



Syncure™ S1027A

Crosslinked Polyethylene

Key Characteristics

Product Description

Moisture Crosslinkable Polyethylene Compound. Available as Base Resin component for PolyOne Syncure System.

General

Material Status	• Commercial: Active
Regional Availability	• North America
Uses	• Wire & Cable Applications
Forms	• Pellets

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	0.938 g/cm ³	0.938 g/cm ³	ASTM D1505
Apparent Density ²	0.53 g/cm ³	0.53 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)	2600 psi	17.9 MPa	ASTM D638
Tensile Elongation ⁵ (Break)	450 %	450 %	ASTM D638
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deformation ⁶ (268°F (131°C))	3.0 %	3.0 %	UL 1581
Hot Creep Elongation ⁷	35 %	35 %	
Aging	Typical Value (English)	Typical Value (SI)	
Retention of Tensile Elongation ⁸ 334°F (168°C), 75.0 mil (1.91 mm)	80 %	80 %	
Retention of Tensile Strength ⁸ 334°F (168°C), 75.0 mil (1.91 mm)	85 %	85 %	

Additional Information

Tensile, Oven Aging, measured on a 100 phr S1027A / 20 phr V0022G system. Deformation, Hot Creep, and Gel measured on a 95 phr S1027A / 5 phr S1000B system; all cured for 6 hours in water at 90 degree C. Pellet appearance is 1/8" cylindrical.

Notes

¹ Typical values are not to be construed as specifications.

² Geon® 1169

³ Procedure A

⁴ Crosslinked PE, Method B (NonReferee Test)

⁵ Type IV, 20 in/min (510 mm/min)

⁶ 500 g, 1hr

⁷ SYV-40

⁸ 168 hr, UL Standard

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CONTACT INFORMATION**Americas**

United States - Avon Lake
+1 440 930 1000

United States - McHenry
+1 815 385 8500

Asia

China - Guangzhou
+86 20 8732 7260

China - Shenzhen
+86 755 2969 2888

China - Suzhou
+86 512 6823 24 38

China - Suzhou
+86 512 6265 2600

Hong Kong -
+852 2690 5332

Taiwan - Yonghe City,
+886 9396 99740, +886 2929 1849

Europe

Germany - Gaggenau
+49 7225 6802 0

Spain - Barbastro (Huesca)
+34 974 310 314



Beyond Polymers.

Better Business Solutions. SM

www.polyone.com

PolyOne Americas

33587 Walker Road
Avon Lake, Ohio 44012
United States
+1 440 930 1000
+1 866 POLYONE

PolyOne Asia

No. 88 Guoshoujing Road
Z.J Hi-tech Park, Pudong
Shanghai, 201203, China
+86 21 5080 1188

PolyOne Europe

6 Giällewee
+352 269 050 35

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