

# ALCUDIA® HDPE C-220-N

High Density Polyethylene  
REPSOL

Message:

ALCUDIA® C-220-N is a high molecular weight, high density polyethylene compound designed to provide very low shrinkage during processing. It contains well dispersed carbon black and antioxidant in order to ensure UV radiation resistance and thermal ageing respectively. The outstanding feature of this product is its mechanical properties, excellent outdoor weather resistance and very good processability

TYPICAL APPLICATIONS

Black jacketing of power and telecommunication cables.

It is recommended a melt temperature between 190 - 220°C and the use of a screw L/D: 20 - 28.

ALCUDIA® C-220-N meets the following specifications: ISO 1872 PE KHC 40/45 D003/006; ASTM D 1248 III, C4, Grade J5; VDE 0207 Teil3 2YM1.

General Information			
Additive	Antioxidation		
	Carbon black (3%)		
Features	High molecular weight		
	Antioxidation		
	Workability, good		
	Good weather resistance		
	Low shrinkage		
Uses	Cable sheath		
	Wire and cable applications		
Agency Ratings	ASTM D 1248, III, Class C, Cat. 4, Grade J5		
	ISO 1872 PE KHC 40/45 D003/006		
	VDE 0207 Teil3 2YM1		
Appearance	Black		
Forms	Particle		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	0.952	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.60	g/10 min	ISO 1133
Environmental Stress-Cracking Resistance (F0)	> 1000	hr	ASTM D1693
Carbon Black Content	2.5	%	ASTM D1603
Retention of Mechanical Properties <sup>1</sup> (110°C)	> 75	%	ISO 527-2
Oxidation Induction Time (200°C)	> 30	min	EN 728
Hardness	Nominal Value	Unit	Test Method

Durometer Hardness (Shore D)	55		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Break)	27.0	MPa	ISO 527-2
Tensile Strain (Break)	800	%	ISO 527-2
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature <sup>2</sup>	-76.0	°C	ASTM D746
Vicat Softening Temperature	125	°C	ISO 306/A
Electrical	Nominal Value		Test Method
Dielectric Constant (1 MHz)	2.70		ASTM D150
Dissipation Factor (1 MHz)	5.0E-3		ASTM D150
Extrusion	Nominal Value	Unit	
Melt Temperature	190 - 220	°C	
Extrusion instructions			
L/D Ratio: 20 to 28:1			
NOTE			
1.	10 days		
2.	0 Failures		

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