

Technical Data Sheet

HBM 5020

High Density Polyethylene

HBM5020 is a high density polyethylene with broad molecular weight distribution, specially developed for small blow molded bottles. This grade offer high stiffness, easy flow, very good ESCR and chemical resistance and sufficient impact strength. HBM5020 is recommended for multipurpose blow molding process. HBM5020 has been manufactured under Basell license.

Applications:

Multipurpose blow molding process, small blow molded bottles, packaging of consumer and dangerous goods

Arena Petro Gas

آرنا پتروگاز

Technical Data Sheet

Typical Properties	Typical Value ¹	Units	Test Method
High Load Melt Flow Index(190°C/21.6kg)	22	g/10 min	ISO 1133
Melt Flow Index(190°C/2.16 kg)	0.3	g/10 min	ISO 1133
Density ²	0.950	gr/cm ³	ISO 1183
Bulk Density	>0.50	gr/cm ³	ISO 60
Mechanical³			
Tensile Modulus of Elasticity	1000	MPa	ISO527-1;2
Tensile Stress at Yield	25	MPa	ISO527-1;2
Tensile Strain at Yield	9	%	ISO527-1;2
Tensile Impact Strength(Notched, Type 1,Method A,-30°C)	110	KJ/m ²	ISO 8256
Ball Indentation Hardness(H 132/30)	45	MPa	ISO 2039-1
ESCR	150	hr	Basell method
FNCT(3.5 MPa,2% Arkopal N100,80°C)	6	hr	ISO 16770
Thermal Properties			
Melting Temperature	131	°C	ISO 3146
Vicat Softening Temperature (Method B/ 50N)	78	°C	ISO 306
Deflection Temperature Under Load (0.45 MPa)	75	°C	ISO 75
Deflection Temperature Under Load (1.8 MPa)	43	°C	ISO 75
Recommended Process Conditions⁴			
Processing Method: Extrusion Blow Molding; Thermoforming			
Extruder Barrel Temperature: 170-200 °C		Melt Temperature: 190-220 °C	

1. Typical values: these are not to be construed as specification.

2. The density parameter was determined on compression-molded specimens, which were prepared in accordance with procedure C of ASTM D4703, Annex A1.

3. Properties are based on compression-molded specimens, which were prepared in accordance with procedure B of ASTM D4703, Annex A1, using 100% HBM5020 resin.

4. Please note that these processing conditions are recommended by manufacturer only for 100% HBM5020 resin (not in the case of blending with any other compatible material), therefore because of the many particular factors which are outside our current knowledge and control and may affect the use of product, no warranty is given for the foregoing data. Also, the specific recommendations for resin type and the processing conditions can only be made when the end use, required properties and fabrication equipment are known.