

Product Solutions

FOR BETTER LIVING





Because our plastic and chemical products are all around you,
we take utmost care in every step throughout their journey
to deliver only the best for you.



About GC

PTT Global Chemical Public Company Limited (GC) is PTT Group's petrochemical flagship. We are committed to strengthening our leading position in the chemicals business by combining environmentally-friendly innovations with advanced technologies to develop products for people's better living.

GC comprises diversified and comprehensive petrochemical businesses, including manufacturing and distribution of upstream, intermediate, and downstream petrochemical products.

These products can be converted into other chemical products and serve as basic feedstock for downstream industries such as packaging, apparel, communications and electronic equipment, electrical appliances, vehicles, construction materials, engineering-based plastics, agricultural equipment, and much more. These products are not only part of our daily lives but they also enhance the way we live.



Shareholder

We deliver the best business performance through trustworthiness to create fair and sustainable value for shareholders.

Business Partner

We provide superior solutions from innovative and sustainable products and services to be the best choice for our business partners.



Society

We integrate social and environmental responsibility into our business practices to achieve sustainable development.

Employee

We build an organization that is prepared for dynamic change and learning by providing a happy working environment promoting the development of employees' capabilities and enabling them to meet new challenges with dedication to the organization and to professional excellence.

Product Overview & Certificate



InnoPlus by GC is a registered trademark of PTT Global Chemical Public Company Limited (GC). GC manufactures Polyethylene (PE), nameplate capacity at 1,850,000 MTA and Polyethylene Terephthalate (PET) nameplate capacity at 200,000 MTA



HDPE

InnoPlus by GC High Density Polyethylene (HDPE) has a total production capacity at 850,000 MTA. InnoPlus HDPE is made from the low-pressure polymerization using the slurry process of Mitsui Technology. InnoPlus HDPE offers high certainty of specific properties to meet all particular needs and complies with international standards regulations.

LLDPE

InnoPlus by GC Linear Low Density Polyethylene (LLDPE) is produced within a combined LLDPE & mPE production capacity of 800,000 MTA, using gas phase Unipol Process technology under the license of Univation Technology, a leading global technology licensor. This technology can provide a wide range of LLDPE products.

LDPE

InnoPlus by GC Low Density Polyethylene (LDPE) has a total production capacity of 300,000 MTA. InnoPlus LDPE is produced by a high pressure tubular process, a technology licensed by LyondellBasell.

Certificate of HDPE, LDPE, LLDPE



ISO 9001
Quality Management System by MASCI



ISO 50001
Energy Management System by MASCI



GHPs
Good Manufacturing Practice System by MASCI



mPE

InnoPlus by GC
Metallocene Polyethylene (mPE) is produced within a combined LLDPE & mPE production capacity of 800,000 MTA, using low-pressure polymerization via gas-phase Unipol Process technology under the license of Univation Technology, a leading global technology licensor of proven metallocene PE technology.

This advanced catalyst technology provides superior puncture and dart impact resistance, excellent sealability, and outstanding optical properties.
InnoPlus mPE is widely used for cast and blown film applications.

PET

InnoPlus by GC
Polyethylene Terephthalate (PET)
has total production capacity at 219,000 MTA
InnoPlus PET is produced by the leading technological know-how of T.EN Zimmer GmbH (Germany) and Polymetrix AG (Switzerland)



ISO 14001
Environment
Management
System by MASCI



ISO45001
Occupational
Health and Safety
Assessment
Series by MASCI



HACCP
Hazard Analysis
Critical Control
Point System
by MASCI

GC Product Brand of Other Polymers



PlastMate by GC is registered trademark of PTT Global Chemical Public Company Limited (GC) for various type of compound resin such as PE compound, PP compound, PS compound, PC compound, ABS compound and Bioplastics Compound.



InnoEco by GC is registered trademark of PTT Global Chemical Public Company Limited (GC) for high quality recycled plastic resin products. (Post-consumer recycled: PCR) of the GC group.

Maximum production capacity of 45,000 MTA of recycled plastic resins. Consisting of 30,000 MTA of PCR PET resin and 15,000 MTA of PCR HDPE resin.



DIAREX by GC is a registered trademark of PTT Global Chemical Public Company Limited (GC) for Polystyrene

The capacity of HIPS is 30,000 MTA. We offer a wide range of Diarex grades with various properties for using in injection.



