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HEX4460 Pe80+ HDPE

Product Data Sheet

HEX4460 Pe80+
High Density Polyethylene

Product Description

HEX4460 PE80+ is a high molecular weight, high density polyethylene (HDPE) with high melt viscosity for extrusion.

This grade, which is produced by 1-hexene co-monomer, is classified as PE 80+ and provides excellent stress crack resistance properties (ESCR) combined with very good long-term hydrostatic strength and good processability.

Typical customer applications are underfloor heating and multilayer pipe for heating and plumbing. HEX4460 Pe80+ has been manufactured under Basell license.

General Information

Status : Commercial: Active

Application : Drinking water pipe, drainage pipe, plumbing, heating & cooling

Form(s) : Pellet

Attribute: Outstanding ESCR

Good Resistance to SCG & RCP

Good Creep Strength Good Processability

Good Chemical Resistance Very Good Low Temp. Impact Resistance

Additives: Processing Aid: No
Antiblock: No

Antioxidant: Yes
Slip Agent: No

Typical Properties	Typical Value	Unit	Test Method
Physical			
High Load Melt Flow Index (190°C/ 21.6 kg)	6.0	g/10 min	ISO 1133
Melt Flow Index (190°C/ 5.0 kg)	0.33	g/10 min	ISO 1133
Density	0.944	g/cm ³	ISO 1183
Mechanical			
Tensile Strength at Yield	25	Mpa	ISO 527-1, -2
Elongation at Yield	11	%	ISO 527-1, -2
Elongation at Break	> 1000	%	ISO 527-1, -2
Tensile Strength at Break	40	Mpa	ISO 527-1, -2
Tensile Modulus of Elasticity	700	Mpa	ISO 527-1, -2
Flexural Modulus - 1% Secant	> 1000	Mpa	ASTM D790
ESCR F10 (10% Igepal, Method B)	> 1000	hrs	ASTM D790
FNCT (3.5 MPa, 2% Arkopal N100, 80°C)	> 150	hrs	ISO 16770
Conformance Testing			
Minimum Required Strength (20°C)	> 8.0	Mpa	ISO 12162
Hydrostatic Pressure Test (9.0 MPa @ 20°C)	> 100	hrs	ISO 1167
Hydrostatic Pressure Test (4.0 MPa @ 80	> 1000	hrs	ISO 1167
Resistance to Slow Crack Growth (4.6 MPa @ 80 °C)	> 1000	hrs	ISO 1167
Resistance to Rapid Crack Propagation (Pc @ 0 °C)	> 6.0	bar	ISO 13477

Typical Properties	Typical Value	Unit	Test Method
Impact			
Tensile Impact Strength (Notched, Type 1, Method A, -30°C)	6.0	g/10 min	ISO 1133
Izod Impact Strength (Notched, Method A, 23°C)	0.33	g/10 min	ISO 1133
Thermal			
Melting Temperature	25	Mpa	ISO 527-1, -2
Oxidation Induction Time (200°C)	11	%	SO 527-1, -2
Vicat Softening Temperature (Method A/ 10N)	> 1000	%	ISO 527-1, -2
Deflection Temperature Under Load (0.45 MPa)	40	Mpa	ISO 527-1, -2
Deflection Temperature Under Load (1.8 MPa)	700	Mpa	ISO 527-1, -2

Recommended Process Conditions 5

Processing Method: Pipe Extrusion; Sheet Extrusion

Extruder Barrel Temperature: 200-230 °C

Melt Temperature: 205-240 °C

Further Information

Health and Safety

1. Typical values: these are not to be construed as specifications.
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% HEX4460 PE80+ resin.
4. Values were obtained on 110 mm, SDR11 pipe made with HEX4460 PE80+ and an approved masterbatch.

5. Please note that, these processing conditions are recommended by manufacturer only for 100% HEX4460 PE80+ 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. Moreover, the specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

The resin will burn when supplied with excess heat and oxygen. It should be handled and stored away from contact with direct flames and/or ignition sources. While burning, the resin contributes high heat and may generate a dense black smoke.

Recycled resins may have previously been used as packaging for, or may have otherwise been in contact with, hazardous goods. Converters are responsible for taking all necessary precautions to ensure that recycled resins are safe for continued use.

The detailed information about safety, handling, individual protection and waste disposal is provided in the relevant Safety Data Sheet. Additional specific information can be requested via customer.

