



# Syncure™ System S100FH

## Crosslinked Polyethylene

### Key Characteristics

#### Product Description

Syncure™ systems are two part moisture crosslinkable compounds. S100FH is a UL bulletinized, RoHS and flame retardant cable insulation compound. Graft resin component of this system has 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	• North America
Features	• Flame Retardant • Oil Resistant
Uses	• Wire & Cable Applications
Wire Types	• RHH • SIS • XHH • RHW-2 • USE-2 • XHHW
Agency Ratings	• MIL C-24643 • UL 44
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Extrusion Coating

### Technical Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.01	1.01	ASTM D792
Gel Content <sup>2</sup>	68 %	68 %	ASTM D2765
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Strength <sup>3</sup> (Yield)	2800 psi	19.3 MPa	ASTM D638
Tensile Elongation <sup>3</sup> (Break)	400 %	400 %	ASTM D638
Deformation Under Load <sup>4</sup> (268°F (131°C))	10.0 %	10.0 %	UL 1581
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness			ASTM D2240
Shore D	53	53	
Shore D, 10 sec	47	47	
Thermal	Typical Value (English)	Typical Value (SI)	
UL Temperature Rating	194 °F	90 °C	
Aging	Typical Value (English)	Typical Value (SI)	
Retention of Tensile Elongation <sup>5</sup> 250°F (121°C), 75.0 mil (1.91 mm)	90 %	90 %	
Retention of Tensile Strength <sup>5</sup> 250°F (121°C), 75.0 mil (1.91 mm)	95 %	95 %	
Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Dielectric Strength	1000 V/mil	39 kV/mm	ASTM D149
Dielectric Constant (10 MHz)	2.31	2.31	ASTM D150
Dissipation Factor (10 MHz)	1.2E-3	1.2E-3	ASTM D150
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Test - Horizontal			
--	Pass	Pass	UL 1581
--	Pass	Pass	CSA FT-2

Copyright © 2015 PolyOne Corporation. PolyOne makes no representations, guarantees, or warranties of any kind with respect to the Information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the Information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as "typical" or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the Information. PolyOne makes no warranties or guarantees respecting suitability of either PolyOne's products or the Information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the Information and/or use or handling of any product. POLYONE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the Information or products reflected by the Information. This data sheet shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.

Additional Information	Typical Value (English)	Typical Value (SI)
Catalyst Masterbatch - V-0022G RoHS	17 %	17 %
Grafted Base Resin - S-1054A	83 %	83 %

NOTE: The above represents Typical Properties measured on 14 AWG with 30 mil wall.  
STORAGE AND HANDLING: Use within 48 hours once package is open to avoid self-curing and scrap.

**Notes**

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

<sup>2</sup> Crosslinked PE, Method B (NonReferee Test)

<sup>3</sup> Type IV, 20 in/min (510 mm/min)

<sup>4</sup> 500 g, 1 hr.

<sup>5</sup> UL Standard, 336 hrs.

**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 - Barbastró (Huesca)  
+34 974 310 314



*Beyond Polymers.*

*Better Business Solutions. SM*

[www.polyone.com](http://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

Copyright ©, 2015 PolyOne Corporation. PolyOne makes no representations, guarantees, or warranties of any kind with respect to the Information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the Information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as "typical" or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the Information. PolyOne makes no warranties or guarantees respecting suitability of either PolyOne's products or the Information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the Information and/or use or handling of any product. POLYONE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the Information or products reflected by the Information. This data sheet shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.