SABIC® HDPE BM1052

HIGH DENSITY POLYETHYLENE

DESCRIPTION

BM1052 is a high molecular weight High Density Polyethylene copolymer grade with broad molecular weight distribution. It has excellent processability and exhibits very high impact strength, stiffness and superior environmental stress crack resistance.

TYPICAL APPLICATIONS

BM1052 resin is intended for blow molding of large containers such as closed head shipping containers, fuel tanks and containers for industrial use. It can also be extruded into sheets giving exceptionally high impact strength.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (1)			
at 190°C and 2.16 kg (1)	0.05	g/10 min	ASTM D 1238
at 190°C and 5 kg	0.38	g/10 min	ASTM D 1238
at 190°C and 21.6 kg	10	g/10 min	ASTM D 1238
Density at 23°C	952	kg/m³	ASTM D1505
MECHANICAL PROPERTIES			
1% Secant Modulus	1000	MPa	ASTM D638
Tensile Strength at Yield	27	MPa	ASTM D638
Tensile Strength at Break	18	MPa	ASTM D638
Tensile Elongation at Break	> 500	%	ASTM D638
Flexural Strength (2)	26	MPa	ASTM D790
Flexural modulus	1050	MPa	ISO 178/1A
Izod Impact Strength	300	J/m	ASTM D256
Hardness (Shore D)	63	-	ASTM D2240
ESCR (100% Igepal), F50	> 1200	hrs	ASTM D1693B
ESCR (10% Igepal), F50	720	hrs	ASTM D1693B
THERMAL PROPERTIES			
Vicat Softening Point	125	°C	ASTM D1525
Brittleness Temperature	< -75	°C	ASTM D746

(1) Typical values: not to be construed as specification limits.

(2) Based on compression molded sheet.

PROCESSING CONDITIONS

Typical processing conditions for BM1052 are:

Barrel temperature: 200 - 250°C

Melt temperature: 200 - 230°C

HEALTH, SAFETY AND FOOD CONTACT REGULATIONS

Detailed information is provided in the relevant Material Safety Datasheet and or Standard Food Declaration, Additional specific information can be requested via your local Sales Office.

STORAGE AND HANDLING

Polyethylene material should be stored in a manner to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry and preferably don't exceed 50°C. SABIC would not give warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance. It is advisable to process PE resin within 6 months after delivery.