

TOTAL PETROCHEMICALS

Polyethylene HF 513

Medium Density Polyethylene



Product Description

MDPE HF 513 is a medium density polyethylene produced by slurry loop low pressure process with hexene as co-monomer. MDPE HF 513 is a semi-high molecular weight polyethylene giving excellent mechanical properties. It shows a broad molecular weight distribution ensuring outstanding processability. MDPE HF 513 can be used alone, blended or coextruded in a wide variety of blown film applications : consumer, industrial, food or hygiene packaging.

General

Material Status	• Commercial: Active		
Availability	• Europe		
Additive	• Antioxidant		
Features	• Antioxidant • Food Contact Acceptable	• Good Processability • Hexene Comonomer	• High Molecular Weight • Med.-Wide Molecular Weight Distrib.
Uses	• Blending • Consumer Applications	• Film • Food Packaging	• Industrial Applications • Packaging
Agency Ratings	• EC 1907/2006 (REACH)	• FDA Food Contact, Unspecified Rating	
Forms	• Pellets		
Processing Method	• Blown Film		

Physical	Nominal Value	Unit	Test Method
Density	0.934	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/2.16 kg	0.15	g/10 min	
190°C/21.6 kg	15	g/10 min	

Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	620	MPa	ISO 178

Films	Nominal Value	Unit	Test Method
Tensile Stress			ISO 527-3
MD: Yield, 20.0 µm, Blown Film	20.0	MPa	
TD: Yield, 20.0 µm, Blown Film	19.0	MPa	
MD: Yield, 40.0 µm, Blown Film	18.0	MPa	
TD: Yield, 40.0 µm, Blown Film	18.0	MPa	
MD: Break, 20.0 µm, Blown Film	65.0	MPa	
TD: Break, 20.0 µm, Blown Film	52.0	MPa	
MD: Break, 40.0 µm, Blown Film	55.0	MPa	
TD: Break, 40.0 µm, Blown Film	52.0	MPa	
Tensile Elongation			ISO 527-3
MD: Break, 20.0 µm, Blown Film	400	%	
TD: Break, 20.0 µm, Blown Film	500	%	
MD: Break, 40.0 µm, Blown Film	540	%	
TD: Break, 40.0 µm, Blown Film	620	%	
Dart Drop Impact			ISO 7765-1
20.0 µm, Blown Film	220	g	
40.0 µm, Blown Film	290	g	

Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	118	°C	ISO 306
Melting Temperature (DSC)	125	°C	ISO 3146

Additional Information

The value listed as Melting Temperature, ISO 3146, was tested in accordance with ISO 11357. Elmendorf, ISO 6383-2, MD, Blown Film, 20 µm: 11 N/mm
Elmendorf, ISO 6383-2, TD, Blown Film, 20 µm: 135 N/mm
Elmendorf, ISO 6383-2, MD, Blown Film, 40 µm: 24 N/mm
Elmendorf, ISO 6383-2, TD, Blown Film, 40 µm: 185 N/mm

Revision History

Document Created: Tuesday, December 01, 2009
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Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	190 to 220	°C
Cylinder Zone 2 Temp.	190 to 220	°C
Cylinder Zone 3 Temp.	190 to 220	°C
Cylinder Zone 4 Temp.	190 to 220	°C
Cylinder Zone 5 Temp.	190 to 220	°C

Notes

¹ Typical properties: these are not to be construed as specifications.

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