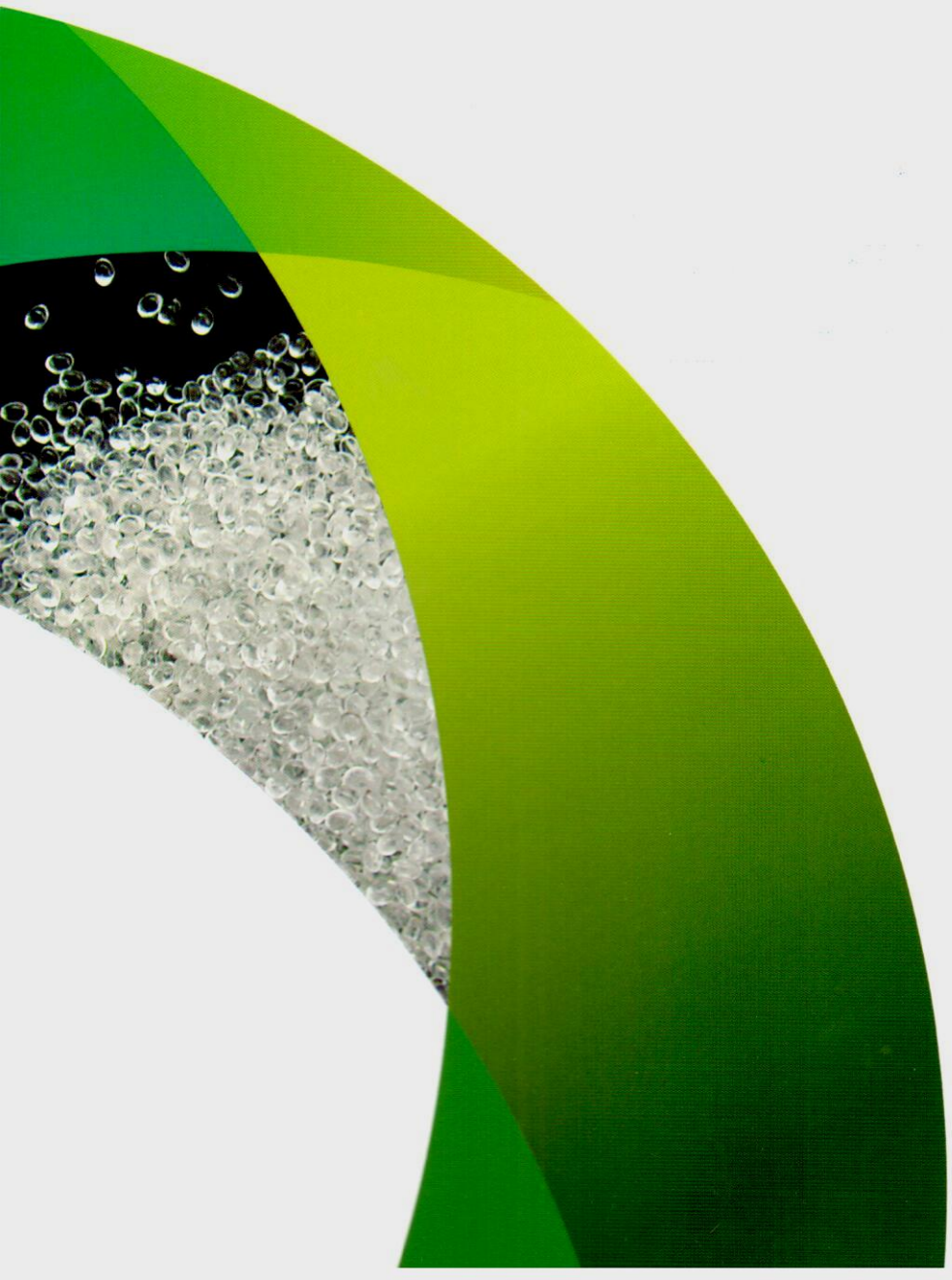
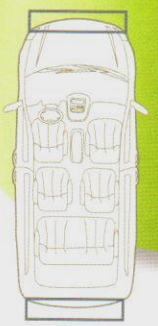
Your Global Solution Partner

