

HIGH DENSITY POLYETHYLENE

Produced under License Agreement with Basell Technology Inc.
(TU 2211 – 145-05766801-2008)

Product obtained by gas phase polymerization of ethylene in presence of complex metal-organic catalysts.

HDPE 2260M	blow molding of articles up to 0.5 dm³. antacid, antioxidant, thermostabilizer, processing aid, dispersing agent
HDPE 4050Q	caps and closures antacid, antioxidant, thermostabilizer, dispersing agent.
HDPE 4252J	general purpose, blow molding of articles up to 2 dm³. antacid, antioxidant, thermostabilizer, processing aid, dispersing agent
HDPE 6148C	high strength blown film for thin bags. antacid, antioxidant, thermostabilizer, processing aid, dispersing agent.
HDPE 6250D	blow molding, jerry cans. antacid, antioxidant, thermostabilizer, processing aid, dispersing agent
HDPE 6252J	general purpose, blow molding of articles up to 2 dm³. antacid, antioxidant, thermostabilizer, processing aid, dispersing agent
HDPE 6844G	basic component for PE 80 class pressure pipes. antacid, antioxidant, thermostabilizer, processing aid, dispersing agent.
HDPE 6845G	carbon black filled compound for PE 80 class pressure pipes. antacid, antioxidant, thermostabilizer, processing aid, dispersing agent, carbon black
HDPE 6948C	basic component for PE 100 class pressure pipes. antacid, antioxidant, thermostabilizer, processing aid, dispersing agent.
HDPE 6949C	carbon black filled compound for PE 100 class pressure pipes. antacid, antioxidant, thermostabilizer, processing aid, dispersing agent, carbon black

MAIN QUALITY SPECIFICATIONS

PROPERTY	TEST METHOD	2260M (601F7) Value	4050Q (50403) Value	4252J (524F2) Value	6148C (486H3) Value	6250D (506H4) Value
Density (of base resin), g/cm ³ , in the range	ASTM D 1505	0.958–0.962	0.948–0.952	0.950–0.954	0.946–0.950	0.948–0.952
Melt Flow Rate, g/10 min, in the range:	ASTM D 1238/L	-	-	-	0.25–0.4	0.3–0.5
- at 5.0 kg/190 °C		0.6–0.8	2.4–3.2	0.15–0.3	-	-
- at 2.16 kg/190 °C						
Ratio:	ASTM D 1238	-	-	-	Min 18	Min 18
- MFR _{21.6kg} / MFR _{5.0 kg}		above 50	30–50	above 70	-	-
- MFR _{21.6kg} / MFR _{2.16 kg}						

MAIN QUALITY SPECIFICATIONS

PROPERTY	TEST METHOD	6252J (526F2) Value	6844G (446H7) Value	6845G (446H7) Value	6948C (486H3) Value	6949C (486H3) Value
Density (of base resin), g/cm ³ , in the range	ASTM D 1505	0.950–0.954	0.942–0.946	0.942–0.946	0.946–0.950	0.946–0.950
Melt Flow Rate, g/10 min, in the range:	ASTM D 1238/L	-	0.6–0.8	0.6–0.8	0.25 – 0.4	0.25–0.4
- at 5.0 kg/190 °C		0.15–0.3	-	-	-	-
- at 2.16 kg/190 °C						
Ratio:	ASTM D 1238	-	Min 18	Min 18	Min 18	Min 18
- MFR _{21.6kg} / MFR _{5.0 kg}		above 70	-	-	-	-
- MFR _{21.6kg} / MFR _{2.16 kg}						

ADDITIONAL REFERENCE PROPERTIES						
PROPERTY	TEST METHOD	2260M (601F7) Value	4050Q (50403) Value	4252J (524F2) Value	6148C (486H3) Value	6250D (506H4) Value
Flexural Modulus, MPa, min.:	ASTM D 790	1400	1200	1250	-	1200
Izod Impact Strength at 23 °C, J/m, min.:	ASTM D 256	160	67	190	-	Does Not Fail.
ESCR, hr.	ASTM D 1693	-	-	-	-	-
Dart Impact strength, g, min.	ASTM D 1709	-	-	-	200	-
Tensile Modulus, 2 % sec., MPa, min.:						
MD	ASTM D 882	-	-	-	700	-
TD					650	
Tensile Strength, MPa, min.:						
MD	ASTM D 882	-	-	-	53	-
TD					50	
Elongation at break, %, min.:						
MD	ASTM D 882	-	-	-	500	-
TD					650	
Elmendorf tear strength, min.:						
MD	ASTM D 1922	-	-	-	18	-
TD					55	
Gel content, pcs./m ² , max	A TU 2211-145-05766801	-	-	-	600	-

