

HB5003 High Density Polyethylene

Information & Polyethylene Sales

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HDPE – High Density Polyethylene

Application

HB5003 is suitable for extrusion of small blow moldings for packaging of consumer goods, surfactants and dangerous goods and can be used for engineering parts.

Additives

Antioxidant

Performance properties – HB5003

Test	Value	Unit	Test method
Physical Properties			
MFR (190°C/21.6)	22	g/10min	ISO 1133
MFR (190°C/2.16)	0.3	g/10min	
Density	0.950	g/cm ³	ISO 1183
Mechanical Properties			
Tensile stress at yield	25	MPa	ISO 527-1-2-3
Tensile strain at yield	9	%	
Tensile modulus	1000	MPa	
Notched tensile impact strength (-30°C)	110	KJ/m ²	ISO 8256
Ball indentation hardness	45	MPa	ISO 2039-1
Thermal Properties			
Melting point	131	°C	ISO 3146
Vicat softening temperature (B50, 50°C/h, 50N)	78	°C	ISO 306
Heat deflection temperature B (0.45MPa) Unannealed	75	°C	ISO 75B-1-2
Heat deflection temperature A (1.8MPa) Unannealed	43	°C	
Additional Properties			
ESCR	150	hr	Basell bottle test

HDPE - Interim Product Data Sheet



Packaging

Supplied in pellet form and can be packed in bulk or 25 kg bags.

Food Packaging

HB5003 conforms to F&DA regulation, Title 21, Section 177.1520 related to the use of olefin polymers. The material may be used in materials or articles which are intended to contact food, however it excludes articles holding food during cooking.

The monomers used in the production of **HB5003** are approved as found in EC directive 2002/72/EC, Annex 2, Section A. The use of additives is approved in the same directive Annex 3 and the amendment 2008/39/EC.

Conveying

Conveying equipment should be designed to prevent accumulation of fines and dust particles that are contained in all polyethylene resins. These fines and dust particles can, under certain conditions, pose an explosion hazard. We recommend that the conveying system used:

1. be equipped with adequate filters
2. is operated and maintained in such a manner to ensure no leaks develop
3. that adequate grounding exists at all times

we further recommended that good housekeeping should be practiced through out the facility

Storage

As ultraviolet light may cause a change in the material, all resins should be protected from direct sunlight during storage.

Handling

Minimal protection to prevent possible mechanical or thermal injury to the eyes. Fabrication areas should be ventilated to carry away fumes or vapours

Combustibility

Polyethylene resins will burn when supplied adequate heat and oxygen. They should be handled and stored away from contact with direct flames and/or other ignition sources. In burning, polyethylene resins contribute high heat and may generate a dense black smoke. Fires can be extinguished by conventional means with water and water mist preferred. In enclosed areas, fire fighters should be provided with self contained breathing apparatus.