Conveying

Conveying equipment should be designed to prevent accumulation of fines and dust particles. These particles can, under certain conditions pose an explosion hazard. We recommend that the conveying system will be equipped with adequate filters and be operated and maintained in the way that ensure no leaks develop.

Storage

Polyethylene resins should be protected from direct sunlight and/or heat during storage. The storage location should also be dry, dust free and the storage temperature should not exceed 50°C. It is also advisable to process polyethylene resins (in pelletized or powder form) within 6 months after delivery, because excessive aging of polyethylene can lead to a deterioration in quality. Arya Sasol Polymer Company would not give any warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance

The information provided in this Product Data Sheet has been based upon the current level of knowledge and experience. They are not to be interpreted as a warranty for specific product characteristics. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. Customer is responsible for determining whether the products and the information in this document are appropriate for customer's use and for ensuring that customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Seller assumes no obligation or liability for the information in this document.



HD52518
HDPE

Product Data Sheet

HD52518
High Density Polyethylene

General Information

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

Application : Housewares , High Fludity

Product Type: HDPE Narrow MWD - Comopolymer Injection Moulding

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

Typical Properties	Typical Value	Unit	Test Method
Density	952 ± 2	g/l	D 1505
Flexural Modulus	≥1350	Mpa	D 790
Izod 23°C	≥25	J/m	D 256/A
Vicat	≥122	°C	D 1525
MFR "E"	18±2	g/10 min	D 1238

Product Data Sheet

HCH5110
High Density Polyethylene

Product Description

HCH5110 has been manufactured using Basell Lupotech G licensed technology

General Information

Status : Commercial: Active

Application : HCH 5110 is suitable for Film, Bags, Products for Use in Property Modification

Notes: Typical properties; not to be construed as specifications.
Film properties taken from 20 µm blown film extruded at a melt temperature of 220°C, long stalk process, and a blow-up ratio of 4:1.

Processing: Recommended film thickness: 15 to 50 µm.

Typical Properties	Typical Value	Unit	Test Method
Physical			
Density (23 °C)	951	kg/cm ³	ISO 1183
MFI (190 °C /21.6Kg)	10	dg/min	ISO 1133
Mechanical properties			
Tensile Modulus of elasticity	1050	Mpa	ISO527-1;2
Tensile Strength (MD)	55	Mpa	ISO 527-1;3
Tensile Strength (TD)	55	Mpa	ISO 527-1;3
Tensile Strain at Break (MD)	580	%	ISO 527-1
Tensile Strain at Break (TD)	620	%	ISO 527-1
Tensile stress at Yield	26	Mpa	ISO 527-1
Tensile strain at Yield	10	%	ISO 527-1
Elemendorf tear strength(MD)	250	mN	ISO 6383-2
Elemendorf tear strength(TD)	800	mN	ISO 6383-2
Thermal Properties			
Melting Point	132	°C	ISO 3146
Vicat Temperature , (A50,50 °C/h , 10 N)	127	°C	ISO 306
Additive :Antioxidant –Heat stabilizer			
Zinc Stearate			

Packaging : Supplied in pellet form and can be packaged in 25Kg Bags, one ton semi bulk or 17 tons bulk containers.

Food packaging : The above mentioned grade meets the relevant requirements of plastics directive 2002/72/EC (06-08-2002) and its amendments till directive 2008/39EC relating to plastic materials and articles intended to come into contact with foodstuffs.

Pharmaceutical Application: The above mentioned grade meets the requirements of the European pharmacopeia version 6 section 3.1.5 for pharmaceutical application.

Conveying: Conveying equipment should be designed to prevent accumulation of 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 will practiced throughout the facility

Storage : As ultraviolet light may cause a change in the material, all resins should be protected from direct sunlight and/or heat during storage. The storage location should also be dry, dust free and the ambient temperature should not exceed 50. It is also advisable to process polyethylene resins (in pelletized or powder form) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality

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

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 mist preferred. In enclosed areas, fire fighters should be provided with self contained breathing apparatus.

Note: this information is based on our current knowledge and experience .in view of many factors that may affect processing and application, this data does not relive processors from the responsibility of carrying out their own tests and experiments, neither does it imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

Hb0035
HDPE

Product Data Sheet

Hb0035
High Density Polyethylene

Product Description

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 HB0035 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.

General Information

Status : Commercial: Active

Application : 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.).

