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ARYA SASOL POLYMER COMPANY

## HIGH DENSITY POLYETHYLENE HBM 5020

HBM 5020 is a high density polyethylene (HDPE) with medium molecular weight, produced using 1-hexene as a co-monomer. It offers an excellent combination of high stiffness, easy flow, very good environmental stress cracking resistance (ESCR), chemical resistance, and sufficient impact strength.

Producer	Characteristic Properties	Applications	Additive
Arya Sasol Petrochemical	Good ESCR Good Chemical Resistance High Stiffness	Multipurpose blow molding process- Small blow molded bottles- Packaging of consumer and dangerous goods.	Antioxidant: Yes Processing Aid: No Antiblock: No Slip Agent: No

### Typical Properties

Resin Properties	Unit	Typical Value	ASTM Method
High Load Melt Flow Index (190oC/ 21.6 kg)	g/10 min	22	ISO 1133
Melt Flow Index (190oC/ 2.16 kg)	g/10 min	0.3	ISO 1133
Density	g/cm3	0.950	ISO 1183

  

Thermal Properties	Unit	Typical Value	Test Method
Deflection Temperature Under Load (0.45 MPa)	°C	75	ISO 75
Deflection Temperature Under Load (1.8 MPa)	°C	43	ISO 75
Melting Temperature	°C	131	ISO 3146
Vicat Softening Temperature (Method B/ 50N)	°C	78	ISO 306

  

Mechanical Properties	Unit	Typical Value	Test Method
Tensile Modulus of Elasticity	MPa	1000	ISO 527-1, -2
Tensile Stress at Yield	MPa	25	ISO 527-1, -2
Tensile Strain at Yield	%	9	ISO 527-1, -2
Ball Indentation Hardness (H 132/30)	MPa	45	ISO 2039-1
Tensile Impact Strength (Notched, Type 1, Method A, -30oC)	kJ/m2	110	ISO 8256