Solution Partner

POLYOLEFIN

LUTENE | LUTENE-H | LUCENE LUPURE | SÉETEC







LOW DENSITY POLYETHYLENE / LUTENE®

LUTENE® LDPE is produced under the modern high-pressure process and meets our customers' requirements as a result of continuous R&D for quality assurance and improvement. It serves various purposes such as films, extrusion coating, blow molding, injection molding, etc. In films, its application is widely accepted in any general-purpose film, agricultural film, heavy-duty film and shrink film. Furthermore, our extrusion coating is extensively used for craft paper, aluminum coating and car-mat back coating. There are also numerous product applications in injection molding (i.e-lids, master batches, powder coating and artificial flowers). Through our intensive product development, we are looking forward to offering our clients with the widest range of products available to suit their various needs.

					Propertyll					
			Density @ 23°C		Tensile strength at yield					
				D1525	D638		D638	D746		
		g/10min	g/cm ³		kg/cm²		%	°C		
	LB7000	7	0,917	82	90	120	500	< -76	Kraft Paper, Release Paper	
Extrusion Coating	LB7500N	7.5	0,918	83	90	115	500	< -76	Food Package, Kraft Paper	
	LB9000G	9	0.919	83	90	110	500	< -76	Food Package, Kraft Paper	
Injection	MB9205	25	0,915	81	100	100	500	< -60	Household & lids, powder coating	
Molding	MB9500	52	0.915	74	75	90	400	< -45	Artificial flower, lawns, powder coating	

III Measured on compression molded specimen, Values given above should only be used as a guide and should not be considered as firm specification or guarantee.

LOW DENSITY POLYETHYLENE / SÉETEC

SÉETEC LDPE is produced in a wide-range of chemical properties in order to meet the specifications of our clients' various application requirements. The tubular process enables us to produce LDPE of a narrow molecular weight distribution with proper optical and mechanical characteristics, which is considered ideal for various film extrusions.

			Property/II										
			Density @ 23°C										
			D1505			D638			D2240	D638			
									D SCALE				
Masking Film	BF315	1	0,923	110	94	88	170	750	50	1,150			
	BF415	2	0.924	112	95	96	135	650	52	1,350			

Measured on compression molded specimen, Values given above should only be used as a guide and should not be considered as firm

² Values given above should only be used as a guide and should not be considered as firm specification or guarantee.













Film thickness		Gloss (45°C)						Application	
						MD			
	D1003		D1709	D882	D882	D882	D882		
30	5.5	95	130	270	260	400	600	No additiva protectiva file	
30	5	95	65	270	240	300	550	No additive protective t	

EVA ETHYLENE VINYL ACETATE / SÉETEC

LG Chem has developed family of high content vinyl acetate EVA copolymers, ranging up to 40%. Our high EVA products can be applied for the various applications, such as sheet for photovoltaic encapsulation, hot melt adhesive, foam for footwear soles, extrusion coating for thermal lamination film, semi-conductive cable and jacket compounds, etc.

	Crada		Pro	perty(1)	
	Grade	VA content	Melt Index	Density @ 23°C	Melting temp.
Category	ASTM	D1505	D1238	D1505	LG
		g/cm³	g/10min	g/cm ³	Ĉ
Form	ES28005	28	5	0,951	72
	EC15006	15	6	0,936	89
	EC28005	28	5	0.951	72
Vire & Cable	EC28007	28	6.5	0.951	76
	EC33018	33	18	0,960	62
	EP28015	28	18	0,950	71
PVEN	EP28025	28	25	0.951	69
	EA19150	19	150	0,940	80
	EA19400	19	400	0,939	78
	EA28025	28	25	0,951	69
Hot Melt	EA28150	28	150	0.946	70
	EA28400	28	400	0.945	68
	EA33045	33	45	0.960	62

¹⁹ Values given above should only be used as a guide and should not be considered as firm specification or guarantee.







