ALCUDIA® HDPE 5300-N

High Density (HMW) Polyethylene

REPSOL

Message:

ALCUDIA® 5502-E natural compound is an hexene copolymer of medium molecular weight apt for the extrusion of corrugated pipes for protection of cables, one or multilayered pipe.

This product is supplied in natural colour but it can be easily coloured with pigments steady at processing temperature, using dry-colouring or masterbatch techniques

ALCUDIA® 5502E is a high-density polyethylene copolymer of hexene, with high molecular weight. It is specially designed to make, by blow

molding-extrusion, tanks for liquid detergents and chemicals. This grade contains stabilizers according to the end use of the item in order to reinforce the thermal stability.

Good environmental stress cracking resistance can be obtained with ALCUDIA® 5502E due to its molecular weight and density.

TYPICAL APPLICATIONS

Packaging of non-aggressive liquid detergents and chemicals.

Recommended melt temperature range from 180 to 200°C. Processing conditions should be optimised for each production line.

General Information				
Additive	Antioxidant			
	Carbon Black (2%)			
Features	Antioxidant			
	Food Contact Acceptable			
	Hexene Comonomer			
	High ESCR (Stress Crack Resist.)			
	High Molecular Weight			
Uses	Piping			
Agency Ratings	EN 12201			
	EN 1555			
Appearance	Black			
Processing Method	Pipe Extrusion			
Physical	Nominal Value	Unit	Test Method	
Density (23°C)	0.954	g/cm³	ISO 1183	
Melt Mass-Flow Rate (MFR)			ISO 1133	
190°C/2.16 kg	0.11	g/10 min		
190°C/21.6 kg	11	g/10 min		
190°C/5.0 kg	0.50	g/10 min		
Environmental Stress-Cracking Resistance (10% Antarox CO-630, F50)	> 1000	hr	ASTM D1693	
Hardness	Nominal Value	Unit	Test Method	
Shore Hardness (Shore D)	60		ISO 868	
Mechanical	Nominal Value	Unit	Test Method	
Tensile Stress (Break)	35.0	MPa	EN 638	

Tensile Strain (Break)	800	%	EN 638
Flexural Modulus	800	MPa	ASTM D790
Internal Pressure Resistance			EN 1555/12201
10 MPa : 20°C	> 4.2	day	
4.0 MPa : 80°C	> 41.7	day	
4.6 MPa : 80°C	> 6.9	day	
Oxidation Induction Time (210°C)	> 20	min	EN 728
Long-Term Hydrostatic Strength - 50 years			
(20°C) ¹	> 8.00	MPa	ISO TR 9080
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -118	°C	ASTM D746
Vicat Softening Temperature	126	°C	ASTM D1525 ²
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	175 to 195	°C	
Cylinder Zone 2 Temp.	180 to 200	°C	
Cylinder Zone 3 Temp.	185 to 205	°C	
Cylinder Zone 4 Temp.	190 to 210	°C	
Cylinder Zone 5 Temp.	195 to 215	°C	
Cylinder Zone 5 Temp. Melt Temperature	195 to 215 195 to 215	°C °C	
Cylinder Zone 5 Temp. Melt Temperature NOTE	195 to 215 195 to 215	°C °C	
Cylinder Zone 5 Temp. Melt Temperature NOTE 1.	195 to 215 195 to 215 Regression Curve	°C °C	

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