# Polylink Power Cable PP 408/401

# Crosslinked Polyethylene

Polylink Polymers (India) Ltd.

### Message:

A silane grafted crosslinkable polyethylene compound, curable by exposure to moisture, for insulation of power cables and possessing excellent extrudability at high out put rate.

PP 408 is based on a high molecular weight polymer and has melt index in the range of 0.5 to 0.8. It has especially developed for low voltage cable insulation and for sheathing purpose.

#### **DESCRIPTION:**

This compound utilizes the system for cross - linking of polyethylene developed by DOW Corning and known as Sioplas. It is a two component system comprising a silylated ethylene polymer known as the graft copolymer PP 408, and a master batch PP 401 containing a cross - linking catalyst. The two materials normally used in the ratio of 95 parts graft to 5 parts catalyst master batch.

General Information			
Features	High molecular weight		
	Crosslinkable		
Uses	Low voltage insulation		
	Cable sheath		
Forms	Particle		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	0.925	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.50	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Break)	18.0	MPa	IEC 60811
Tensile Strain (Break)	550	%	IEC 60811
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (135°C, 168 hr)	10	%	IEC 60811
Change in Tensile Strain at Break in Air (135°C, 168 hr)	15	%	IEC 60811
Thermal	Nominal Value	Unit	Test Method
Thermoset <sup>1</sup>			IEC 60811
Elongation Under Load : 200°C	100	%	IEC 60811
Permanent Elongation after Cooling : 200°C	5.0	%	IEC 60811
Power factor (23°C) <sup>2</sup>	4.00E-4		IEC 250
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (20°C)	2.4E+16	ohms·cm	IEC 60502
Dielectric Strength	25	kV/mm	IEC 60243-1
Dielectric Constant	2.30		IEC 60250

Extrusion	Nominal Value	Unit		
Cylinder Zone 1 Temp.	160	°C		
Cylinder Zone 2 Temp.	170	°C		
Cylinder Zone 3 Temp.	180	°C		
Cylinder Zone 4 Temp.	190	°C		
Cylinder Zone 5 Temp.	200	°C		
Die Temperature	210	°C		
Extrusion instructions				
Screw water temperature: 60 to70°CScreens: 30,100,30(mesh apertures per linear inch)L/D Ratio: 20Compression: 3:0:1				
NOTE				
1.	15 min, 0.2 N/mm²			
2.	50 Hz			

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