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

Processing Conditions: : HB0035 can be processed in most types of blow moulding equipment including HDPE or LDPE extruders. It is suitable for producing hollow article in extrusion blow moulding process.

A single screw extruder with a barrel of 25D to 30D long, smooth walled grooved feed section and/ or with decompression, mixing and shearing sections with 20D to 25Dscrew length are typical extruders for blow moulding of containers. This arrangement minimizes thermal degradation of melt and provides a high plasticizing capacity coupled with good extrudate quality.

Storage: The product should be stored in dry conditions at temperature below 60°C and protected from UV light.

Improper storage can initiate degradation with resulting odor generation and colour changes.

Health & Environment: HB0035 is not classified as a dangerous product. Dust and fines from the product may give a risk for dust explosion. All equipment should be properly grounded. Inhalation of dust may irritate the respiratory system and should be avoided.

During processing of the product small amounts of fumes are generated which require proper ventilation.

Recycling: End products made from this polymer are recyclable for other applications, using modern methods of shredding and cleaning, only if approved in the relevant standard or specification. In-house production waste should be kept clean to facilitate direct recycling.

Dumping and landfilling is also possible in agreement with the competent authorities.

Food Contact : The composition of products complies with the EC Directive 90/128/EEC for use in food contact application.

Packaging : This product is packed in 25 Kg PE bags.



BG-HD-52B18
HDPE

Product Data Sheet

BG-HD-52B18
High Density Polyethylene

Product Description

this data are typical values and shall not be construed as product specifications.

General Information

Status : Commercial: Active

Application : General Purpose, Thin Walled Foam Containers

Features: Comonomer Butene-1 (C4)
Easy Processing
High Rigidity
Easy Processing

Additives: Antioxidants
Lubricants
Acid Scavenger

Typical Properties	Typical Value	Unit	Test Method
Resin			
Melt Flow Rate (MFR) (190°C/ 2.16 kg)	15-21	g/10 min	ASTM D1238
Melt Flow Rate (MFR) (190°C/ 2.16 kg)	0.57	g/cm ²	ASTM D1895
Density (23°C)	0.951-0.953	g/cm ²	ASTM D1505
Physical			
F/E Ratio	<30	-	ASTM D1238
Yellowness Index	<4 (0.5)	%	ASTM D1925
Ti Content	≤5 (2)	PPM Wt	MTM 15636
Tensile Strength @ Yield	25-27	Mp	ASTM D638
Tensile Strength @ Break	>14	Mp	ASTM D638
Elongation @ Break	>150	%	ASTM D638
Vicat	130-134	°C	ASTM D1525
Flexural Modulus	1300-1400	MP	ASTM D790
Izod Impact	36	J/Min	ASTM D256

F7000
HDPE

Product Data Sheet

F7000

High Density Polyethylene

Product Description

7000 F is a high density polyethylene resin ;a product of bi-modal process from Mitsui Chemicals, Inc. of Japan

General Information

Status : Commercial: Active

Application : Enhanced ultra thin film
Good moisture barrier
Food contact applicable
Good impact resistance and processability
Shopping bag and T-shirt bag
Garbage bag

Features: Recommend film thickness at 10-25 micron
High tensile strength with good dart impact strength
Low gel content
High stiffness
Wide service Temperature range, UV resistance

Typical Properties	Typical Value	Unit	Test Method
Density	0.952	g/cm ³	ISO 1183
MFR(190°/21.16)	0.04	g/10min	ASTM D 1238
Stress at Break	390	kg/cm ²	ASTM D 638
Stress at Yield Point	250	kg/cm ²	ASTM D 638
Izod Impact	30	kg.cm/cm	ASTM D 256
Elongation at Break	Above 500	%	ASTM D 638
Stress Cracking Resistance	Above 600	hr	ASTM D 1693
Melting Point	131	°C	ASTM D 2117



MCH 3713
HDPE

Product Data Sheet

MCH 3713
High Density Polyethylene

Product Description

MCH3713 has been manufactured using Basell Lupotech G licensed technology.

