# TOTAL Polyethylene XSene® HDPE BM 593

### High Density Polyethylene

#### TOTAL Refining & Chemicals

#### Message:

HDPE BM 593 is a new generation of bimodal high density polyethylene and is produced by Total Petrochemicals Double Loop Technology TM. HDPE BM 593 has been especially designed for applications where high film rigidity is required. Very thin films can also be easily achieved. HDPE BM 593 is an ideal partner for applications such as food packaging, carrier bags, refuse bags, industrial packaging, hygiene packaging. HDPE BM 593 is a grade to be used for thin films requiring high rigidity and high heat resistance. Good blendability with LDPE, LLDPE & mPE in co-extrusion structures.

HDPE BM593 is a high density polyethylene (HDPE) with outstanding stiffness and Environmental Stress Crack Resistance (ESCR). It has been specifically designed for the manufacture of blow moulded packaging for household, industrial, cosmetics liquids with an optimized weight. HDPE BM593 is a pellet grade and contains antioxidants.

General Information				
Additive	Antioxidant			
Features	Antioxidant			
	Good Processability			
	Hexene Comonomer			
	High ESCR (Stress Crack Resist.)			
	MedWide Molecular Weight Distrib.			
Uses	Bags			
	Blow Molding Applications			
	Film			
	Food Packaging			
	Industrial Applications			
	Packaging			
Agency Ratings	EC 1907/2006 (REACH)			
Forms	Pellets			
Processing Method	Blow Molding			
	Blown Film			
Physical	Nominal Value	Unit	Test Method	
Density	0.959	g/cm³	ISO 1183	
Melt Mass-Flow Rate (MFR)			ISO 1133	
190°C/2.16 kg	0.27	g/10 min		
190°C/21.6 kg	26	g/10 min		
Environmental Stress-Cracking Resistance (100% Antarox, F50)	> 250	hr	ASTM D1693B	
Mechanical	Nominal Value	Unit	Test Method	
Flexural Modulus	1350	MPa	ISO 178	
Films	Nominal Value	Unit	Test Method	

Film Thickness - Tested	12	μm	
Tensile Stress			ISO 527-3
MD : Yield, 12 µm, Blown Film	29.0	MPa	
TD : Yield, 12 µm, Blown Film	32.0	MPa	
MD : Break, 12 µm, Blown Film	64.0	MPa	
TD : Break, 12 µm, Blown Film	25.0	MPa	
Tensile Elongation			ISO 527-3
MD : Break, 12 µm, Blown Film	610	%	
TD : Break, 12 µm, Blown Film	630	%	
Dart Drop Impact (12 µm, Blown Film)	44	g	ISO 7765-1
Elmendorf Tear Strength <sup>1</sup>			ISO 6383-2
MD : 12.0 μm	7.0	kN/m	
TD : 12.0 µm	233.0	kN/m	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	16	kJ/m²	ISO 179
Extrusion	Nominal Value	Unit	
Melt Temperature	180 to 220	°C	
NOTE			
1.	Blown Film		

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