# Starex EA-0640

## Lotte Chemical Corporation - Acrylonitrile Butadiene Styrene

| Properties [1] | | | |
|---|---|---|---|
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Density / Specific Gravity (Natural) | 1.05 | | ASTM D792 |
| Density (Natural) | 1.05 | g/cm³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 1.8 | g/10 min | ASTM D1238 |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 1.8 | g/10 min | ISO 1133 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus [2] | 284000 | psi | ASTM D638 |
| Tensile Modulus | 319000 | psi | ISO 527-1/50 |
| Tensile Strength [2] (Yield) | 6400 | psi | ASTM D638 |
| Tensile Stress (Yield) | 5800 | psi | ISO 527-2/50 |
| Tensile Strength [2] (Break) | 4840 | psi | ASTM D638 |
| Tensile Stress (Break) | 4930 | psi | ISO 527-2/50 |
| Tensile Elongation [2] (Break) | 20 | % | ASTM D638 |
| Tensile Strain (Break) | 10 | % | ISO 527-2/50 |
| Flexural Modulus [3] | 370000 | psi | ASTM D790 |
| Flexural Modulus [4] | 319000 | psi | ISO 178 |
| Flexural Strength [3] | 10700 | psi | ASTM D790 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength [5] (73°F) | 13 | ft·lb/in² | ISO 179/1eA |
| Notched Izod Impact (73°F, 0.250 in) | 3.5 | ft·lb/in | ASTM D256 |
| Notched Izod Impact Strength [5] (73°F) | 10 | ft·lb/in² | ISO 180/1A |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Rockwell Hardness (R-Scale) | 95 | | ASTM D785 |
| Rockwell Hardness (R-Scale) | 95 | | ISO 2039-2 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load | | | ASTM D648 |
| 66 psi, Unannealed, 0.252 in | 205 | °F | |
| Deflection Temperature Under Load | | | ISO 75-2/B |
| 66 psi, Unannealed, 0.157 in | 196 | °F | |
| Deflection Temperature Under Load | | | ASTM D648 |
| 264 psi, Unannealed, 0.252 in | 178 | °F | |
| Deflection Temperature Under Load | | | ISO 75-2/A |
| 264 psi, Unannealed, 0.157 in | 172 | °F | |
| Vicat Softening Temperature | | | |
| -- | 212 | °F | ISO 306/B120 |
| -- | • 203<br>• 207 | °F | ISO 306/B50 |

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| Processing Information | | |
|---|---|---|
| **Injection** | **Nominal Value** | **Unit** |
| Drying Temperature | | |
| Desiccant Dryer | 176 | °F |
| Hot Air Dryer | 176 | °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 | 320 to 356 | °F |
| Middle Temperature | 374 to 392 | °F |
| Front Temperature | 410 to 428 | °F |
| Nozzle Temperature | 446 | °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°C