			Property	
	Hardness	Ultimate elongation	Tensile strength at break	Vicat softening temp.
Application	D2240	D638	D638	D1525
	A SCALE	%	kg/cm²	C
Shoe sole	79	800	138	46
	92	800	160	
Semiconductive compound for wire & ca HFFR(Halogen Free Flame Retardant)	79	800	138	
compound for wire & cable	78	800	122	
	64	900	100	
Distribution and and (about)	78	900	110	46
Photovolatic encapsulant (sheet)	76	850	95	45
	88	800	70	< 40
	85	850	55	< 40
11-1	76	850	95	45
Hotmelt adhesive	74	900	40	< 40
	68	900	30	< 40
	62	950	46	< 40







METALLOCENE POLYETHYLENE / LUCENE™

LG Metallocene Polyethylenes(LUCENE™) offer customers a wide range of products to meet the specifications of their various application requirements. They are having excellent mechanical properties for plastics and enable to reduce cost through down-gauging. LG's proprietary metallocene catalyst technology allows the design of unique polymer architecture at a molecular level and thus makes is possible to tailor physical, mechanical and processing properties of products. LG Metallocene Polyolefin Technology is introducing its customers to the new world of innovative polymers with extraordinary mechanical properties (e.g. stress cracking resistance, dart impact strength, tenacity, etc.) and excellent processability.

											ulus impact E; (cant) strength (F)	
Category			Density @ 23°C			Tensile strength at yield		Ultimate elongation		Flexural Modulus (1% Secant)		
	ASTM	D1238	D1505		D1525	D638		D638	D2240			
			g/cm ³	°C	°C	kg/cm²				kg/cm²		
	SP310	1	0,918	116								
Blown Film	SP311	1	0.918	116								
	SP312	1	0,918	116								
Blown Film	SE0327	0.3	0,930	118								
(Easy Processing)	SE1020	1	0.920	115								
Pipe	SP980	0,6	0,938	126	124	190	350	> 700	55	5,700	N,B ^[2]	> 8,760
(PE-RT)	SP988	0.6	0,941	128	125	210	370	> 700	57	6,500	N,B ^[2]	> 8,760
Monofilament	SP380	0,6	0,952	134	127	300	> 400	> 1,000	61			
Injection	SM600	8	0,961	133	125	290		> 500	65	12,000	6,5	
Molding	SM800	8	0.955	132	124	270		> 500	65	10,500	5	

¹¹ Measured on compression molded specimen, Values given above should only be used as a guide and should not be considered as firm specification or guarantee.

HIGH DENSITY POLYETHYLENE / LUTENE-H®

LUTENE-H® HDPE, which was first commercialized by Hoechst AG of Germany, is produced under the lowpressure polymerization manufacturing process and its technical manufacturing know-how is being offered throughout the world, including the U.S.A. and Japan. The high-density polyethylene offered by LG Chem is a high-impact and high-stiffness product that has distinguished chemical resistance, environmental stress crack resistance and high electrical properties. It is extensively used for films, blow molding, injection, pipes, monofilaments, insulated cables and many other applications.

			NEW STREET	Prop	erty ^[1]		Propertyil										
Category		Melt index															
	ASTM	D1238		D1525	D638												
	Unit	g/10min					D SCALE										
Pipe	XL1800	2.0 (HLMI)	0.950	124	250	> 800	60										
	ME1000	0,9	0,952	123	260	> 700	64										
Bottle Cap	ME2500	2	0,952	123	260	> 600	64										
	ME8000	8	0.957	125	270	> 500	65										

¹⁾ Measured on compression molded specimen, Values given above should only be used as a guide and should not be considered as firm specification or guarantee.

[2] NB: No break

^[2] NB : No break

^[3] Specifics of 50um blown film, Values given above should only be used as a guide and should not be considered as firm specification or guarantee,







		Property [®]									
Application	Dart impact resistance										
	lesisialite		MD				MD				
	D1709	D1922		D882	D882	D882	D882				
			%			kg/cm²	kg/cm²				
	> 1,000	17	12	650	600	450	500				
Lamination, Shrink, Agricultural, General purpose	> 1,000	17	12	650	600	450	500				
	> 1,000	17	12	650	600	450	500				
Heavy duty bag, Shrink	310	13	4	700	660	440	450				
Lamination, Agricultural, General purpose	450	16	7	680	650	470	470				
Under floor heating											
Hot & Cold drinking water, Aluminum composite											
Rope, Nets, Twine, Tarpaulin											
Pallet, Pail, Crate											
Bottle Cap for mineral water, Crate, Cartridg											







	Prope								
Flexural modulus (1% secant)									
10,000	< -80	NB ^[2]		Chemically cross-linked pipe for floor heating processed by RAM type extrusion					
8,000		8		CSD and other beverages					
8,000		10		Mineral water, CSD and other beverages					
10,500		6		Pail, Crate, Cartridge, Bottle cap for mineral water					

MEDICAL POLYOLEFIN / LUPURE™

LG Medical Polyolefins(LUPURE™) offer optimum balance between good processing and physical properties. They comply with FDA regulation 21 CFR177.1520 for all food contact, meet the USP Class VI requirements and have DMF No. Their main applications are container for medical use, especially IV solution. Our medical grades are packaged in a tightly controlled clean room, so their purity is excellent.

