



# HB0035

## HIGH DENSITY POLYETHYLENE

### General Informations:

HB0035 is a high molecular weight high density polyethylene blow moulding grade combining blow moulding extrusion behavior and superior mechanical properties. Blow moulded items made from HB 0035 exhibit high impact strength and good stress cracking resistance and high stiffness. HB 0035 contains antioxidant to protect the polymer from degradation during processing.

HB 0035 is a highly crystalline, non-polar thermoplastic and has excellent chemical resistance and superb impact resistance at ambient conditions and even at cold temperatures.

### Applications:

HB0035 is well suited for wide range of blow moulding applications due to its unique properties. These range from bottles for bleach, motor oil, toiletries, mild and distilled water. This grade is also used to make small containers (from 10 cc to 20 lit.).

### Specifications:

Property	Unit	Value	Test Method
MFI (190 °C /2. 16 kg)	gr/10min.	0.35	ASTM D 1238
Density	gr/cm <sup>3</sup>	0.959	ASTM D 1505
Izod impact strength	Kg.cm/cm	25 min	ASTM D 256
Yellow index	--	-5 max.	ASTM D 1925
Ash content	wt%	0.06 max	ASTM D 1063
Volatile matter	wt%	0.05 max.	ASTM D 1960
Tensile strength @ break	gr/cm <sup>2</sup>	290 min	ASTM D 638
Elongation @ break	%	900 min	ASTM D 638
Melting point	°C	130	ASTM D 2117
Vicat softening point	°C	126	ASTM D 1525
ESCR	hr	15	ASTM D 1693

The above data are typical laboratory average. They are intended to serve as guides only.

**Grade/Product Name : 60505**



**Grade: HDPE & LLDPE Injection Moulding , Extrusion Coating & Rotomoulding**

Test/Composition	value	Unit	Method
Break Strength	$\geq 16$	MPa	D 638
Density	$960 \pm 2$	g/l	D 1505
Elongation at Break	200	%	D 639
Flexural Modulus	$\geq 1480$	MPa	D 790
HDT	$\geq 78$		D 1925
Izod 23°C	$\geq 46$	J/m	D 256/A
MFR "E"	$5.5 \pm 1$	g/10 min	D 1238
Vicat	$\geq 127$	°C	D 1525
Yield Strength	$\geq 30$	MPa	D 638

**Main Application: Crates**

**Product Type: HDPE Narrow MWD - Homopolymer Injection Moulding**

**Notes: Properties on compression moulded specimen according to method MA 17102, unless specified**

**Grade/Product Name : HF4760(THE/THT:Grade)**



Test/Composition	value	Unit	Method
Density	0.95 6 ±0.002	g/cm <sup>3</sup>	ISO 1183
MFR(190°/21.16)	23±4	g/10min	ISO 1133
MFR(190°/5)	1.2±0.3	g/10min	ISO 1133
Notched Impact (23°c) <sup>2</sup>	≥9	mJ/mm <sup>2</sup>	ISO179/1eA

**Main Application: Small blow moulding**

**Notes:**

- 1- FRR values are statistical and calculated by dividing MFR values.
- 2- Notch Impact Test specimen from compressed moulded sheet 23°C and The data quoted is average values

Alfa Polymer Kimia



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## High Density Polyethylene

### BL3

Typical properties	Test method (DIN)	Unit	Value
MFI@190°C, 5 kg	53735	gr/10min	1
Density	53479	gr/ml	0.954
Notched Impact Strength	53453	mj/mm <sup>2</sup>	≥6.5
ESCR, plax (70°C, 0.5bar)	Hoechst HDPE 19	hr	≥2
Standard Yellow Index	6167	-	≤4

> Values shown are averages & are not to be considered as product specifications.

#### ❖ Main application & Characteristics:

BL3 is a high density polyethylene grade with broad molecular weight distribution, suitable for blow moulding applications.




#### ♦ Characteristics:

- High rigidity.
- Good flow ability.
- Good impact strength.
- Good stress cracking resistance.

#### ♦ Typical applications are:

- Containers ranging from a few ml up to 10 litres.
- Sheets for thermoforming.

\* BL3 is suitable for food contact.

