



Syncure™ S1042A Natural

Crosslinked Polyethylene

Key Characteristics

Product Description

Graft Resin component for PolyOne's Syncure™ system, which is a two-step, silane-grafted, moisture-crosslinkable polyethylene system. Graft Resins have approximate shelf life of 6 months from the date of production. Please consult PolyOne for its use past 6 months.

General

| | |
|-----------------------|---|
| Material Status | • Commercial: Active |
| Regional Availability | • Africa & Middle East • Asia Pacific • Europe • North America |
| Uses | • Wire & Cable Applications |
| Forms | • Pellets |

Technical Properties ¹

| Physical | Typical Value (English) | Typical Value (SI) | Test Method |
|--|-------------------------|-------------------------|-----------------|
| Density | 0.918 g/cm ³ | 0.918 g/cm ³ | ASTM D1505 |
| Apparent Density ² | 1.70 g/cm ³ | 1.70 g/cm ³ | Internal Method |
| Melt Mass-Flow Rate (MFR) ³ (190°C/2.16 kg) | 0.73 g/10 min | 0.73 g/10 min | ASTM D1238 |
| Appearance | Pellets/Cubes | Pellets/Cubes | ASTM D2090 |
| Gel Content ⁴ | 75 % | 75 % | ASTM D2765 |
| Mechanical | Typical Value (English) | Typical Value (SI) | Test Method |
| Tensile Strength ⁵ (Break) | 1900 psi | 13.1 MPa | ASTM D638 |
| Tensile Elongation ⁵ (Break) | 300 % | 300 % | ASTM D638 |
| Thermal | Typical Value (English) | Typical Value (SI) | Test Method |
| Brittleness Temperature | -94.0 °F | -70.0 °C | ASTM D746 |
| Deformation ⁶ (268°F (131°C)) | 5.0 % | 5.0 % | UL 1581 |

Additional Information

Tensile, Deformation, and Gel measured on a 95 phr S1042A / 5 phr S1000B system; and cured by autoclave for 9 hours.

Processing Information

| Injection | Typical Value (English) | Typical Value (SI) |
|--------------------|-------------------------|--------------------|
| Drying Temperature | 160 °F | 71.1 °C |
| Drying Time | 3.0 to 4.0 hr | 3.0 to 4.0 hr |
| Rear Temperature | 400 to 420 °F | 204 to 216 °C |
| Middle Temperature | 340 to 400 °F | 171 to 204 °C |
| Front Temperature | 350 to 400 °F | 177 to 204 °C |
| Nozzle Temperature | 350 to 420 °F | 177 to 216 °C |
| Mold Temperature | 80.0 to 150 °F | 26.7 to 65.6 °C |

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Notes¹ Typical values are not to be construed as specifications.² Geon® 1169³ Procedure A⁴ Crosslinked PE, Method B (NonReferee Test)⁵ Type IV, 20 in/min (510 mm/min)⁶ 500 g, 1hr**CONTACT INFORMATION****Americas**United States - Avon Lake
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