

How to use LIMEX for blown film

LIMEX pellet TDS

PE78-02M

LHPE-7802M: Limestone + PE

Physical Property

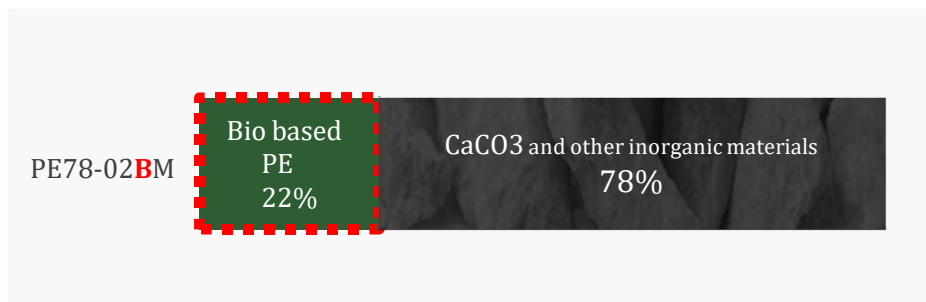
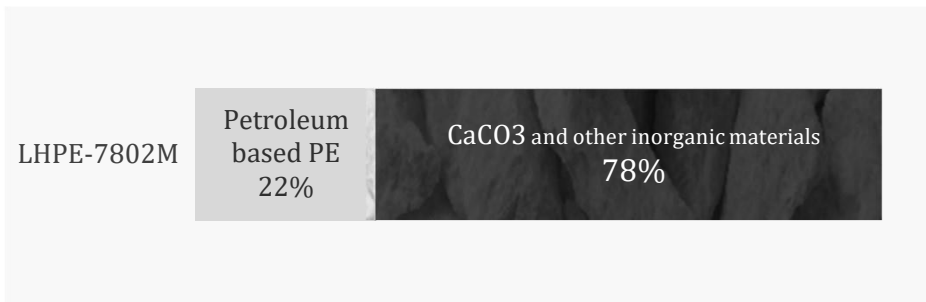
Character- istic	MFR	Allocation	Specific Gravity	Moisture Content
Unit	g/10min	%	g/cm3	%
Measureme nt Method	JIS K 7210	ISO 3451-1	ISO 1183	Loss and Drying
PE78-M	0.6	78	1.9	≤0.06

*LHPE-7802M has the same physical property

PE78-02BM: Limestone + Biomass PE

Physical Property

Character- istic	MFR	Allocation	Specific Gravity	Moisture Content
Unit	g/10min	%	g/cm3	%
Measurement Method	JIS K 7210	ISO 3451-1	ISO 1183	Loss and Drying
PE78-BM	0.6	78	1.9	≤0.06



Process condition - 1

Masterbatch Physical Properties

	Unit	Measurement Method	LHPE-7802M	PE78-02BM
MFR	g/10min	JIS K 7210	0.6	0.6
Ash	%	ISO 3451-1	78	78
Specific Gravity	g/cm ³	ISO 1183	1.9	1.9
Water Content	%	Drying Loss	≦ 0.06	≦ 0.06

※ Above is representative value, NOT guaranteed value

Heat Seal Requirements

	Upper	Lower (Silicon)	No. of Shots
LIMEX Shopping Bag (20~30μm) ※1	230°C	90°C	180
LIMEX Shopping Bag (40μm~)	180°C	—	35

※1 Pressure adjustment using tape is recommended.

Recommended Recipe

	LHPE-7802M	PE78-02BM	HDPE	LLDPE	Bio HDPE	Bio LLDPE	Total
HD LIMEX Bag	70		27 ※1	3 ※2			100
LLD LIMEX Bag	70			30 ※3			100
Bio HD LIMEX Bag		70		3 ※2	27 ※1		100
Bio LLD LIMEX Bag		70				30 ※3	100

※1 MFR = 0.05 g/10min HDPE is recommended.

※2 MFR = 1~4 g/10min, melting point = 220~230°C metallocene-polymer LLDPE is recommended.

※3 MFR = 1~4 g/10min, melting point = 220~230°C LLDPE is recommended.

※4 Dry-blend grades are available.

