



## 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 <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	0.918 g/cm <sup>3</sup>	0.918 g/cm <sup>3</sup>	ASTM D1505
Apparent (Bulk) Density <sup>2</sup>	1.70 g/cm <sup>3</sup>	1.70 g/cm <sup>3</sup>	Internal Method
Melt Mass-Flow Rate (MFR) <sup>3</sup> (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 <sup>4</sup>	75 %	75 %	ASTM D2765
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Strength <sup>5</sup> (Break)	1900 psi	13.1 MPa	ASTM D638
Tensile Elongation <sup>5</sup> (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 <sup>6</sup> (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 °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 to 150 °F	27 to 66 °C

**Notes**

<sup>1</sup> Typical values are not to be construed as specifications.

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<sup>2</sup> Geon® 1169

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<sup>3</sup> Procedure A

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<sup>4</sup> Crosslinked PE, Method B (NonReferee Test)

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<sup>5</sup> Type IV, 20 in/min (510 mm/min)

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<sup>6</sup> 500 g, 1hr



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