

Alcudia® High density polyethylene

Chemicals

Technical data sheet



BLACK COMPOUND ALCUDIA® 3802N

ALCUDIA® 3802N black compound is a high density polyethylene hexene copolymer of high molecular weight mainly designed for the extrusion of microirrigations tapes. The combination of the antioxidant system and minimum of 2.0 % well dispersed carbon black used in ALCUDIA® 3802N provides an excellent protection against thermal oxidation during processing and good long-term thermal stability and UV resistance. Because other good mechanical properties and their characteristics, and an excellent ESCR resistance the polyethylene black compound ALCUDIA® 3802N, is designed to produce:

TYPICAL APPLICATIONS

- Black microirrigation tapes.
- Fittings and valves.

Recommended melt temperature range 190 - 210 °C. Processing conditions should be optimised for each production line.

PROPERTIES	VALUE	UNIT	TEST METHOD
General			
Melt Flow Rate (190°C, 21.6 kg)	17,5	g/10 min	ISO 1133
Melt Flow Rate (190°C, 5 kg)	0,85	g/10 min	ISO 1133
Melt Flow Rate (190°C, 2.16 kg)	0,20	g/10 min	ISO 1133
Density at 23°C	948	kg/m ³	ISO 1183
Mechanical			
Tensile Strength at Break	30	MPa	ISO 527-2
Elongation at Break	800	%	ISO 527-2
Flexural modulus of elasticity	700	MPa	ISO 178
Internal Pressure Resistance			
Long-term hydrostatic strength for 50 years at 20°C (97,5% LCL), MRS	> 8.0	MPa	ISO TR 9080
Others			
ESCR (F50) (Igepal 10%)	> 1000	h	ASTM D-1693
Oxidation Induction Time (210°C)	> 20	min	UNE EN 728
Brittleness temperature	< -70	°C	ASTM D-746
Vicat Softening temperature (10 N)	126	°C	ISO 306
Shore Hardness D	60	-	ISO 868

ALCUDIA® 3802N black compound complies with the European Directives regarding materials intended for contact with foodstuffs. For further information, please contact our Technical Service and Development Laboratory or our Customer Care Service.

STORAGE

ALCUDIA® 3802N black compound should be stored in a dry atmosphere, on a paved, drained and not flooded area, at temperatures under 60 °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.

November 2013

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