شماره سند: FO-QC-05-03 تاریخ صدور: 22/06/03		<b>QUALITY CONTROL CERTIFICATE</b> HDPE PLANT: HIGH DENSITY POLYETHYLENE PRODUCT: BL4 (HM 8355)			 شرکت پلیمر کرمانشاه (سهیم) دما	
DATE : 96/09/21		Grade : BL4				
Lot . No : 96522		Silo : 6001				
NO	ANALYSIS	UNIT	METHOD	STANDARD	RESULT	REMARK
1	MFI (190°C/5.0 kg)	g/10min	ISO 1133	0.35 ± 0.06	0.37	
2	MFI (190°C/21.8 kg)	g/10min	ISO 1133	9.5 ± 2	10.2	
3	FRR	-----	-----	---	27.50	
4	Density	g/cm <sup>3</sup>	ISO 1183	0.951 ± 0.002	0.952	
5	Yellowness Index	Rating	ASTM 1925	---	-5.7	
6	Volatiles	% wt	Internal	-----	0.02	
7	Contamination	Rating	Internal	≤ 2	1.0	
8	Bulk Density	g/cm <sup>3</sup>	Internal	-----	0.620	
توضیحات: محصول مورد نظر ON بوده و قابل توجه به بازار داخلی می باشد.						
						
KERMANSHAH POLYMER CO. <b>ON SPEC</b> Quality Control						

> **HDPE made via Hostalen Process**



## HM-8355 (BL4)

HM-8355(BL4) is a Blow molding grade resin which is manufactured by suspension polymerization of ethylene monomer. HM-8355 (BL4) is a bi-modal high density polyethylene with Butene-1 as co monomer with general purpose of large container.

**HDPE: HM-8355(BL4)**

**Density: 0.949-0.953 g/cm<sup>3</sup>**

**MFR 190/5: 0.29-0.41**

### Characteristic Properties



- High molar mass, easily processable high stiffness Strength, good stress Cracking resistance and very good molding surface finish.

### Main Applications



- General purpose grade for large container.

### Additives



- Antioxidant / Process stabilizer
- Lubricant / acid scavenger

**Material properties** (This data are typical values and are not to be construed as product specifications.)

Resin Properties	Unit	Typical Value	Test Method
Melt Index(21.6)	(g/10 min)	9.5	ISO 1133
Melt Index(5)	(g/10 min)	0.35	ISO 1133
FRR (21.6/5)		27	
Density	g/cm <sup>3</sup>	0.951	ISO 1183
Swell Ratio	%	110	
Moulded Properties	Unit	Typical Value	Test Method
Notched Impact @ 23 °C	mJ/mm <sup>2</sup>	10	ISO 179/ 1 eA



KERMANSHAH POLYMER COMPANY

Plant : **KERMAPOL**

Grade/Product Name : **BL3/HF4760**

Catalyst : **THT**

**Technical Data**

**Product Description**

HF4760 is a high-density Polyethylene with 1-Butene as a co-monomer.

**Application:**

Containers with capacities ranging from a few ml up to 10 liters, for Production of sheets for thermoforming

**General**

**Additive**

- Antioxidant, Lubricant

**Features**

- High stiffness
- Good flow ability
- Good impact strength
- Good stress cracking resistance
- High Density

**Forms**

- Pellet

**Processing Method**

- Small Blow Molding

**Physical**

	Nominal Value	Unit	Test Method
Density <sup>1)</sup>	0.954±0.002	g/cm <sup>3</sup>	ISO1183
Melt Mass-Flow Rate (MFR) (190°C/5 kg)	1.2±0.3	g/10 min	ISO1133
Melt Mass-Flow Rate (MFR) (190°C/21.6 kg)	23±4	g/10 min	ISO1133
Flow Rate Ratio (21.6 kg/5 kg) <sup>2)</sup>	19±3		
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Notched Impact (23°C) <sup>3)4)</sup>	9m.J/mm <sup>2</sup>		ISO179/1 eA
Swell Ratio	110±15%		

1) Test specimen from compression moulded sheet at 23 °C, samples not annealed

2) FRR values are statistical and calculated by dividing MFR values

3) Test specimen from compressed moulded sheet 23°C

4) The data quoted are average values





## HD-BL 3 License Grade Code HF 4760(THT)

### Product Description:

"BL3" is a high density polyethylene with 1-Butene as co monomer. It is high density and stiffness, good ESCR, high rigidity, good flowability and impact strength.

### Applications:

- Small blow moulding
- Bottles
- Containers (up to 5 lit)
- Packaging of pharmaceuticals & surfactants

### Typical data

PROPERTY	TEST METHOD	UNIT	TYPICAL VALUE*
Mass density (23 C)	ISO 1183	g/cm <sup>3</sup>	0.954
Melt Flow Rate (190 C/5.06kg)	ISO 1133	g/10min	1.2
Melt Flow Rate (190 C/21.16kg)	ISO 1133	g/10min	23
FRR(21.6/5)		-	19
Impact strength (23 C)	ISO 179/1eA	kJ/mm <sup>2</sup>	10
Swell ratio	MPC-Test	%	120

● Typical value not to be constructed as specifications.

● Recommended melt temp. 180-220 c.

