

ALCUDIA® **High density polyethylene**



Chemicals

5605-N

ALCUDIA® 5605-N is a bimodal high density polyethylene black compound with a special molecular structure to provide very low shrinkage during processing. Due to this outstanding characteristic, this grade is a very good product for optical fiber and contains a combination of antioxidant system with well dispersed carbon black which provide the following features: excellent protection against thermal oxidation during processing; long term stability and excellent outdoor weather resistance. This grade is widely used for sheathing of jelly-filled constructions and optical fiber. It is also suitable for power cable jacketing.

TYPICAL APPLICATIONS

Black jacketing of telecommunication and power cables.

ALCUDIA® 5605-N provides a smooth surface finish at high extrusion rates and over a wide range of processing conditions. For best results, an extrusion melt temperature of typically 190°C - 240°C is recommended, together with the use of a screw L/D ratio: 20-28.

ALCUDIA® 5605-N meets the following specifications: ISO 1872 PE KHC 40/45 D003/006; ASTM D 1248 III, C4, Grade J5; VDE 0207 Teil3 2YM1.

PROPERTIES	VALUE	UNIT	TEST METHOD
Generales			
Melt Flow rate (190°C/2,16 kg)	0.45	g/10 min	ISO 1133
Density at 23°C	958	kg/m ³	ISO 1183
Oxidation Induction Time (200°C)	>30	min	UNE EN 728
Environmental Stress Cracking Resistance (F0)	>1000	h	ASTM D 1693
Carbon Black Content	2.3	%	ASTM D 1603
Mechanical			
Tensile Strain at Break	>30	MPa	ISO 527-2
Elongation at break	>600	%	ISO 527-2
Retention of mechanical properties after ageing 100°C/10 days	≥75	%	ISO 527
Retention of mechanical properties after ageing 110°C/14 days	≥75	%	ISO 527
Shore Hardness D	64	-	ISO 868
Thermal			
Brittleness temperature (-76°C)	failures	0	ASTM D 746
Vicat Softening Temperature (10 N)	125	°C	ISO 306
Electrical			
Dielectric Constant (1 MHz)	2.5	-	ASTM D 1531
Dielectric Dissipation Factor (1 MHz)	5E-3	-	ASTM D 527

STORAGE

ALCUDIA® 5605-N should be stored in a dry atmosphere, on a paved, drained and not flooded area, at temperatures under 50°C and protected from UV radiation. Storage under inappropriate conditions could initiate degradation processes which may have a negative influence on the processability and the properties of the transformed product.

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This information is offered in good faith and meant only as a guide. The transformer or user will be, in each case, responsible for the processing conditions and the final use of the product. Freedom under patents, copyright and registered designs cannot be assumed.

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