X PURGE by GC is registered trademark of PTT Global Chemical Public Company Limited (GC) for Purging compound.

X PURGE by GC is a high efficiency ready-to-use purging compound which provides fast and effective color, material change and contaminant removal in the machine without disassembly. X PURGE by GC will reduce machine downtime and/or maximize productivity. This product is designed for cleaning various types of the machines i.e., injection molding machines, blow molding machine, blown film machine, sheet casting machine.



InnoSis is a registered trademark of GC Marketing Solutions Company Limited, a subsidiary of PTT Global Chemical Public Company Limited (GC) for polyethylene trading.

Trading polyethylene of InnoSis is the product under the concept of being a leading distributor of plastic resin who is developing products to meet customer needs and create better quality products.

GC Product Label

Bioplastics are plastics derived from agricultural raw materials (Biobased) or petroleum (Petrobased). Bioplastics have a plastic-like quality and characteristics. They can be melted and formed by general processes with general machines; only slight adjustments may be needed. For bioplastics made from agricultural raw materials, they are produced by a fermentation process that converts agricultural raw materials into monomers, which are then used to produce plastic pellets. Currently, the raw materials used in bioplastics production are corn, sugarcane, and cassava.





START
TODAY
SAVE
TOMORROW

START
TODAY
SAVE
TOMORROW





Solutions

For Every Product Applications

GC commits to continually develop plastic resins covering all applications various market to support all needs, reinforce efficiency including adding value to products for all industries such as packaging, agriculture, home goods and personal care, construction, electrical appliances, automotive and others.

Film and Flexible Packaging

Flexible packaging is commonly used in consumer products and industrial packaging application. The purpose of these packaging are for storing, protecting, and distributing a vast array of products. It is normally composed of easily yielding materials such as HDPE, LLDPE, LDPE, mPE, PCR. When it's filled and closed, the shape of the container can be easily altered.

International Standard Compliances

	RoHS Restriction of Hazardous Substances EU Directive 2011/65/EU		TIS 816-2565 (มอก.816) Polyethylene industrial standard		Halal Islamic law for food relate goods/product		US FDA Food and Drug Administration (FDA) Specification according to US FDA 21 code of Federal regulations part 177.1520 ©
	JCII* Japan Chemical Innovation and Inspection Institute.		GB9685 - 2016* (China FDA) The Hygienic Standards for Uses of Additives in Food Containers and Packaging Materials* under GB31603- 2015				

*Application to Selected Grades



Lamination Film

The multilayer films which produced by lamination process are combined between at least 2 substrates to promote the film functions e.g., mechanical properties, barrier properties and seal ability. Lamination film are comprised of LDPE, LLDPE and HDPE which suitable for food, personal care and home care packaging. To promote sustainability trend, lamination film can produce from mono-material Polyethylene with acceptable packaging performance by the combination of high performance resin and special formulation.



Recommendation

	LDPE	InnoPlus : LD2420D, LD2420F, LD2426F, LD2420H,LD2426H, LD2420K, LD2420K, LD1826L
	LLDPE	InnoPlus : LL7410A, LL7410D, LL7410D1, LL7410G1, LL7410D2, LL7610A, LL7610D1
	mPE	InnoPlus : LL7810A,LL7810A-S, LL7810D, LL7810D-S, LL7820D, LL7910A,LL7910A-S, LL7910D, LL7910D-S, LL7903A, LL7903A-S, LL7905AM, LL7905AM-S, LL7905AO, LL7810D2V, LL7810AV, LL7810AW, LL7838AV
	HDPE	InnoPlus : HD3355F, HD4000F

General Film

General purpose film are comprised of LDPE, LLDPE, HDPE and Bioplastics and suitable for general packing products such as Zipper bags, Bubble film, Garbage bags, Shopping bags, Frozen & Chilled bags and Dry food packaging.



Recommendation

	LDPE	InnoPlus : LD2420D, LD2420F, LD2426F, LD2420H, LD2426H, LD2420K, LD2420K, LD1826L
	LLDPE	InnoPlus : LL7410A, LL7410D, LL7410D1, LL7410G1, LL7410D2, LL7420A, LL7420D, LL7420D1, LL7610A, LL7610D1
	mPE	InnoPlus : LL7810A, LL7810A-S, LL7810D, LL7810D-S, LL7910A, LL7910A-S, LL7910D, LL7910D-S, LL7903A, LL7903A-S, LL7905AM, LL7905AM-S, LL7905AO
	HDPE	InnoPlus : HD6000F, HD7000F, HD3355F, HD4000F

Shrink Film

Shrink film is used for wrap single products or several products together by heating the film. Majority of Polyethylene shrink film made from LDPE combine with LLDPE and HDPE. Potential products for shrink film include packaging of foods, beverages and home & personal cares.