Extrusion / Inflation Requirements

	zone1	zone2	zone3	zone4	Extruder 1	Extruder 2	Blow Rate	Blow Position
LIMEX Shopping Bag HDPE (20~30μm)	190°C	190°C	200°C	200°C	200°C	200°C	3.5-4.5	> 10 times Extruder
LIMEX Shopping Bag HDPE (40μm~)	190°C	190°C	200°C	200°C	200°C	200°C	1.5-3.0	> 10 times Extruder
LIMEX Shopping Bag LLDPE (40μm~)	190°C	190°C	200°C	200°C	200°C	200°C	1.5-3.0	—

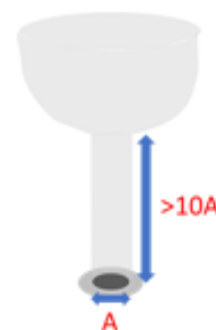
Screw Temperature

Gradually heating

Process condition - 2

Processing Cautions

- Start-up with PE resin only, then switching to LIMEX recipe after stabilizing will allow smooth processing.
- Below #60 filter is recommended for long-time processing.
- Material drying is recommended in case of bubble occurrence.
- **Recommended drying conditions (1000 kg of material): 90°C de-humidifier for 30 minutes**
Avoid drying longer than 60 minutes even when extremely wet.



Product Use Instructions

- Please avoid high temperature or direct sunlight for storage.
- This product can be affected by moisture.
Indoor storage with certain temperature control, and no contact with water (e.g. raindrops) is recommended.
- Recommended drying conditions (1000 kg of material): 90°C de-humidifier for 30~60 minutes
- Please avoid moisture, dust and dirt for storage after un-packaging. Please tightly seal when re-packaging.
Drying after each un-packaging is recommended.
- Please avoid use near fire.