General Information

Status : Commercial: Active

Application : MCH3713 is suitable for Film, Bags, Film extrusion (Blending partner, (Refuse) bags, T-shirt bags, carrier bags)

Notes: Typical values; not to be construed as specifications
Blown film: thickness 20 μm , extruded at melt temperature of 220°C, long stalk process, blow-up ratio 4:1

Processing: Recommended melt temperatures: 180 - 240°C
Recommended film thickness: 10 – 50 μm

Typical Properties	Typical Value	Unit	Test Method
Physical Properties			
Density (23 °C)	937	kg/cm ³	ISO 1183
MFI (190 °C /21.6Kg)	13	dg/min	ISO 1133
MFI (190 °C /2.16Kg)	0.1	dg/min	ISO 1133
Mechanical properties			
Tensile Modulus of elasticity	735	Mpa	ISO527-1,2
Max. Tensile Strength (MD)	46	Mpa	ISO 527-1;3
Max. Tensile Strength (TD)	46	Mpa	ISO 527-1;3
Tensile Strain at Break (MD)	550	%	ISO 527-1
Tensile Strain at Break (TD)	650	%	ISO 527-1
Elmendorf tear strength(MD)	210	mN	ISO 6383-2
Elmendorf tear strength(TD)	1100	mN	ISO 6383-2
Failure energy	7	J/mm	DIN 53373
Dart Drop Impact	120	g	ASTM D 1709
Thermal Properties			
Melting Point	127	°C	ISO 3146
Vicat Temp , (A50,50 °C /h , 10 N)	121	°C	ISO 306
Additives :Antioxidant -Heat stabilizer			

Packaging : Supplied in pellet form and can be packaged in 25Kg Bags, one ton semi bulk or 17 tons bulk containers.

Food packaging : The above mentioned grade meets the relevant requirements of plastics directive 2002/72/EC (06-08-2002) and its amendments till directive 2008/39EC relating to plastic materials and articles intended to come into contact with foodstuffs.

Pharmaceutical Application: The above mentioned grade meets the requirements of the European pharmacopeia version 6 section 3.1.5 for pharmaceutical application.

Conveying: Conveying equipment should be designed to prevent accumulation of 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 will practiced throughout the facility

Storage : As ultraviolet light may cause a change in the material, all resins should be protected from direct sunlight and/or heat during storage. The storage location should also be dry, dust free and the ambient temperature should not exceed 50. It is also advisable to process polyethylene resins (in pelletized or powder form) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality.

Handling :Minimal protection to prevent possible mechanical injury to the eyes. Fabrication areas should be ventilated to carry away fumes or vapors.

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 mist preferred. In enclosed areas, fire fighters should be provided with self contained breathing apparatus.

Note: this information is based on our current knowledge and experience .in view of many factors that may affect processing and application, this data does not relive processors from the responsibility of carrying out their own tests and experiments, neither does it imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.



HM5010T2N
HDPE

Product Data Sheet

HM5010T2N

General Information

Grade : THE/THT

Application : Pipe (natural)

Notes: 1- Notch Impact Test specimen from compressed moulded sheet 23°C and The data quoted is average

Typical Properties	Typical Value	Unit	Test Method
Density	0.947±0.002	g/cm ³	ISO 1183
MFR(190°/21.16)	12±2	g/10min	ISO 1133
MFR(190°/5)	0.45±0.06	g/10min	ISO 1133
Notched Impact (23°C) ²	≥12	mj/mm ³	ISO179/1eA
Hydrostatic Strength(80°C)	18±2	g/10 min	D 1238

HM9450F(EX₅) HDPE

Product Data Sheet

HM9450F (Ex₅)
High Density Polyethylene
HDPE made via Hostalen Process

Product Description

For blown films with paper like quality, suitable for counter bags, carried bags and w/aping films, excellent processing

General Information

Status : Commercial: Active

Application : blown, Film

Features: High molar mass film grade, good stiffness and tenacity

Additives: Antioxidant/Process stabilizer
Lubricant (processing aid)/ acid scavenge

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

Typical Properties	Typical Value	Unit	Test Method
Density	0.949	g/cm ³	ISO 1183
Fish Eye Note	≤3	note	Internal
FRR 21.6/5	29		
MFR 190°/21.6	8.0	g/10min	ISO1133
MFR190°/5	0.28	g/10min	ISO1133

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

Product Data Sheet

HMCRP 100 BLACK
High Density Polyethylene

Product Description

HM-CRP100N (PE100) is a natural pipe grade resin which is manufactured by suspension polymerization of ethylen monomer, HM-CRP100N (PE100) is a bi-model high density polyethylene with 1-Butene as co monomer