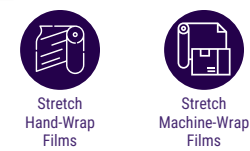


Recommendation

	LDPE	InnoPlus : LD2420D, LD2420F,LD2426F, LD2420H, LD2426H
	LLDPE	InnoPlus : LL7410A, LL7410D, LL7410D1, LL7610A, LL7610D1
	mPE	InnoPlus : LL7903A, LL7903A-S, LL7905AO
	HDPE	InnoPlus : HD7000F, HD4000F

Stretch Film

Stretch film is a thin and stretchable plastic film, typically made from Polyethylene LLDPE, that protect products, cartons, and packages stay clean and in place while being transported and stored.



Recommendation

	LLDPE	InnoPlus : LL7420A, LL7625A
	mPE	InnoPlus : LL7835A, LL7910A, LL7910A-S, LL7838AV

Coating

PE Coating Grade is designed for high-quality extrusion coating and lamination applications. It offers excellent adhesion, and strong moisture resistance. With good heat-sealability and consistent processing performance, this grade is ideal for food packaging, lamination, and coated paper.



Recommendation

(Polymer Type - Brand: Grades)

	LDPE	InnoPlus : LD2420K
	HDPE	InnoPlus : HD2000F

Squeeze Tube

Squeeze Tube is commonly made of plastic that is cylindrical in shape. It has one end sealed, and the other end is enclosed with a cap which is open to dispose the required quantity of the product without getting deformed.



Squeeze Tube



Recommendation

LDPE	InnoPlus : LD2420D, LD2420F
LLDPE	InnoPlus : LL7410A
mPE	InnoPlus : LL7905AO, LL7905AM, LL7905AM-S
HDPE	InnoPlus : HD3355F, HD4000F
PCR-HDPE	InnoEco : HN035NB

Foam

PE Foam is a lightweight, closed-cell cushioning material that provides excellent shock absorption, flexibility, and moisture resistance. PE foam offers clean appearance, durable protection, and easy customization for packaging.



Protective Foam



Insulation Foam



Foam Net



Recommendation

(Polymer Type - Brand: Grades)

LDPE	InnoPlus : LD2420K
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Agricultural Film

Agricultural film has been designed to be durable and has many qualifications such as reflection of UV and heat. Currently, the manufacturing technology for agricultural film and tools have been significantly developed. Agricultural film has been manufactured to support variety of usage such green house film, pond liner, nursery bags, plant tray and etc. by focusing on incresing productivity, convenience, easiness and durability.



Greenhouse Film



Mulch Film



Liner



Silage



Grow Bags

Recommendation

(Polymer Type - Brand: Grades)

LDPE	InnoPlus : LD2420D, LD2420F
LLDPE	InnoPlus : LL7610A, LL7610D1, LL7625A
mPE	InnoPlus : LL7810A, LL7810A-S, LL7810D, LL7810D-S, LL7820D, LL7835A, LL7910A, LL7910A-S,LL7910D, LL7910D-S, LL7903A, LL7903A-S, LL7905AO





HDPE

High Density Polyethylene

InnoPlus : HDPE					
Properties	Test Method	Unit	Grade		
			HD6000F	HD7000F	HD3355F
MFR (190 °C, 2.16 kg)	ASTM D1238	g/10 min	0.16	0.05	1.1
Density	ASTM D1505	g/cm³	0.956	0.956	0.951
Melting Temperature	ASTM D3418	°C	135	135	131
Tensile Strength at Yield	ASTM D638	kg/cm²	260	300	240
Tensile Strength at Break	ASTM D638	kg/cm²	370	390	370
	ASTM D882	MPa (MD/TD)	-	-	-
Elongation at Break	ASTM D638	%	950	820	>1,000
	ASTM D882	% (MD/TD)	-	-	-
Flexural Modulus	ASTM D790	kg/cm²	11,000	12,000	11,000
Tensile Modulus, 1% Secant	ASTM D882	MPa	-	-	-
Notched Izod Impact Strength	ASTM D256	kg.cm/cm	27 (NB*)	30 (NB*)	14
Durometer Hardness	ASTM D2240	shore D	65	64	62
Vicat Softening Point	ASTM D1525	°C	125	125	122
ESCR; 25% Igepal, F ₅₀	ASTM D1693	Hours	>500	>2,000	25
Dart Impact Strength	ASTM D1709	g	-	-	-
Tear Strength (MD/TD)	PEG 701	g	-	-	-
Haze	ASTM D1003	%	-	-	-
Gloss (45 °)	ASTM D2457	-	-	-	-
End Product			General purpose bags, Shopping bags, Linear Films, Bags on roll, Garbage bags, Industrial films		Laminated films, Laminated Tubes, General purpose films