LG Polyolefin Elastomers

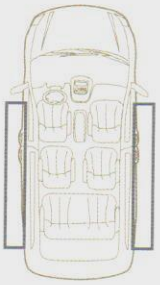
LUCENE™



LG Chem

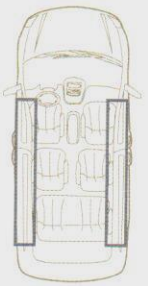


Hard LUCENEs
for bumper fascia



Hard LUCENEs
for rocker panels
and side molding

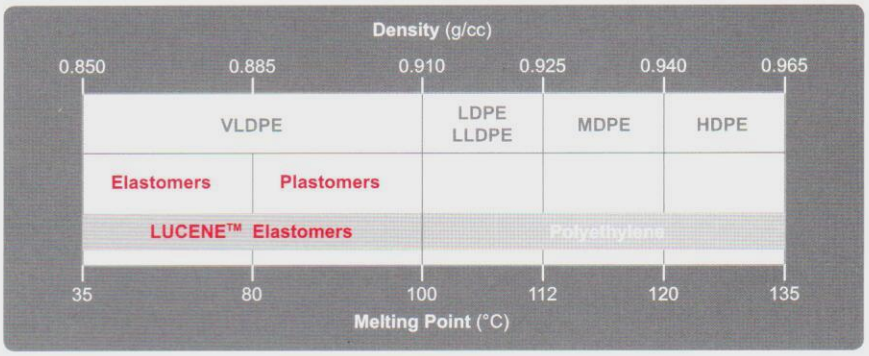
Hard LUCENEs
for interior roof
pillar moldings



Hard LUCENEs
for door trim

LG Polyolefin Elastomers

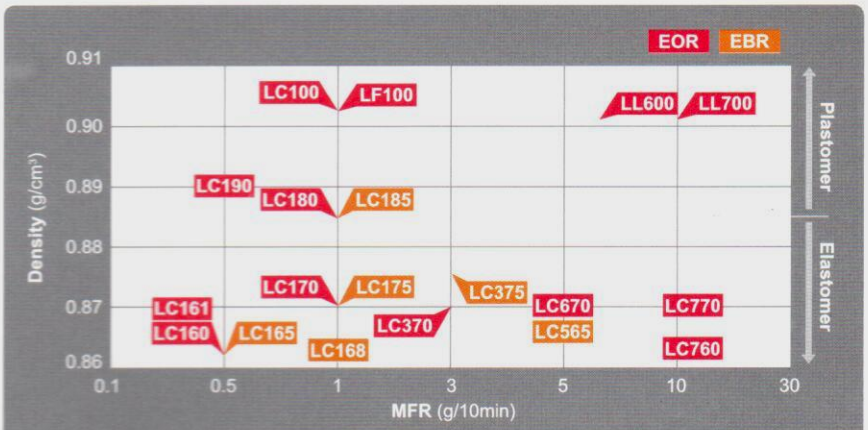
LUCENE™ Polyolefin elastomers offer customers a wide range of products to meet the specifications of their various application requirements.



LUCENE™ Polyolefin elastomers are ethylene alpha-olefin copolymers produced using LG Chem's unique metallocene polymerization catalyst and solution process technology. They are excellent impact modifiers for plastics and offer outstanding performance capabilities for compounded products.

LG Chem is endlessly working to develop innovative technology and create new value-added polyolefin elastomers.

LUCENE™ POE Grades



Advantages of EOR*
- Excellent mechanical strength
- Balance between toughness & stiffness
- Outstanding curing for foaming

* EOR : Ethylene Octene Copolymer

Advantages of EBR*
- Lower crystallinity
- Good impact strength at low temp.
- Lower-cost solution (vs. EPDM, EOR etc.)