General Information

Status : Commercial: Active

Features: Natural PE100 pipe resin

Application : Top quality PE100 pressure Pipes for gas and water transportaion at higher pressures or with thinner walls as PE80 (UV stabilization and/ or pigments during precessing)

Additives : Antioxidant/Process stabilizer
Lubricant (processing aid)/acid scavenger

Typical Properties	Typical Value	Unit	Test Method
FRR 21.6/5	28	-	-
Density	0.948	g/crn [^]	ISO 1183
MFR190°/21.6	6.2	g/10min	ISO 1133
MFR190°/5	0.22	g/10min	ISO 1133
Notched Impact (23°C)	24	mJ/mm ²	ISO 179/1eA
Hydrostatic Strength(80°C)	5000 (4.5 N/mm ²)	h	ISO 1167

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

Handling and Health Safety: Molten polymers could be injured skin or eye so safety glasses and appropriate gloves are suggested to prevent possible thermal injuries. Also appropriate ventilation is suggested in working by melt polymer. Accumulation of fines or dust particles that are in this grade is not suitable because of explosion hazard probability. So adequated filters and grounding exists at all time are recommended.

Storage: Polyethylene products (in pelletised or powder form) should not be stored in direct sunshine and/or heat radiation. Ultraviolet cause a change in the material properties. The Storage area should be dry and preferably don't exceed 50 °C. it is advisable to process PE resine within 6 month after delivery .JPC would not resspensible about quality diminishing such as color change ,bad smell or ets which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.



LD2420D
LDPE

Product Data Sheet

LD2420D

LDPE Lupolen 2420 D

Product Description

Lupolen 2420 D is a non-additivated, low density Polyethylene. It is delivered in pellet form

General Information

Status : Commercial: Active

Application : Bags & Pouches
Bottles for Consumer Goods
Shrink Film
Blown Film
Film

Processing Method: Blown Film
Injection Moulding
Extrusion Blow Moulding

Features: Good Processability, Good Tear strength, Good Toughness

Typical Properties	Typical Value	Unit	Test Method
Resin Properties	0.923	g/cm ³	ISO 1183
Melt flow rate (MFR)(190°C/2.16Kg)	0.25	g/10 min	ISO 1133
Tensile Modulus	240	Mpa	ISO 527-1, -2
Tensile Stress at Yield	10	Mpa	ISO 527-1, -2
Tensile Strength at Break MD/TD	27/20	Mpa	ISO 527-1, -3
Tensile Strain at Break MD/TD	200/500	%	ISO 527-1, -3
Dart Drop Impact(50 blown Plm)	250	g	ASTM D 1709
Vicat softening temp(A50 (50 °C/h 10N))	94	°C	ISO 306
Haze (50)	<14	%	ASTM D 1003
Gloss (60° ,50)	>50	-	ASTM D 2457



LD2420H
LDPE

Product Data Sheet

LD2420H

LDPE Lupolen 2420 H

Product Description

Lupolen 2420 H is a non-additivated, low density Polyethylene. It is delivered in pellet form.

General Information

Status : Commercial: Active

Application : Bags & Pouches

Film

Shrink Film

Blown Film

Cast Film

Form(s) : Pellet

Features: Good Heat Seal, Optical, Good Processability

Processing Method: Cast Film
Blown Film



LLF0200
LDPE

Product Data Sheet

LLF0200

LDPE- Low Density Polyethylene

Product Description

LLF0200 is a high molecular weight low density polyethylene film grade combining good flexible extrusion behavior and superior mechanical properties. Film made from Lf0200 exhibits high dart impact combined with excellent yield and tensile strength and high stiffness. Its toughness bears even in cold emperatures. The film can be sealed on all types of machines. The film possesses good dimensional stability and is resistant to tearing and breaking. LF0200 contains antioxidant.

General Information

Status : Commercial: Active

Application : LF0200 is well suited for wide range of applications due to its unique balance of properties. The superior mechanical properties will improve the functionality of the films. Examples; general purpose bags, packaging of mechanical parts, carrier bags, coextruded milk bags, low tension power cables insulation and industrial injection mouldings.

