

# ALCUDIA® LDPE PE-004

Low Density Polyethylene

REPSOL

## Message:

ALCUDIA® PE-004 is a natural and crosslinkable low density polyethylene specifically designed to be cross-linked by organic peroxide. The outstanding features of this grade are cleanliness, excellent processability, high efficiency of crosslinking, good mechanical properties and smooth surface finish. This grade does not contain antioxidant, therefore, it is necessary to add in proper balance of a non-staining antioxidant and peroxide to ensure thermal stability and optimum cure level.

ALCUDIA® PE-004 is normally supplied in octabins, tankers and van-boxes.

### TYPICAL APPLICATIONS

Medium voltage cable insulation.

Processing conditions of ALCUDIA® PE-004 are dependent on formulation and technique employed but it is noteworthy that this grade is suitable to use in a temperature range of 120°C - 130°C.

ALCUDIA® PE-004 meets the following standards: ISO 1872 PE KHN 18D022; ASTM D 1248 I, A3 Grade E5.

General Information			
Features	Workability, good Crosslinkable Excellent appearance		
Uses	Wire and cable applications Insulating material		
Agency Ratings	ASTM D 1248, I, Class A, Cat. 3, Grade E5 ISO 1872 PE KN 18D022		
Appearance	Natural color		
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	0.920	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.4	g/10 min	ISO 1133
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Break)	14.0	MPa	ISO 527-2
Tensile Strain (Break)	500	%	ISO 527-2
Aging	Nominal Value	Unit	Test Method
Retention of Mechanical Properties <sup>1</sup> (100°C)	> 75	%	ISO 527-2
Thermoset <sup>2</sup> (200°C)		%	IEC 60811-2-1
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	91.0	°C	ISO 306/A
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+16	ohms · cm	ASTM D257
Dielectric Strength <sup>3</sup>	> 22	kV/mm	IEC 60243-1

Dielectric Constant (1 MHz)	2.30	ASTM D150
Dissipation Factor (1 MHz)	3.0E-4	ASTM D150
Extrusion	Nominal Value	Unit
Melt Temperature	120 - 130	°C
NOTE		
1.	10 days, 1.9% Peroxide + 0.2% AO	
2.	20 N/cm <sup>2</sup> , 1.9% Peroxide + 0.2% AO	
3.	50 Hz	

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### Recommended distributors for this material

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