASTM D790 |
| Flexural Modulus ⁴ | 313000 | psi | ISO 178 |
| Flexural Strength ³ | 10100 | psi | ASTM D790 |
| Flexural Stress ⁴ | 10200 | psi | ISO 178 |
| Impact | Nominal Value | Unit | Test Method |
| Charpy Notched Impact Strength ⁵ (73°F) | 6.2 | ft-lb/in ² | ISO 179/1eA |
| Notched Izod Impact (73°F, 0.125 in) | 2.8 | ft-lb/in | ASTM D256 |
| Notched Izod Impact Strength ⁵ (73°F) | 4.3 | ft-lb/in ² | ISO 180/1A |
| Hardness | Nominal Value | Unit | Test Method |
| Rockwell Hardness (R-Scale) | 106 | | ASTM D785 |
| Rockwell Hardness (R-Scale) | 106 | | ISO 2039-2 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load 66 psi, Unannealed, 0.157 in | 217 | °F | ISO 75-2/B |
| Deflection Temperature Under Load 66 psi, Annealed, 0.157 in | 228 | °F | ISO 75-2/B |
| Deflection Temperature Under Load 264 psi, Unannealed, 0.252 in | 201 | °F | ASTM D648 |
| Deflection Temperature Under Load 264 psi, Unannealed, 0.157 in | 189 | °F | ISO 75-2/A |
| Deflection Temperature Under Load 264 psi, Annealed, 0.157 in | 219 | °F | ISO 75-2/A |
| Vicat Softening Temperature | 228 | °F | ISO 306/B50 |

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Processing Information

| Injection | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature | | |
| Desiccant Dryer | 176 | °F |
| Hot Air Dryer | 176 to 194 | °F |
| Drying Time | | |
| Desiccant Dryer | 2.0 to 3.0 | hr |
| Hot Air Dryer | 2.0 to 4.0 | hr |
| Suggested Max Moisture | < 0.050 | % |
| Rear Temperature | 356 to 374 | °F |
| Middle Temperature | 392 to 410 | °F |
| Front Temperature | 428 to 446 | °F |
| Nozzle Temperature | 464 | °F |
| Mold Temperature | 104 to 176 | °F |
| Injection Pressure | 7110 to 35600 | psi |
| Back Pressure | 71.1 to 284 | psi |
| Screw Speed | 50 to 150 | rpm |

Injection Notes

Hot Runner Temperature: 240°C

Notes

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

² 0.20 in/min

³ 0.11 in/min

⁴ 0.079 in/min

⁵ 4mm