Typical Properties	Typical Value	Unit	Test Method
MFI (190 °C/2 .16 Kg)	2	gr/10min.	ASTM D 1238
Density	0.920	gr/ml	* TSTM 209 B
Softening point	94	°C	ASTM D 1525
Elongation @ break (MD)	330 min.	%	ASTM D 882
Elongation @ break (TD)	600 min	%	ASTM D 882
Tensile @ break (MD)	160 min.	kg/cm ²	ASTM D 882
Haze	15 max.	%	ASTM D 648
Dart impact	100 min.	gr	ASTM D 1709
Gloss @ 60	60 min.	Gu	ASTM D 523

* TSTM = Toyo Soda Standard Test Method

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

Processing Conditions: LF0200 can be easily processed in all types of extruders. The temperature of the polymer at the die output should be in the range of 160-180 °C. Minimum blow up ratio should be about 2 in order to keep a good balance of mechanical properties. To avoid blocking and shrinkage in the reel, the film temperature at the nip rollers and haul off should be kept as close as possible to the ambient temperature.

Storage: The product should be stored in dry conditions at temperature below 60 °C and protected from UV light . Improper storage can initiate degradation with resulting odour generation and colour changes.

Health & Environment: LF0200 is not classified as a dangerous product. Dust and fines from the product may give a risk for dust explosion. All equipment should be properly grounded. Inhalation of dust may irritate the respiratory system and should be avoided. During processing of the product small amounts of fumes are generated, which require proper ventilation.

Recycling: The product is suitable for recycling using modern methods of shredding and cleaning for other applications only if approved in the relevant standard or specification. In-house production waste should be kept clean to facilitate direct recycling. Dumping and land filling is also possible in agreement with the competent authorities.

Food Content : The composition of products complies with the EC Directive 90.128.EEC for use in food contact applications.

Packaging: This product is packed in 25 Kg PE bags



Lh0075
LDPE

Product Data Sheet

LH0075

LDPE- Low Density Polyethylene

Product Description

Lh0075 is a high molecular weight low density polyethylene film grade combining good flexible extrusion behavior and superior mechanical properties. Film made from Lh0075 exhibits high dart impact combined with excellent yield and tensile strength and high stiffness. It can be processed on automatic machines. It possesses good dimensional stability.

LH0075 is chiefly recommended for extrusion of blown film. It is suitable for shrink film having a high resistance to hole formation and high degree of shrinkage on cooling. Lh0075 contains antioxidant.

General Information

Status : Commercial: Active

Application : LH0075 is well suited for wide range of applications due to its unique balance of properties. The superior mechanical properties will improve the functionality of the film.

Some examples are; carrier bags, shrink film, industrial film, dust bin liners, large bottles, blow moulding of small containers, packaging of pharmaceutical products, packaging of foodstuffs and bottles for storage of chemical products.

Typical Properties	Typical Value	Unit	Test Method
MFI (190 °C/2 .16 Kg)	0.75	gr/10min.	ASTM D 1238
Density	0.920	gr/ml	* TSTM 209 B
Vicat softening point	95	°C	ASTM D 1525
Elongation @ break (MD)	300 min.	%	ASTM D 882
Elongation @ break (TD)	450 min	%	ASTM D 882
Tensile @ break (MD)	170 min.	kg/cm ²	ASTM D 882
HDT	33	°C	ASTM D 648
Dart impact	120 min.	gr	ASTM D 1709

* TSTM = Toyo Soda Standard Test Method

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

Processing Conditions: LH0075 can be easily processed in all types of extruders. The temperature of the polymer at the die output should be in the range of 180-210 °C. In order to preserve the excellent mechanical properties, it is advisable to limit the predominant orientation of the film along the machine direction by working with a blow up ratio of 2. The film temperature at the nip rollers and haul-off should be kept as close as possible to the ambient temperature.

Storage: The product should be stored in dry conditions at temperature below 60 °C and protected from UV light. Improper storage can initiate degradation that causes odor generation and colour changes.

Health & Environment: LH0075 is not classified as a dangerous product. Dust and fines from the product may give a risk for dust explosion. All equipment should be properly grounded. Inhalation of dust may irritate the respiratory system and should be avoided. During processing of the product small amounts of fumes are generated, which require proper ventilation.

Recycling: The product is recyclable using modern methods of shredding and cleaning. It can be used for other applications only if it is approved by the relevant standard or specification. In-house production waste should be kept clean to facilitate direct recycling. Dumping and land filling is also possible in agreement with the competent authorities.

Food Content : The composition of products complies with the EC Directive 90.128.EEC for use in food contact applications.

Packaging: This product is packed in 25 Kg PE bags.