Note: *NB = Non Break



HDPE

High Density Polyethylene

InnoPlus : HDPE				
Properties	Test Method	Unit	Grade	
			HD4000F ⁽¹⁾	HD2000F ⁽²⁾
MFR (190 °C, 2.16 kg)	ASTM D1238	g/10 min	0.7	8
Density	ASTM D1505	g/cm³	0.966	0.962
Melting Temperature	ASTM D3418	°C	135	135
Tensile Strength at Yield	ASTM D638	kg/cm²	-	-
Tensile Strength at Break	ASTM D638	kg/cm²	-	-
	ASTM D882	MPa (MD/TD)	55/34	39/22
Elongation at Break	ASTM D638	%	-	-
	ASTM D882	% (MD/TD)	515/3	900/560
Flexural Modulus	ASTM D790	kg/cm²	-	-
Tensile Modulus, 2% Secant	ASTM D882	Mpa	690/520	580/700
Notched Izod Impact Strength	ASTM D256	kg.cm/cm	-	-
Durometer Hardness	ASTM D2240	shore D	-	-
Vicat Softening Point	ASTM D1525	°C	125	127
ESCR; 25% Igepal, F ₅₀	ASTM D1693	Hours	-	-
Dart Impact Strength	ASTM D1709	g	<63	-
Tear Strength (MD/TD)	ASTM D1922	g	10/800	20/130
Haze	ASTM D1003	%	64	16
Gloss (45°)	ASTM D2457	-	8	-
End Product			Laminated film, General propose film, Shrink film, Mono-material solution	Paper coating, Food carton, Laminated film, Cast film

Note: (1) Film made on blown film line at blow up ratio 5.0. film properties obtained from 25 microns film.
(2) Film made on internal laboratory casting line. Typical film properties obtained from 25 micron film.

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LLDPE

Linear Low Density Polyethylene

InnoPlus : LLDPE							
Properties	Test Method	Unit	Grade				
			LL7410A ⁽¹⁾	LL7410D1 ⁽¹⁾	LL7410G1 ⁽¹⁾	LL7410D ⁽¹⁾	LL7410D2 ⁽¹⁾
MFR (190 °C, 2.16 kg)	ASTM D1238	g/10 min	1	1	1	1	1
Density	ASTM D792	g/cm³	0.918	0.920	0.920	0.921	0.921
Film Properties							
Tensile Strength at Break (MD)	ASTM D882	Mpa	50	35	35	35	35
Tensile Strength at Break (TD)	ASTM D882	Mpa	45	30	30	30	30
Elongation at Break (MD)	ASTM D882	%	710	700	700	700	700
Elongation at Break (TD)	ASTM D882	%	850	850	850	850	850
1% Secant Modulus (MD)	ASTM D882	Mpa	225	225	225	225	225
1% Secant Modulus (TD)	ASTM D882	Mpa	240	240	240	240	240
Dart Impact Strength	ASTM D1709	g	100	110	105	105	105
Tear Strength (MD)	ASTM D1922	g	150	150	150	150	150
Tear Strength (TD)	ASTM D1922	g	300	300	300	300	300
Vicat Softening Point	ASTM D1525	°C	100	101	101	100	100
Gloss (45 °)	ASTM D2457	-	38	38	38	30	30
Haze	ASTM D1003	%	14	16	15	20	20
Additive			-	Low Slip & Antiblock	Low Slip & Antiblock	High Slip & Antiblock	Very High Slip & Antiblock
End Product			General purpose films, Lamination films, Liners, Food packaging, Heavy duty and Agricultural films				



