



# 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
Density / 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

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.



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