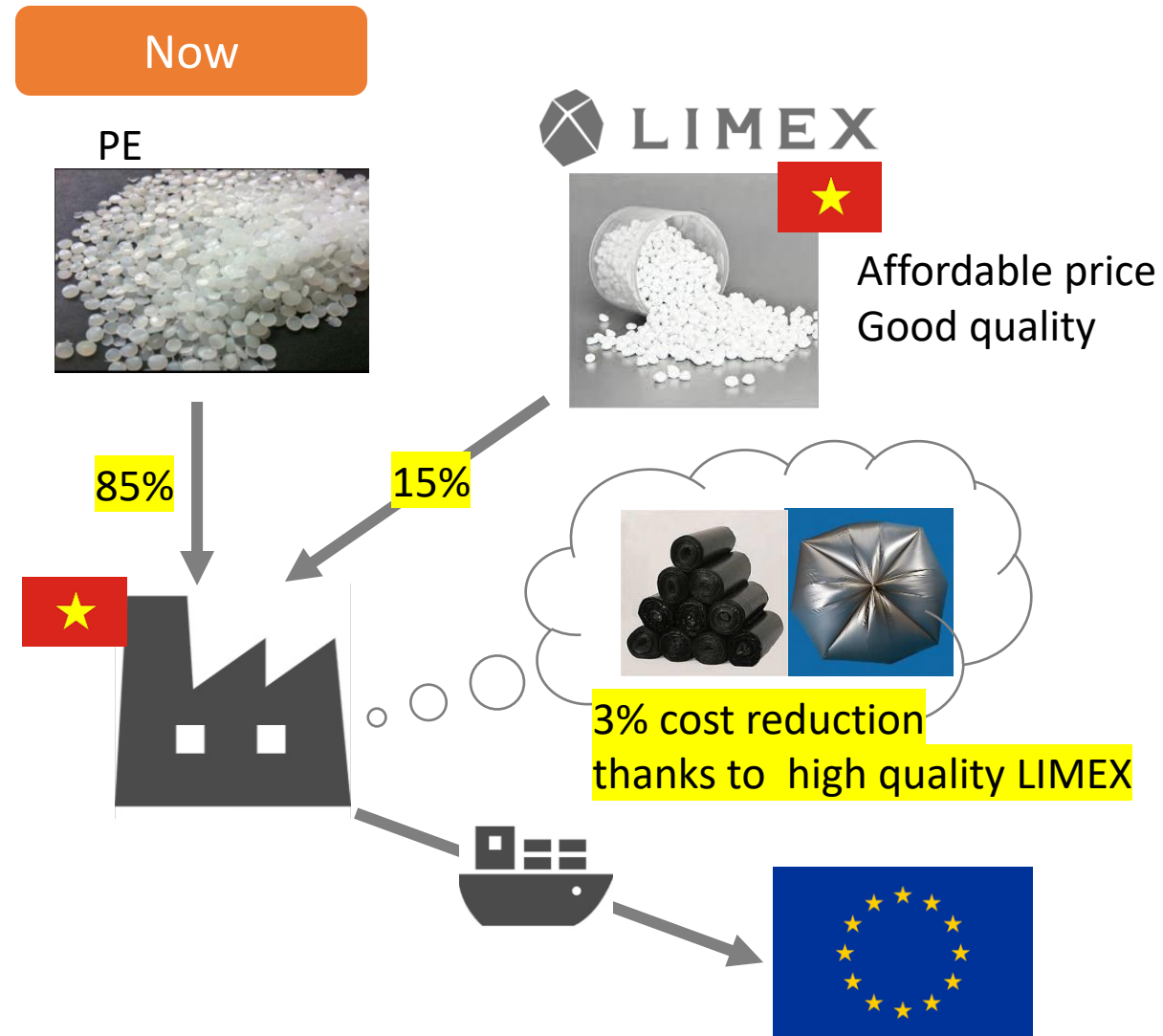
LIMEX Film structure



Film recipe

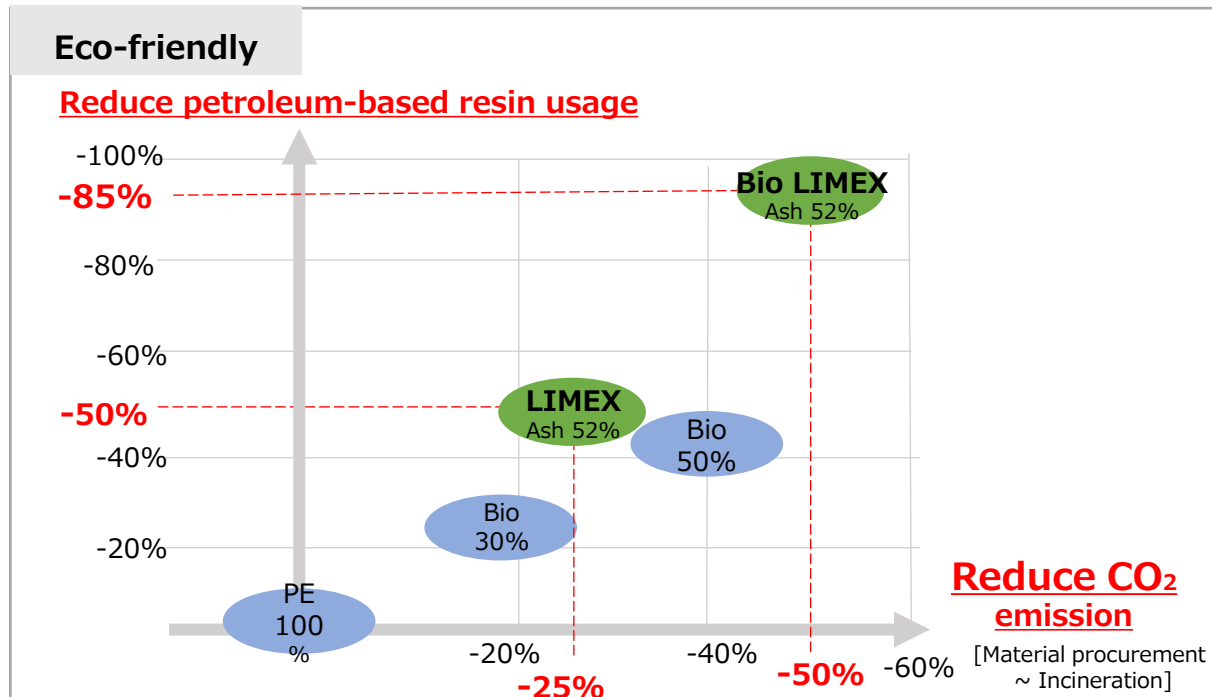
Success model of garbage bag with LHPE-7802M

EU market requires high quality, so the blown film manufacturer used to not be able to add CaCO₃ masterbatch.



LIMEX flexible packaging & Bag

- **Eco-friendly** *reduce the oil-based resin usage and CO2 emissions
- **CaCO3 is alkaline** *Multiple layers for acidic products



① LIMEX bag

Petroleum-based resin

CaCO₃ 52%

② Bio LIMEX bag

Biomass PE

CaCO₃ 52%



Pet-sheet packaging
Watahan Ltd.

