Syncure™ S1054A Natural

Crosslinked Polyethylene

Key Characteristics

Product Description
Graft Resin component for PolyOne's Syncure™ system, which is a two-step, silane-grafted, moisture-crosslinkable polyethylene system. Graft Resins have 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	• Africa & Middle East • Asia Pacific	• Europe • North America
Uses	• Wire & Cable Applications	
Forms	• Pellets	

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	0.919 g/cm³	0.919 g/cm³	ASTM D1505
Apparent (Bulk) Density [2]	0.50 g/cm³	0.50 g/cm³	Internal Method
Melt Mass-Flow Rate (MFR) [3] (190°C/2.16 kg)	0.58 g/10 min	0.58 g/10 min	ASTM D1238
Gel Content [4]	73 %	73 %	ASTM D2765
Mechanical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Strength [5] (Break)	2500 psi	17.2 MPa	ASTM D638
Tensile Elongation [5] (Break)	450 %	450 %	ASTM D638
Thermal	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Deformation [6] (268°F (131°C))	6.0 %	6.0 %	UL 1581
Hot Creep Elongation [7]	49 %	49 %	
Aging	**Typical Value (English)**	**Typical Value (SI)**	
Retention of Tensile Elongation [8]			
250°F (121°C), 75.0 mil (1.91 mm)	93 %	93 %	
Retention of Tensile Strength [8]			
250°F (121°C), 75.0 mil (1.91 mm)	99 %	99 %	

Additional Information
Oven Aging, Tensile, Elongation, Deformation, Hot Creep, and Gel measured on a 95 phr S1054A / 5 phr S1000B system; and cured by autoclave for 9 hours.

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	160 °F	71 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Rear Temperature	400 to 420 °F	204 to 216 °C
Middle Temperature	340 to 400 °F	171 to 204 °C
Front Temperature	350 to 400 °F	177 to 204 °C
Nozzle Temperature	350 to 420 °F	177 to 216 °C
Mold Temperature	80 to 150 °F	27 to 66 °C

Notes

[1] Typical values are not to be construed as specifications.

[2] Geon® 1169

[3] Procedure A

[4] Crosslinked PE, Method B (NonReferee Test)

[5] Type IV, 20 in/min (510 mm/min)

[6] 500 g, 1hr

[7] SYV-40

[8] 336 hr, UL Standard

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