TECHNICAL DATA SHEET

Repsol ALCUDIA PE004

REPSOL ALCUDIA PE004 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.

REPSOL ALCUDIA PE004 is normally supplied in octabins, tankers and van-boxes.

Applications:

- Medium voltage cable insulation.

Processing conditions of REPSOL ALCUDIA PE004 are dependent on formulation and technique employed but it is noteworthy that this grade is suitable to use in a temperature range of 120ºC - 130ºC.
REPSOL ALCUDIA PE004 meets the following standards: ISO 1872 PE KHN 18D022; ASTM D 1248 I, A3 Grade E5..

Properties:

Properties	Value	Unit	Test Method
GENERAL			
Melt flow rate (190ºC, 2.16kg)1	2.4	g/10 min	ISO 1133
Density at 23 ºC	920	kg/m3	ISO 1183
MECHANICAL			
Tensile Stength at Break	14	MPa	ISO 527-2
Elongation at Break	500	%	ISO 527-2
Retention of mechanical properties after ageing 135ºC/10 days	≥75	%	ISO 527
Hot-Set (15 min, 200ºC, 20 N/cm2) (*)	<60	%	IEC 811-2-1
THERMAL			
Vicat Softening Temperature (10 N)	91	ºC	ISO 306
ELECTRICAL			
Dielectric constant (1 MHz)	2.3	-	ASTM D 1531
Dielectric dissipation factor (1 MHz)	3E-4	-	ASTM D 1531
Volume Resistivity DC at 23ºC	>1E16	ohm·cm	ASTM D 257
Dielectric Strength (50 Hz)	>22	kV/mm	EN - 60243-1

(*) 1,9 % Peróxido + 0.2 % AO

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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Storage:

The grade REPSOL ALCUDIA PE004 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 complies 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.
- Statement on compliance with food contact regulations.

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

March 2026

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