



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	• Oil Resistant	• Sunlight Resistant (720 hours)
	• Low Temperature Resistant		
Uses	• Insulation	• Solar Panels	• Wire & Cable Applications
Wire Types	• SIS	• XHHW	
	• XHH	• XHHW-2	
Agency Ratings	• UL 44	• UL VW-1	
	• UL 4703	• USE 2	
Appearance	• Black	• Natural Color	
Forms	• Pellets		
Processing Method	• Extrusion Coating		

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.29	1.29	ASTM D792
Gel Content ²	60 %	60 %	ASTM D2765
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Strength ³ (Yield)	2500 psi	17.2 MPa	ASTM D638
Tensile Elongation ³ (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 ⁴ (268°F (131°C))	3.0 %	3.0 %	UL 1581
Aging	Typical Value (English)	Typical Value (SI)	
Retention of Tensile Elongation ⁵			
250°F (121°C), 75.0 mil (1.91 mm)	94 %	94 %	
Retention of Tensile Strength ⁵			
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

Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Test ⁶	Pass	Pass	UL 1581
Additional Information	Typical Value (English)	Typical Value (SI)	
Catalyst Masterbatch - V-0044G-UV Natural or Black	50 %	50 %	
Grafted Base 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

¹ Typical values are not to be construed as specifications.

² Crosslinked PE, Method B (NonReferee Test)

³ Type IV, 20 in/min (510 mm/min)

⁴ 500 g, 1hr

⁵ 336 hr, UL Standard

⁶ Vertical



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