



Syncure™ System S100NA

Crosslinked Polyethylene

Key Characteristics

Product Description

Syncure™ systems are two part moisture crosslinkable compounds, UL bulletinized, RoHS compliant, easy processing, high strength, colorable cable insulation compound suitable for service entrance cables. 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
Uses	• Wire & Cable Applications
Wire Types	• USE • USE-2
Agency Ratings	• MIL C-24643 • UL 854
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Extrusion Coating

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	0.925	0.925	ASTM D792
Gel Content ²	72 %	72 %	ASTM D2765
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Strength ³ (Yield)	2800 psi	19.3 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	52	52	
Shore D, 10 sec	46	46	
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
UL Temperature Rating	194 °F	90 °C	
Deformation ⁴ (268°F (131°C))	10 %	10 %	UL 1581
Aging	Typical Value (English)	Typical Value (SI)	
Retention of Tensile Elongation			
250°F (121°C), 75.0 mil (1.91 mm) ⁵	90 %	90 %	
316°F (158°C), 75.0 mil (1.91 mm) ⁶	85 %	85 %	
Retention of Tensile Strength			
250°F (121°C), 75.0 mil (1.91 mm) ⁵	95 %	95 %	
316°F (158°C), 75.0 mil (1.91 mm) ⁶	90 %	90 %	
Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Dielectric Strength	1000 V/mil	39 kV/mm	ASTM D149
Dielectric Constant	2.14	2.14	ASTM D150
Dissipation Factor	2.0E-3	2.0E-3	ASTM D150
Additional Information	Typical Value (English)	Typical Value (SI)	
Catalyst Masterbatch - S-1010B	5.0 %	5.0 %	
Grafted Base Resin - S-1054A	95 %	95 %	

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.

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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

⁶ 168 hr, UL Standard

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