LLDPE

Linear Low Density Polyethylene

InnoPlus : LLDPE						
Properties	Test Method	Unit	Grade			
			LL7420A ⁽¹⁾	LL7420A ⁽²⁾	LL7420D1 ⁽¹⁾	LL7420D ⁽¹⁾
MFR (190 °C, 2.16 kg)	ASTM D1238	g/10 min	2	2	2	2
Density	ASTM D792	g/cm³	0.918	0.918	0.920	0.921
Film Properties						
Tensile Strength at Break (MD)	ASTM D882	Mpa	31	40	31	31
Tensile Strength at Break (TD)	ASTM D882	Mpa	28	25	28	28
Elongation at Break (MD)	ASTM D882	%	790	490	790	790
Elongation at Break (TD)	ASTM D882	%	885	720	885	885
1% Secant Modulus (MD)	ASTM D882	Mpa	230	190	230	230
1% Secant Modulus (TD)	ASTM D882	Mpa	270	200	270	270
Dart Impact Strength	ASTM D1709	g	88	79	88	88
Tear Strength (MD)	ASTM D1922	g	120	60	120	120
Tear Strength (TD)	ASTM D1922	g	280	340	280	280
Vicat Softening Point	ASTM D1525	°C	97	97	97	97
Gloss (45 °)	ASTM D2457	-	31	92	31	30
Haze	ASTM D1003	%	17	2	18	20
Additive			-	-	Low Slip & Antiblock	High Slip & Antiblock
End Product			Stretch films, Liners, Industrial bags, General purpose films, Food packaging, Refuse sacks and Garbage bags			

Note: (1) Film properties obtained from 25 microns film which was blown film extruded at blow up ratio 2.5
 (2) Film properties obtained from 25 microns film which was casted film.

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LLDPE

Linear Low Density Polyethylene

InnoPlus : LLDPE						
Properties	Test Method	Unit	Grade			
			LL7610A ⁽¹⁾	LL7610D1 ⁽¹⁾	LL7625A ⁽¹⁾	LL7625A ⁽²⁾
MFR (190 °C, 2.16 kg)	ASTM D1238	g/10 min	1	1	2.5	2.5
Density	ASTM D792	g/cm³	0.918	0.920	0.919	0.919
Film Properties						
Tensile Strength at Break (MD)	ASTM D882	Mpa	50	50	40	40
Tensile Strength at Break (TD)	ASTM D882	Mpa	45	45	35	30
Elongation at Break (MD)	ASTM D882	%	650	710	885	480
Elongation at Break (TD)	ASTM D882	%	750	850	950	680
1% Secant Modulus (MD)	ASTM D882	Mpa	270	270	250	215
1% Secant Modulus (TD)	ASTM D882	Mpa	320	320	300	230
Dart Impact Strength	ASTM D1709	g	200	200	125	110
Tear Strength (MD)	ASTM D1922	g	350	350	300	255
Tear Strength (TD)	ASTM D1922	g	520	520	550	555
Vicat Softening Point	ASTM D1525	°C	100	100	100	100
Gloss (45 °)	ASTM D2457	-	35	35	25	91
Haze	ASTM D1003	%	14	16	20	2
Additive			-	Low Slip & Antiblock	-	-
End Product			General purpose films, Liners, Food packaging, Heavy duty and Agricultural films		Stretch films, Cast films. Food packaging and Multi-layer packaging films	





mPE

Metallocene Polyethylene

InnoPlus : mPE							
Properties	Test Method	Unit	C6-Metallocene PE Grade				
			LL7810A ⁽¹⁾ / LL7810A-S ⁽³⁾	LL7810D ⁽¹⁾ / LL7810D-S ⁽³⁾	LL7820D ⁽¹⁾	LL7835A ⁽¹⁾	LL7835A ⁽²⁾
MFR (190 °C, 2.16 kg)	ASTM D1238	g/10 min	1	1	2	3.5	3.5
Density	ASTM D792	g/cm ³	0.918	0.918	0.920	0.920	0.920
Film Properties							
Tensile Strength at Break (MD)	ASTM D882	Mpa	50	50	55	45	60
Tensile Strength at Break (TD)	ASTM D882	Mpa	50	50	50	40	45
Elongation at Break (MD)	ASTM D882	%	660	660	740	770	580
Elongation at Break (TD)	ASTM D882	%	660	660	760	730	620
1% Secant Modulus (MD)	ASTM D882	Mpa	240	240	250	230	180
1% Secant Modulus (TD)	ASTM D882	Mpa	250	250	260	250	195
Dart Impact Strength	ASTM D1709	g	1330	1330	700	350	180
Tear Strength (MD)	ASTM D1922	g	280	280	360	360	340
Tear Strength (TD)	ASTM D1922	g	330	330	430	340	430
Vicat Softening Point	ASTM D1525	°C	106	106	105	105	105
Gloss (45 °)	ASTM D2457	-	26	26	25	30	79
Haze	ASTM D1003	%	24	24	30	30	4.3
Additive			-	High Slip & Antiblock	High Slip & Antiblock	-	-
End Product			Heavy duty films, Liners, Lamination films, Food packaging, Multi-layer packaging films and freezer packaging films		Cast films Liners, Lamination films, Food packaging, Multi-layer packaging films and Freezer Agricultural films	Stretch films, Cast films, Food packaging and Multi-layer packaging films	