ADDITIONAL REFERENCE PROPERTIES						
PROPERTY	TEST METHOD	6252J (526F2) Value	6844G (446H7) Value	6845G (446H7) Value	6948C (486H3) Value	6949C (486H3) Value
Flexural Modulus, MPa, min.:	ASTM D 790	1250	900	-	1000	-
Izod Impact Strength at 23 °C, J/m, min.:	ASTM D 256	200	300	-	400	-
ESCR, hr.	ASTM D 1693	-	above 1000	-	above 1000	-
Dart Impact strength, g, min.	ASTM D 1709	-	-	-	-	-
Tensile Modulus, 2 % sec., MPa, min.:	ASTM D 882					
MD		-	-	-	-	-
TD						
Tensile Strength, MPa, min.:	ASTM D 882					
MD		-	-	-	-	-
TD						
Elongation at break, %, min.:	ASTM D 882					
MD		-	-	-	-	-
TD						
Elmendorf tear strength, min.:	ASTM D 1922					
MD		-	-	-	-	-
TD						
Gel content, pcs./m ² , max	A TU 2211-145-05766801	-	-	-	-	-

LINEAR LOW DENSITY POLYETHYLENE

Produced under License Agreement with Basell Technology Inc.
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Product obtained by gas phase polymerization of ethylene in presence of complex metal-organic catalysts.

LLDPE 4118N	General purpose blown film, liners. Improved processability and films surface quality. Antacid, antioxidant, thermostabilizer, lubricant, antiblocking agent, processing aid, dispersing agent.
LLDPE 4118P	General purpose cast and blown films. Improved slip and anti-blocking properties antacid, antioxidant, thermostabilizer, lubricant, antiblocking agent, dispersing agent.
LLDPE 4118Q	General purpose cast films antacid, antioxidant, thermostabilizer, dispersing agent.
LLDPE 4122N	High stiffness blown films; lamination; blending. Improved processability and films surface quality. Antacid, antioxidant, thermostabilizer, lubricant, antiblocking agent, processing aid, dispersing agent.
LLDPE 5118N	High strength blown film. Improved processability and films surface finish. antacid, antioxidant, thermostabilizer, lubricant, antiblocking agent, processing aid, dispersing agent.
LLDPE 5118Q	High strength stretch film antacid, antioxidant, thermostabilizer, dispersing agent.

MAIN QUALITY SPECIFICATIONS

PROPERTY	TEST METHOD	4118N (18401) Value	4118P (18402) Value	4118Q (18403) Value	4122N (22401) Value	5118N (18601) Value	5118Q (18403) Value
Density (of base resin), g/cm ³ , in the range	ASTM D 1505	0.916-0.920	0.916-0.920	0.916-0.920	0.920-0.924	0.916-0.920	0.916-0.920
Melt Flow Rate, (at 2.16 kg/190 °C), g/10 min, in the range:	ASTM D 1238/L	0.8- 1.2	1.8 - 2.2	2.6-3.2	0.9 - 1.3	0.8- 1.2	2.8- 3.4
MFR _{21.6kg} / MFR _{2.16 kg} ratio max.	ASTM D 1238	30	30	30	30	30	30
Dart impact strength, g, min.	ASTM D 1709	100	80	70	80	210	100
Tensile Modulus, 2 % sec., MPa, min.:	ASTM D 882	130	130	115	150	130	115
MD		140	140	120	180	140	120
Tensile strength, MPa, min.:	ASTM D 882	42	51	50	45	50	53
MD		33	24	24	30	35	30
TD							
Elongation at break, %, min.:	ASTM D 882	670	500	480	650	700	500
MD		770	800	850	700	950	900
TD							
Elmendorf tear strength, min.:	ASTM D 1922	150	110	90	120	240	190
MD		380	370	350	400	480	450
TD							
Gel content, pcs./m ² , max, sizing:	A TU 2211 -	0	0	0	0	0	0
> 1mm	145 -	5	5	5	5	5	5
(0.5 - 1.0) mm	05766801	245	245	245	245	245	245
(0.2 - 0.5) mm		250	250	250	250	250	250
>0.2 mm (totally)							

Supply form	Pallets Product is packed in polyethylene bags (one bag net weight 25.00±0.25 kg) and stacked on flat pallets with shrink film. Maximum gross weight of a bundle is 2 tons.
Packaging	PE may be packed into soft containers (big bags) sized for 400 – 1000 kg. Upon agreement with a customer PE Pallets may be bulk loaded straight into wagons for pelletized polymer materials and into polymer trucks, as well as may be delivered in bags by railcars.
Transportation	By all modes of transport
Storage	Polyethylene shall be stored in enclosed dry space preventing from direct sunlight on shelves or pallets at least 5 cm from the floor and at least 1 m from heaters, at temperature max 30°C, relative humidity max 80 %. Prior to processing bags with polymer shall be kept in production area for at least 12 hrs.