* EBR : Ethylene Butene Copolymer

General applications

Automotive in TPO

- Based on POE/PP blends
- For bumper fascia, garnish, instrument panel and airbag cover, etc





Footwear

- Based on POE/EVA blends
- Show light weight and high resilience
- For midsole or sockliner of running shoes and slippers, etc

Toughening of engineering thermoplastics

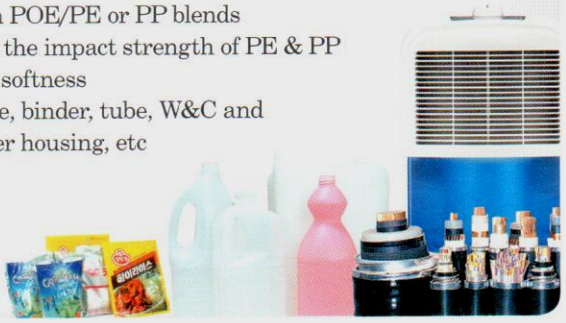
- MAH-grafted-POE as the compatibilizer in the nylon compound
- Increase the impact strength of nylon 6/66
- For industrical, sports & leisure materials

Film

- Based on POE/LDPE or LLDPE
- Excellent low sealing temperature and hot tack strength
- Applied to lamination film layer, etc

Plastic modification

- Based on POE/PE or PP blends
- Increase the impact strength of PE & PP
- Improve softness
- For bottle, binder, tube, W&C and fan heater housing, etc



EOR Polyolefin Elastomers

Item			EOR										
Properties	Test Method (ASTM)	Grade / Unit	LC160	LC161	LC760	LC170	LC370	LC670	LC770	LC180	LC190	LC100	LL600	LL700
Melt Index	D1238	g/10min	0.5	0.5	13	1.1	3.0	5.0	15	1.2	0.5	1.2	6.5	10.0
Density	D1505	g/cm³	0.863	0.868	0.863	0.870	0.870	0.870	0.870	0.885	0.890	0.903	0.901	0.901
Melting Temp.	LG	°C	46	54	41	58	57	58	58	73	80	96	90	90
Mooney Viscosity ML1+4@121°C	D1646	MU	36	35	4	23	13	9	3	20	30	23	7	5
Tensile Strength at Break[2) 3)]	D638	Mpa	6.1	9.4	1.3	9.5	8.0	5.5	3.2	28	36	38	21	18.5
Elongation at Break[2) 3)]	D638	%	>900	>900	>800	>900	>900	>900	>800	>800	>800	660	>900	>900
Flexural Modulus 1% Secant[2)]	D790	Mpa	10	13	8	14	14	13	13	30	41	83	53	47
Hardness Shore A[2)]	D2240	-	57	67	48	71	70	70	65	86	87	91	90	90
Tear Strength[2)]	D624	kN/m	33	54	26	40	39	38	29	58	78	87	85	83
Glass Transition Temperature	LG	°C	-56	-53	-59	-53	-55	-55	-55	-45	-38	-31	-38	-38
Application			Automotive Interior & Exterior Soundproof Shoe sole Polymer modification							Shoe sole Film Hose Wire & Cable				

1) The properties data in this table are typical values, and not guaranteed specification.
2) Typical resin property values are measured on a standard compression molded specimens.
3) Speed of 508 mm/min

