# **INEOS Wire & Cable BPD8128**

## Low Density Polyethylene

## INEOS Olefins & Polymers Europe

#### Message:

BPD 8128 is a high molecular weight low density polyethylene compound specially designed for crosslinking with silanes. It is a "non staining" Monosil® product that contains a controlled amount of metal-deactivator and antioxidant to provide the desired copper contact performance. BPD 8128 is widely used by cable manufacturers using a Silane® (one step) crosslinking process. Its major area of application is for the insulation of low voltage power cables.

General Information			
Additive	Metal deactivator		
	Antioxidation		
Features	High molecular weight		
	Crosslinkable		
Uses	Low voltage insulation		
	Wire and cable applications		
Agency Ratings	ASTM D 1248, I, Class A, Cat. 5		
	IEC 60502-1		
	IEC 60502-2		
	ISO 1872 PE KHN 23D003		
RoHS Compliance	Contact manufacturer		
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Density	0.923	g/cm³	ISO 1183/D
Melt Mass-Flow Rate (MFR) (190°C/2.16			
kg)	0.27	g/10 min	ISO 1133
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Break)	15.0	MPa	IEC 60811-1-1
Tensile Strain (Break)	350	%	IEC 60811-1-1
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (135°C, 168 hr)	< 25	%	IEC 60811-1-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+14	ohms•cm	ASTM D257
Dielectric Constant (50 Hz)	< 2.35		ASTM D150
Dissipation Factor (50 Hz)	< 3.0E-3		ASTM D150
Additional Information	Nominal Value	Unit	Test Method
Hot Elongation <sup>1</sup> (200°C)	50	%	IEC 60811-2-1

All the tests have been performed on cables extruded on a Nokia Maillefer BMA 45 30L/D monosil line with 1.5% of a commercial mixture of vinyl trimethoxysilane, peroxide, crosslinking catalyst (ex: SILCAT R) and a suitable package of antioxidants. The cables have been crosslinked 4h in water at 80°C.

Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	140	°C	
Cylinder Zone 2 Temp.	150	°C	
Cylinder Zone 3 Temp.	160	°C	
Cylinder Zone 4 Temp.	170	°C	
Cylinder Zone 5 Temp.	190	°C	
Melt Temperature	220 - 230	°C	
Die Temperature	220	°C	
Extrusion instructions			
Zone 6 Temperature: 200°CZone 7 Temperature: 210°CHead Temperatures: 210-220-220°CScrew Cooling: 80°C			
NOTE			

1.

15 min, 20 N/cm<sup>2</sup>

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# Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

