TECHNICAL DATA SHEET

Repsol ALCUDIA C220N

REPSOL ALCUDIA C220N 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.

Applications:

- Black jacketing of power and telecommunication cables.

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

REPSOL ALCUDIA C220N meets the following specifications: ISO 1872 PE KHC 40/45 D003/006; ASTM D 1248 III, C4, Grade J5; VDE 0207 Teil3 2YM1.

Properties:

Properties	Value	Unit	Test Method
GENERAL			
Melt flow rate (190ºC, 2.16kg)	0.60	g/10 min	ISO 1133
Density at 23 ºC	955	kg/m3	ISO 1183
Oxidation Induction Time (200ºC)	>30	min	UNE EN 728
Environmental Stress Cracking Resistance (F0)	>1000	h	ASTM D 1693
Carbon Black Content	2.5	%	ASTM 1603
MECHANICAL			
Tensile Strain at Break	27	MPa	ISO 527-2
Elongation at Break	800	%	ISO 527-2
Flexural Modulus	650	MPa	ISO 178
Retention of mechanical properties after ageing 100ºC/10 days	≥75	%	ISO 527-2
Shore Hardness D (15 s)	55	-	ISO 868
Shore Hardness D (3 s)	59	-	ISO 868
THERMAL			
Brittleness temperature (-76ºC)	0	failures	ASTM D 746
Vicat Softening Temperature (10 N)	116	ºC	ISO 306
ELECTRICAL			
Dielectric Constant (1 MHz)	2.7	-	ASTM D 1531
Dielectric Dissipation Factor (1 MHz)	6E-3	-	ASTM D 1531

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.

Technical Service & Development:
Tel. +34 91 753 86 00
ATD_Polimeros@repsol.com

Headquarters
Méndez Álvaro, 44
28045 Madrid
España
www.repsol.com

Customer Care
CustomerCare.materials@repsol.com

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Storage:

The grade REPSOL ALCUDIA C220N should be stored in a dry atmosphere, on a paved, drained and not flooded area, at temperatures under 50ºC and protected from UV radiation. Storage under inappropriate conditions could initiate degradation processes or undesired migration of additives included in its formulation which may have a negative influence on the processability and the properties of the transformed product

Disclaimer:

This grade does not comply with the European regulations for materials for use in food contact. This grade is not intended to be used in medical, pharmaceutical, or healthcare applications, therefore Repsol does not authorize its use in them.

Repsol does not grant express or implicit guarantees that extend beyond the description contained herein. Nothing herein shall constitute any guarantee of merchantability or fitness for a particular purpose. Before using a product sold by Repsol, users must make their own independent determination that the product is safe, legal, and technically suitable for its intended use. Repsol does not assume any responsibility for the use of its materials together with other materials.

Related documents:

The following related documents are available on request, and represent various aspects on the usability and safety of the product:

- Safety data sheet.

Recommended consumption period: 12 months from the date of delivery to the customer.

March 2026

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