



# Syncure™ System S110FV-UV

## Crosslinked Polyethylene

### Key Characteristics

Product Description	
Syncure™ systems are two part moisture crosslinkable insulation compounds. S110FV-UV is a UL bulletinized, RoHS compliant, high strength, highly flame retardant insulation compound. Available in black and natural colorable versions. S110FV-UV is suitable for UL4703 photovoltaic wire insulation not requiring an outer jacket. 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 • Low Temperature Resistant • Oil Resistant • Sunlight Resistant (720 hours)
Uses	• Insulation • Solar Panels • Wire & Cable Applications
Wire Types	• SIS • XHH • XHHW • XHHW-2
Agency Ratings	• UL 44 • UL 4703 • UL VW-1 • USE 2
Appearance	• Black • Natural Color
Forms	• Pellets
Processing Method	• Extrusion Coating

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

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.29	1.29 g/cm <sup>3</sup>	ASTM D792
Gel Content <sup>2</sup>	60 %	60 %	ASTM D2765
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Strength <sup>3</sup> (Yield)	2500 psi	17.2 MPa	ASTM D638
Tensile Elongation <sup>3</sup> (Break)	400 %	400 %	ASTM D638
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness			ASTM D2240
Shore D	54	54	
Shore D, 10 sec	50	50	
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
UL Temperature Rating	194 °F	90 °C	
Deformation <sup>4</sup> (268°F (131°C))	3.0 %	3.0 %	UL 1581
Aging	Typical Value (English)	Typical Value (SI)	
Retention of Tensile Elongation <sup>5</sup>			
250°F (121°C), 75.0 mil (1.91 mm)	94 %	94 %	
Retention of Tensile Strength <sup>5</sup>			
250°F (121°C), 75.0 mil (1.91 mm)	100 %	100 %	
Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Dielectric Strength	1000 V/mil	39 kV/mm	ASTM D149
Dielectric Constant (1 MHz)	2.54	2.54	ASTM D150
Dissipation Factor (1 MHz)	2.8E-3	2.8E-3	ASTM D150
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Oxygen Index (0.0750 in (1.91 mm))	27 %	27 %	ASTM D2863

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Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Test <sup>6</sup>	Pass	Pass	UL 1581
Additional Information	Typical Value (English)	Typical Value (SI)	
Catalyst Masterbatch - V-0044G-UV Natural or Black	50 %	50 %	
Grafted Resin - S-1060A	50 %	50 %	

NOTE: The above represents Typical Properties measured on 14 AWG with 30 mil wall.

STORAGE AND HANDLING: Use S-1060A 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, 1hr

<sup>5</sup> 336 hr, UL Standard

<sup>6</sup> Vertical

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