			Density @ 23°C			Flexural modules		Tensile strength at break			Haze (70µm film)	Izod impact strength	
					D1525	D790	D638	D638	D638		D1003	D256	
		g/10min					kg/cm²		%	-scale	%	kg • cm/cm	
	BB120	0,3	0,925	114	101		100	180	750	51[2]	20		Pharmaceutical bottle
LDPE	BB150	0,8	0.922	111	94		110	200	720	51[2]	18		Small pharmaceutical bottle
PP	R6400	8.0	0.9	145	136	10,500	300		> 500	86		5	Medical IV solution bottle

¹⁾ Values given above should only be used as a guide and should not be considered as firm specification or guarantee,

² ASTM D2240 Shore D







METALLOCENE POLYPROPYLENE / LUCENE™

LG Chem's Metallocene Polypropylene grades are manufactured by our own developed metallocene catalyst. The most advantages of metallocene polypropylene are narrow MWD (High Strength), controllable high melt index (peroxide free), low odor (automotive compound), and low melting temperature (energy saving).

			Propertyil									
			Tensile strength at yield	Ultimate elongation			Izod impact strength 23°C	Melting Temperatures				
			D638		D785	D790	D256	LG				
		g/10min	kg/cm²		R-SCALE			°C				
	MH7700	25	360	< 500	100	16,000	3	150	Spunbond			
	MH1700	40	360	< 500	100	16,000	3	150	Compounding			
MPP	MH1850	60	380	< 100	100	20,000	3	153	TWIM, Compounding			
	MH7900	150	370	< 50	100	17,000	3	150	LFT[2] Compounding			

¹⁾ Values given above should only be used as a guide and should not be considered as firm specification or guarantee,

² Long Fiber reinforced Thermoplastics,









POLYPROPYLENE /SÉETEC

SÉETEC PP is produced by Basell's Spheripol process, which is considered one of the most advanced technologies in the production of polypropylene. Employing two independent production lines, PP can be simultaneously produced in variances by implementing various catalysts for the two specific applications. PP can be categorized into four broad groups: Homo Polymers, Impact Copolymers, Random Copolymers, and Random Terpolymers. Depending upon the specific application, these can further be subdivided into a wider spectrum of grades with different additives and MI, offering our clients with the widest range of products available to suit their needs.

					Pro	perty(1)				
				Ultimate		Flexural				
Category			strength at yield							
	ASTM	D1238	D638	D638	D785	D790	D256	D256	D648	
		g/10min			R-SCALE					
Impact	M1685	30	320	< 50	105	19,000	6	3	135	Automotive mode
(HCPP)	M1885	60	320	< 50	105	19,000	5	3	135	Automotives parts
	M1400	8	250	300	90	12,000	12	4	105	Housewares
	M1425	10	260	100	95	16,500	10	4	120	Housewares
	M1500	16	250	300	90	12,000	11	4	105	Housewares, Automotives parts
Impact	M1600	25	250	300	90	12,000	10	4	105	Home appliance
(Injection)	M1650	30	260	200	95	16,500	8	4	120	IML(Food container)
	M1700	40	250	< 100	90	12,000	8	4	105	Home appliance
	M1810	60	250	< 100	90	12,000	7	4	105	Housewares
	M1850	70	260	< 100	95	16,500	5.5	3.5	95	TWIM(Yogurt container)
Spun Bond	H7700	34	350	< 500	100	16,000	2.5		105	Spunbond
	H7900	230	350	< 500	105	16,000	2		125	Filter
	H7910	950								Filter, Mask
Melt Blown	H7912	1,200								Mask, Diaper
	H7914	1,400								Diaper, Wet Tissue, Sound absorbent
	R3400	8	270	> 500	84	9,000	5		80	CPP (Medium Slip)
Random	R3410	7	280	> 500	88	9,500	5		90	EPP (Bead expand), CPP (Non Slip)
	R3450	8	270	> 500	84	9,000	6		80	CPP (High Slip)
Ter-Polymer	T3410	7	230	> 500	80	8,500	10		85	EPP(Bead expand), CPP Film(Medium slip)

Values given above should only be used as a guide and should not be considered as firm specification or guarantee.