LL0209AA
LDPE

Product Data Sheet

LL0209 AA
Linear Low Density Polyethylene

Product Description

“LL 0209AA” is a LLDPE copolymer with butene as comonomer which contains antioxidant.

It is recommended for general purpose applications.

It is suitable for blending with conventional LDPE.

Film made from pure LL 02090 AA has the following advantages over conventional LDPE:

Better sealing, higher puncture resistance.

Greater drawdown capability.

Higher tensile strength.

Neutralizer: Calcium Stearate.

Antioxidant: Irganox1010, Irganox168

General Information

Status : Commercial: Active

Application : Food Grade

Heave duty sacks, agricultural lms, liners.

Produce bags, stretch lm

Typical Properties	Typical Value	Unit	Test Method
MFR (190°C/2.16kg)	0.9	g/10min	ISO 1133
Density	920	Kg/m ³	ISO 1183
Tensile Strength at Yield MD/TD	10/11	Mpa	ISO 527
Tensile Strength at Break MD/TD	41/32	Mpa	ISO 527
Elongation at Break MD/TD	620/840	%	ISO 527
Tear Strength MD/TD	145/370	g/25μ	ASTM D1922
Dart Drop Impact	150	g	ASTM D1709



LL235F6
LDPE

Product Data Sheet

LL-235F6 Linear Low Density Polyethylene

Product Description

LL-235F6 is a linear-low density polyethylene resin (LLDPE), obtained by gas phase technology process. This grade designed for the production of different type of films and agricultural tapes. In this grade excellent processability, mechanical properties, melt strength and drawability achieved based on the balanced molecular weight and molecular weight distribution. LL-235F6 has good sealability and approved for food contact applications.

General Information

Status : Commercial: Active

Application : LL-235F6 is suited for mono and coextrusion in a wide range of applications. Agricultural Films and Tapes, Lamination, Shrink Film, Industrial Films, Frozen Food Packaging

Typical Properties	Typical Value	Unit	Test Method
Resin Properties			
Melt Index @ 190 °C and 2.16 kg	0.6	gr/10min.	D1238
Density	0.922	g/cm ³	D1505
Thermal Properties			
Vicat Softening Point	107	°C	D1525
Melting Point	127	°C	D3418
Mechanical Properties			
Flexural Modulus	350	Mpa	D790
Tensile Strength at Yield	10/11 (MD/TD)	Mpa	D882
Tensile Strength at Break	45/25 (MD/TD)	Mpa	D882
Tensile Elongation at Break	>600	%	D882
Elmendorf Tear	120/450 (MD/TD)	gr	D1922
Hardness	55	Shore D	D2240
Melting Point	>1000	hr	1693

- On compression molded according to ASTM D1928C

Processing Conditions : Recommended barrel temperature range is between 180°C and 240°C

Storage and Handling : Polyethylene products (in pelletized or powder form) should not be stored in direct sunshine and/or heat radiation. The Storage area should be dry and preferably don't exceed 50 °C. JPC would not responsible for quality diminishing such as color change, bad smell etc., which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.



LTH1922
LDPE

Product Data Sheet

LTH 1922
LDPE- Low Density Polyethylene

Product Description

LTH 1922 has been manufactured using SABTEC licensed technology

General Information

Status : Commercial: Active

Application : LTH 1922 is specially developed for applications that require a good balance between flow properties and mechanical properties, e.g. toys, household articles, clamping lids.

Additive : Antioxidant

Typical Properties	Typical Value	Unit	Test Method
Polymer Properties			
MFI (190 °C/2 .16 Kg)	22	dg/min	ISO 1133
MFI (190 °C /5 Kg)	75	dg/min	ISO 1133
MVR (190 °C /2 .16 Kg)	29	ml/10min	ISO 1133
MVR (190 °C /5 Kg)	98	ml/10min	ISO 1133
Density	919	Kg/m ³	ISO 1183 (A)
Thermal Properties			
Heat deflection temperature at 0.45MPa (HDT/B)	39	°C	ISO 75
Vicat softening temperature at 10N (VST/A)	82	°C	ISO 306
Melting Point	105	°C	DIN 53765
Enthalpy change	104	j/g	DIN 53765
Mechanical properties			
Stress at yield	8	Mpa	ISO 527/2
Stress at break	7	Mpa	ISO 527/2
Strain at break	400	%	ISO 527/2
Tensile modulus	175	Mpa	ISO 527/2
Creep modulus (After 1 hour)	80	Mpa	ISO 899
Creep modulus (After 1000 hour)	45	Mpa	ISO 899
Notched Izod at +23°C	42	KJ/m ²	ISO 180 A
Notched Izod at -30 °C	5	KJ/m ²	ISO 180 A

