

TOTAL Polyethylene MDPE HF 513

Medium Density Polyethylene

TOTAL Refining & Chemicals

Message:

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 Information			
Additive	Antioxidation		
Features	High molecular weight		
	hexene comonomer		
	Antioxidation		
	Workability, good		
	Medium wide molecular weight distribution		
Uses	Packaging		
	Films		
	Industrial application		
	Mixing		
	Food packaging		
	Consumer goods application field		
Agency Ratings	EC 1907/2006 (REACH)		
Forms	Particle		
Processing Method	Blow film		
	Extrusion		
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	ISO 1133
190°C/21.6 kg	15	g/10 min	ISO 1133
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 µm, blown film	20.0	MPa	ISO 527-3
TD: Yield, 20 µm, blown film	19.0	MPa	ISO 527-3
MD: Yield, 40 µm, blown film	18.0	MPa	ISO 527-3

TD: Yield, 40 µm, blown film	18.0	MPa	ISO 527-3
MD: Broken, 20 µm, blown film	65.0	MPa	ISO 527-3
TD: Broken, 20 µm, blown film	52.0	MPa	ISO 527-3
MD: Broken, 40 µm, blown film	55.0	MPa	ISO 527-3
TD: Broken, 40 µm, blown film	52.0	MPa	ISO 527-3
Tensile Elongation			ISO 527-3
MD: Broken, 20 µm, blown film	400	%	ISO 527-3
TD: Broken, 20 µm, blown film	500	%	ISO 527-3
MD: Broken, 40 µm, blown film	540	%	ISO 527-3
TD: Broken, 40 µm, blown film	620	%	ISO 527-3
Dart Drop Impact			ISO 7765-1
20 µm, blown film	220	g	ISO 7765-1
40 µm, blown film	290	g	ISO 7765-1
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	118	°C	ISO 306
Melting Temperature (DSC)	125	°C	ISO 3146

Additional Information

Elmendorf, ISO 6383-2, MD, Blown Film, 20 µm: 11 N/mmElmendorf, ISO 6383-2, TD, Blown Film, 20 µm: 135 N/mmElmendorf, ISO 6383-2, MD, Blown Film, 40 µm: 24 N/mmElmendorf, ISO 6383-2, TD, Blown Film, 40 µm: 185 N/mm

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	190 - 220	°C
Cylinder Zone 2 Temp.	190 - 220	°C
Cylinder Zone 3 Temp.	190 - 220	°C
Cylinder Zone 4 Temp.	190 - 220	°C
Cylinder Zone 5 Temp.	190 - 220	°C

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