

Alcudia® High density polyethylene

Chemicals

Technical data sheet



HDPE ALCUDIA® TR210

DESCRIPTION

ALCUDIA® TR210 is a high density polyethylene developed to provide excellent mechanical properties, toughness, good environmental stress cracking resistance (ESCR) and stability against oxidative degradation. This product provides a superior performance at high-speed extrusion together with a smooth surface finish of the cable. It is stabilized to be protected from thermal and shear degradation and contains a metal deactivator to ensure long-term ageing properties.

TYPICAL APPLICATIONS

Solid insulation of telephone single. Skin layer in foam-skin construction. Jelly-filled cable. ALCUDIA® TR210 can be extruded at a high melt temperature between 230°C - 260°C without risk of thermal or shear degradation. The optimum conditions depend on the application and the extrusion equipment used. When processed using proper extrusion conditions, ALCUDIA® TR210 is expected to meet the requirements of the following product and cable specifications:

- ISO 1872 PE KHN 45D006/012
- ASTM D 1248 III, A4, Grade E9
- NF C 32-060 ISM3
- BS 6234, Type H03
- VDE 0207 Teil2 2Y11
- EN 50290-2-23
- EN 50288

PROPERTIES	VALUE	UNIT	TEST METHOD
General			
Melt flow rate (190°C/2.16 kg)	0.80	g/10 min	ISO 1133
Density at 23°C	943	kg/m ³	ISO 1183
Weight increase by gel absorption (10 days, 70°C)	≤10	%	IEC 811-4-2
Long term stability	0	failures	IEC 811-4-2
Oxidation induction time (200°C)	>30	min	UNE EN 728
Environmental stress cracking resistance (F50)	>1000	h	ASTM D 1693
Mechanical			
Tensile strain at break	20	MPa	ISO 527-2
Elongation at break	700	%	ISO 527-2
Retention of mechanical properties after ageing 100°C/10 days	≥75	%	ISO 527-2
Thermal			
Brittleness temperature (-76°C)	0	failures	ASTM D 746
Vicat softening temperature (10 N)	126	°C	ISO 306
Electrical			
Dielectric constant (1 MHz)	2.3	-	ASTM D 1531
Dielectric dissipation factor (1 MHz)	4·10 ⁻⁴	-	ASTM D 1531

STORAGE

ALCUDIA® TR210 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.

Technical Service and Development:
Repsol Technology Centre
Ctra. de Extremadura A5, Km 18
28931 Móstoles, Madrid
Tel. +34 91 753 86 00
atd_poliiolefinas@repsol.com

Headquarters:
Méndez Álvaro, 44
28045 Madrid
Spain
www.chemicals.repsol.com

Customer Care:
sacrq@repsol.com