Typical Properties	Typical Value	Unit	Test Method
Notched Tensile impact strength	86	KJ/m ²	ISO 8256/1B
Elongation at break	8.4	%	ISO 8256/1B
Maximum Tension	16	Mpa	ISO 8256/1B
Hardness Shore D	45	-	ISO 868
Ball indentation test			
Applied load	49	N	ISO 2039-1
Ball indentation hardness	16	Mpa	ISO 2039-1
ESCR	3	h	SABTEC Method

Packaging : Supplied in pellet form and can be packaged in 25kg bags, 1ton semi bulk or 17 ton bulk

Food packaging : The above mentioned grade meets the relevant requirements of plastics directive 2002/72/EC (06-08-2002) and its amendments till directive 2008/39EC relating to plastic materials and articles intended to come into contact with foodstuffs

Pharmaceutical Application : The above mentioned grade meets the requirements of the European pharmacopeia version 6 section 3.1.5 for pharmaceutical application..

Conveying :Conveying equipment should be designed prevent accumulation of 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 will practiced throughout the facility

Storage : As ultraviolet light may cause a change in the material, all resins should be protected from direct sunlight and/or heat during storage. The storage location should also be dry, dust Free and the ambient temperature should not exceed 50°C. It is also advisable to process polyethylene resins (in pelletized or powder from) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality

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

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 mist preferred. In enclosed areas, fire fighters should be provided with self contained breathing apparatus



LTM2119X
LDPE

Product Data Sheet

LTM 2119X
LDPE- Low Density Polyethylene

Product Description

LTM 2119 X has been manufactured using SABTEC licensed technology.
Film properties have been measured at 25 μ m with a BUR of 3.

General Information

Status : Commercial: Active

Application : LTM 2119X is suitable for general purpose film and for lamination

Additive : Antioxidant

Typical Properties	Typical Value	Unit	Test Method
Polymer Properties			
MFI (190 °C/2 .16 Kg)	1.9	dg/min	ISO 1133
Density	921	Kg/m ³	ISO 1183 (A)
Mechanical properties			
Impact strength	26	KJ/m	ASTM D 4272
Tear strength (TD)	25	KN/m	ISO 6383-2
Tear Strength (MD)	60	KN/m	ISO 6383-2
Yield stress (TD)	11	Mpa	ISO 527
Yield stress (MD)	13	Mpa	ISO 527
Tensile stress at break (TD)	20	Mpa	ISO 527
Tensile stress at break (MD)	35	Mpa	ISO 527
Strain at Break (TD)	>500	%	ISO 527
Strain at Break (MD)	>150	%	ISO 527
Modulus of Elasticity (TD)	200	Mpa	ISO 527
Modulus of Elasticity (MD)	190	Mpa	ISO 527
Coefficient of friction	>1	-	ASTM D 1894
Blocking	20	g	SABTEC method
Re-blocking	100	g	SABTEC method
Optical properties			
Haze	9	%	ASTM D 1003A
Gloss(45°C)	55	%	ASTM D 2457
Clarity	26	mV	-

Processing : LTM 2119X is a general purpose grade without additives. This grade offers high output and excellent drawdown.

Packaging : Supplied in pellet form and can be packaged in 25kg bags, 1 ton semi bulk or 17 ton bulk

Food packaging : The above mentioned grade meets the relevant requirements of plastics directive 2002/72/EC (06-08-2002) and its amendments till directive 2008/39EC relating to plastic materials and articles intended to come into contact with foodstuffs.

Pharmaceutical Application : The above mentioned grade meets the requirements of the European pharmacopeia version 6 section 3.1.5 for pharmaceutical application..

Conveying : Conveying equipment should be designed prevent accumulation of 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 will practiced throughout the facility

Storage : As ultraviolet light may cause a change in the material, all resins should be protected from direct sunlight and/or heat during storage. The storage location should also be dry, dust Free and the ambient temperature should not exceed 50°C. It is also advisable to process polyethylene resins (in pelletized or powder from) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality

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

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 mist preferred. In enclosed areas, fire fighters should be provided with self contained breathing apparatus