Note: (1) Film properties obtained from 25 microns film which was blown film extruded at blow up ratio 2.5
 (2) Film properties obtained from 25 microns film which was casted film.
 (3) PFAS Free Grade

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mPE

Metallocene Polyethylene

InnoPlus : mPE							
Properties	Test Method	Unit	C6-Metallocene PE Grade				
			LL7810AV ⁽¹⁾	LL7810D2V ⁽¹⁾	LL7810AW ⁽¹⁾	LL7838AV ⁽¹⁾	LL7838AV ⁽²⁾
MFR (190 °C, 2.16 kg)	ASTM D1238	g/10 min	1	1	2	3.8	3.8
Density	ASTM D792	g/cm3	0.912	0.912	0.92	0.912	0.912
Film Properties							
Tensile Strength at Break (MD)	ASTM D882	Mpa	60	60	55	50	35
Tensile Strength at Break (TD)	ASTM D882	Mpa	50	50	45	50	30
Elongation at Break (MD)	ASTM D882	%	620	620	630	700	430
Elongation at Break (TD)	ASTM D882	%	600	600	620	730	500
1% Secant Modulus (MD)	ASTM D882	Mpa	180	180	230	180	35
1% Secant Modulus (TD)	ASTM D882	Mpa	180	180	240	175	30
Dart Impact Strength	ASTM D1709	g	1500	1500	1000	760	620
Tear Strength (MD)	ASTM D1922	g	280	280	240	380	280
Tear Strength (TD)	ASTM D1922	g	330	330	290	440	480
Vicat Softening Point	ASTM D1525	°C	95	95	104	95	95
Gloss (45 °)	ASTM D2457	-	45	45	30	50	92
Haze	ASTM D1003	%	17	17	20	14	2.1
Additive			-	High Slip & Antiblock	-	-	-
End Product			Lamination films, food packaging, multilayer packaging film, stand up pouches.			Cast film, cast stretch film, form fill & seal packaging, heavy duty films and liners.	



mPE

Metallocene Polyethylene

InnoPlus : mPE							
Properties	Test Method	Unit	C6-Metallocene PE Grade				
			LL7903A ⁽¹⁾ / LL7903A-S ⁽³⁾	LL7905AM/ LL7905AM-S ⁽³⁾	LL7905AO	LL7910A ⁽¹⁾ / LL7910A-S ⁽³⁾	LL7910D ⁽¹⁾ / LL7910D-S ⁽³⁾
MFR (190 °C, 2.16 kg)	ASTM D1238	g/10 min	0.3	0.5	0.5	1	1
Density	ASTM D792	g/cm ³	0.927	0.927	0.935	0.918	0.918
Film Properties							
Tensile Strength at Break (MD)	ASTM D882	Mpa	40	45	45	50	50
Tensile Strength at Break (TD)	ASTM D882	Mpa	40	50	50	50	50
Elongation at Break (MD)	ASTM D882	%	620	600	660	630	630
Elongation at Break (TD)	ASTM D882	%	700	730	810	700	700
1% Secant Modulus (MD)	ASTM D882	Mpa	330	325	510	230	230
1% Secant Modulus (TD)	ASTM D882	Mpa	360	340	550	250	250
Dart Impact Strength	ASTM D1709	g	200	190	110	320	320
Tear Strength (MD)	ASTM D1922	g	140	155	20	230	230
Tear Strength (TD)	ASTM D1922	g	500	500	160	445	445
Vicat Softening Point	ASTM D1525	°C	114	112	119	106	106
Gloss (45 °)	ASTM D2457	-	40	40	42	60	60
Haze	ASTM D1003	%	14	14	15	8	8
Additive			-	-	-	-	High Slip & Antiblock
End Product			Shrink film, Heavy duty films, Stand-up pouches, and freezer packaging films	Heavy-duty films, lamination films, shrink film, agricultural film, food packaging, multi-layer packaging films and freezer packaging films.	Food and non-food packaging, shrink films, heavy duty bag, agricultural films and extrusion tube.	Stretch films, Shrink film, Liners, Food packaging, Multi-layer packaging films, and freezer packaging films	Heavy duty films, Liners, Lamination films, Food packaging, Multi-layer packaging films and freezer packaging films