LUCENE™

EBR Polyolefin Elastomers

Item			EBR					
Properties	Test Method (ASTM)	Grade / Unit	LC165	LC168	LC565	LC175	LC375	LC185
Melt Index	D1238	g/10min	0.5	1.2	5.0	1.1	3.0	1.2
Density	D1505	g/cm³	0.862	0.862	0.865	0.870	0.875	0.885
Melting Temp.	LG	°C	30	32	36	42	56	69
Mooney Viscosity ML1+4@121°C	D1646	MU	32	20	8	18	12	19
Tensile Strength at Break[2) 3)]	D638	Mpa	2.2	1.8	1.8	4.4	6.3	14.2
Elongation at Break[2) 3)]	D638	%	>800	>800	550	>900	>800	>800
Flexural Modulus 1% Secant[2)]	D790	Mpa	9	8	8	12	13	23
Hardness Shore A[2)]	D2240	-	43	46	54	63	70	85
Tear Strength[2)]	D624	kN/m	17	17	20	34	32	59
Glass Transition Temperature	LG	°C	-58	-58	-54	-51	-50	-39
Application			Automotive Interior & Exterior Soundproof Shoe sole Polymer modification				Shoe sole Film Hose Wire & Cable	

1) The properties data in this table are typical values, and not guaranteed specification.
2) Typical resin property values are measured on a standard compression molded specimens.
3) Speed of 508 mm/min

Polyolefin Plastomers

Item				POP					
				Film				Coating	
Properties	Test Method (ASTM)	Grade / Unit		LF100	LC100	LC180	LC190	LL600	LL700
Melt Index	D1238	g/10min		1.2	1.2	1.2	0.5	6.5	10.0
Density	D1505	g/cm³		0.903	0.903	0.885	0.890	0.901	0.901
Mooney Viscosity ML1+4@121°C	D1646	MU		23	23	20	30	7	5
Tensile Stength at Break[2]	D882	kg/cm²	MD	530	530	490	560	300	270
			TD	620	620	580	660	290	260
Elongation at Break[2]	D882	%	MD	620	620	640	610	630	670
			TD	680	680	700	650	850	800
Tear Strength[2]	D1004	kg/cm	MD	83	83	70	85	115	93
			TD	85	85	75	100	120	97
Melting Temp.	LG	°C		96	96	73	80	90	90
Glass Transition Temp.	LG	°C		-31	-31	-45	-38	-38	-38
Vicat Softening Point	D1525	°C		86	86	61	64	74	74
Application				Thermoplastic plastomers Lamination film Industrial packaging film Slip & anti-blocking agent	Thermoplastic plastomers Lamination film Industrial packaging film Non-additives		Thermoplastic plastomers Shrinkage film Industrial packaging film Non-additives	Thermoplastic Plastomers Coating & Cast film Non-additives	

1) The properties data in this table are typical values, and not guaranteed specification.
2) Film property values are measured on 50μm blown film.
3) LL600 & LL700 film properties are measured on blending with LDPE 30%

Guidelines for Product Storage and Handling

LUCENE™ Polyolefin Elastomers

1. Proper Storage and Handling is Extremely Important.

- **LUCENE™** Polyolefin Elastomers are available in free-flowing pelletized form designed for use in conventional polymer fabrication systems.
- The proper storage and handling of these products is extremely important for the products to remain flowable for transport and processing without pellet blocking.

2. Pellet Blocking Mechanism

- Pellet blocking occurs when individual pellets form large clumps of pellets due to low softening and melting point of polymers.
- Blocking can be further magnified by heat and static loading over time.
- Blocking occurs faster at high temperatures and is worsened at freezing temperatures.

3. To Prevent Pellet Blocking

- Coating inorganic powders or micro-fine polyethylene powders on the surface of polymeric pellets is known to inhibit blocking and prevents tackiness of the pellets.
- To control pellet blocking by way of fine powder coating requires the maintenance of a safe and clean environment anywhere powder coated pellets are stored, handled or transported.

4. Storage and Handling Recommendations

- To minimize static load, do not double stack pallets.
- Keeping storage and handling temperatures low.
- The recommended storage temperature is between 10~25°C.
- Store the resins in the warehouse to protect from exposure to elevated temperatures-which is not to exceed 35°C.
- Consume the resins on a first in, first out basis.
- Powdered material may form explosive dust- air mixture.
- Keep away from the source of ignition, such as static build-up, heat, spark and flame.
- Before handling of products, read the Material Safety Data Sheet(MSDS).
- Contact your LG Chem representitive.

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