WIRE & CABLE XLPE COMPOUND / LUTENE®

LUTENE® Wire & Cable XLPE Compound for Power cable have being produced by LG Chem's unique process with own technology since 1995. It show not only an excellent electrical and crosslinking properties but also offer outstanding performance in processing. LUTENE® Wire & Cable XLPE Compound is divided into several grades in accordance with contamination level or special application that accepted in the industry. LUTENE® Wire & Cable XLPE Compound offer customers a wide range of products to meet the specifications of their various application requirements.

Calegory	Grade							
			Dielectric constant D150	Dissipation factor D150	Dielectric strength D149	DC Volume resistivity		Application
		D1505				D257		
			1MHz	1MHz				
Insulation	XL8080NTS	0.92	2,30	0.0003	> 22	> 1016	Excellent electrical property	MV power cable insulation
	XL8080TR	0.92	2,30	0,0006	> 22	> 1016	Excellent tree resistance	MV power cable insulation (Water tree retardant XLPE
	XL9090NT	0.92	2,30	0,0003	> 22	> 1016	Enhanced crosslinking property	MV power cable insulation (Rapid cure XLPE)
	XL8080UCS	0.92	2,30	0,0003	> 22	> 1016	Superior cleanliness Excellent electrical property	HV&EHV power cable insulation (Up to 230kV)
Semiconductive Shielding	XL2700BK	1.17					Outstanding strppability	MV strippable insulation shield
	XL2808BK	1,13					Excellent electrical property	MV bonded conductor & insulation shield
	XL2700BKTR	1,16					Outstanding strppability	Strippable insulation shield for MV power cable insulation of WTR XLPE
	XL2808BKTR	1,12					Excellent electrical property	Bonded conductor & insulation shield for MV power cable insulation of WTR XLPE
	XL2802BK	1,12					Super smoothness surface Excellent electrical property	HV bonded conductor & insulation shield (Up to 150kV)
	XL2902BK	1,13					Super smoothness surface Excellent electrical property	EHV bonded conductor & insulation shield (Up to 400kV)

¹⁰ Values given above should only be used as a guide and should not be considered as firm specification or guarantee.







POE POLYOLEFIN ELASTOMERS / LUCENE™

LG Polyolefin Elastomers(LUCENETM) are ethylene α -olefin copolymers produced using LG Chem's unique metallocene polymerization catalyst and solution process technology. Polyolefin elastomers are flexible thermoplastics and compatible with most polyolefins such as polypropylene, polyethylene and ethylene vinyl acetate. They are used as an excellent impact modifier for plastics and offer unique performance capabilities in injection and extrusion molded products like automotive exterior and interior, footwear, wire and cable, film packaging, adhesive and foam.

Category	Grade ASTM		Property(1)									
												Application
	Unit	g/10min	g/cm³	Ĉ	A SCALE	Мра	MU	Мра	%	kN/m	°C	
EOR (Ethylene Octene Copolymer)	LC160	0,5	0,863	46	57	10	36	6.1	> 900	33	-56	Automotive in/exterior parts Sound isolation Shoe sole Wire & Cable
	LC161	0,5	0,868	54	67	13	35	9.4	> 900	38	-53	
	LC170	1,1	0,870	58	71	14	23	9.5	> 900	40	-53	
	LC670	5.0	0.870	58	70	13	9	5.5	> 900	38	-55	
EBR (Ethylene Butene Copolymer)	LC168	1,2	0,862	32	46	8	20	1,8	> 800	17	-58	Automotive in/exterior parts Sound isolation Shoe sole Wire & Cable
	LC175	1,1	0.870	42	63	12	18	4.4	> 900	34	-53	
	LC565	5.0	0,865	36	54	8	8	1,8	> 500	20	-54	
	LC875	33	0.870	57	55	10	1,2	1.4	> 400	14	-53	
POP	LC180	1,2	0,885	73	86	30	20	25	> 800	58	-45	Film packaging Wire & Cable
	LC100	1,2	0.902	96	91	80	23	36	> 600	87	-31	
	LF100	1,2	0.902	92	91	80	23	34	> 600	87	-35	

¹⁰ Typical resin property values are measured on a standard compression molded specimen. The properties data in this table are typical values and not guaranteed specification.







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