Note: (1) Film properties obtained from 25 microns film which was blown film extruded at blow up ratio 2.5
(2) Film properties obtained from 25 microns film which was casted film.
(3) PFAS Free Grade

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose. All above values are typical values, not to be construed as specification.

LDPE

Low Density Polyethylene

InnoPlus : LDPE							
Physical Properties*	Test Method	Unit	Grade				
			LD2420D ⁽¹⁾	LD2420F ⁽²⁾	LD2426F ⁽²⁾	LD2420H ⁽²⁾	LD2426H ⁽²⁾
MFR (190 °C, 2.16 kg)	ISO 1133	g/10 min	0.25	0.75	0.75	1.9	1.9
Density	ISO 1183	g/cm ³	0.922	0.922	0.922	0.924	0.924
Melting Temperature	ISO 11357	°C	111	112	112	112	112
Vicat Softening Point	ASTM D1525	°C	94	95	95	94	94
Film Properties**							
Haze	ASTM D1003	%	7	6	6	6	6
Gloss (20 °)	ASTM D2457	-	40	60	60	85	80
Dart Drop Impact	ASTM D1709	g	210	120	120	110	110
Max. Tensile Strength (MD)	ISO 527	Mpa	24	23	23	20	20
Max. Tensile Strength (TD)	ISO 527	Mpa	22	18	18	18	18
Ultimate Elongation (MD)	ISO 527	%	440	350	350	460	460
Ultimate Elongation (TD)	ISO 527	%	670	630	630	660	660
Additive			-	-	Slip & Antiblock	-	Slip & Antiblock
End Product			Heavy duty films, Agriculture films, Shrink films, Tubes and small extrusion blow molding containers			general purpose films, surface protection film, lamination film, food packaging films, foam sheets and air bubble films.	



LDPE

Low Density Polyethylene

InnoPlus : LDPE						
Physical Properties*	Test Method	Unit	Grade			
			LD2420K ⁽²⁾	LD2426K ⁽²⁾	LD2026K ⁽²⁾	LD1826L ⁽²⁾
MFR (190 °C, 2.16 kg)	ISO 1133	g/10 min	4	4	4	5
Density	ISO 1183	g/cm³	0.924	0.924	0.920	0.918
Melting Temperature	ISO 11357	°C	112	112	109	108
Vicat Softening Point	ASTM D1525	°C	92	92	87	85
Film Properties**						
Haze	ASTM D1003	%	7	7	6	6
Gloss (20 °)	ASTM D2457	-	90	80	90	90
Dart Drop Impact	ASTM D1709	g	100	100	100	100
Max. Tensile Strength (MD)	ISO 527	Mpa	17	17	18	18
Max. Tensile Strength (TD)	ISO 527	Mpa	15	15	16	16
Ultimate Elongation (MD)	ISO 527	%	490	490	470	470
Ultimate Elongation (TD)	ISO 527	%	600	600	680	680
Additive			-	Slip & Antiblock	Slip & Antiblock	Slip & Antiblock
End Product			General Purpose Film, Zip Bags, PE Foam Sheet and Air Bubble Films			

* Data based on pellets and press-molded sheet.
 ** Data based on blown film;
 MD: Machine Direction.
 TD: Transverse Direction.

Note: (1) Film properties obtained from 70 microns film which was blown film extruded at blow up ratio of 2.0 and 35 kg/hr output rate.
 (2) Film properties tested using 50 microns thickness blown film extruded at blow-up ratio of 2.0 and 35 kg/hr output rate.
 Typical values; not to be construed as specification.

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Date as of 30 June 2026