
LX MMA
Link to a Sustainable Future

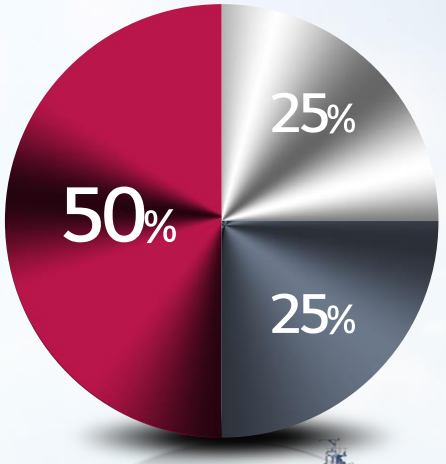
LX MMA

Overview

LX MMA was

Founded as a joint venture of LG Corp. and the prominent Japanese chemical company Sumitomo Chemical Co., Ltd., Japan Catalyst Inc. to localize methyl methacrylate(MMA) used as various industrial materials, contributing to enforce competitive power in international trade by stabilizing supply and demand by local companies, which have traditionally relied the whole quantity upon import.
As of 2021, it is operated under the governance structure of LX Holdings, Sumitomo Chemical Co., Ltd., Japan Catalyst Inc..

LX Holdings



NIPPON SHOKUBAI

SUMITOMO CHEMICAL

"Ever-growing market-leading company that offers differentiated materials and solutions "

Production Scale

(unit: ton/year)

	MMA	MAA	BMA	PMMA	Acrylic Rubber
Capacity	260,000	50,000	35,000	120,000	5,000

LX MMA

History

2010's	2021	Changed the firm name to LX MMA Corp.
	2020	Completed Acrylic Rubber manufacturing process in PMMA Plant 2
	2019	MMA Capa-up (180,000MT/yr → 260,000MT/yr)
	2016	New SMMA commercial manufacture production (20,000MT/yr)
	2015	New BMA commercial manufacture production (15,000MT/yr)
	2012	MAA Capa-up (20,000MT/yr → 50,000MT/yr)
	2011	MAA Capa-up (20,000MT/yr → 50,000MT/yr)
	2010	PMMA Capa-up (90,000MT/yr → 101,000MT/yr)
2000's	2008	Completion of MMA Plant 3 and commercial manufacture production (100,000MT/yr → 180,000MT/yr)
	2005	Completed PMMA Plant 2 (50,000MT/yr → 90,000MT/yr)
	2003	Completed MMA Plant 2 (50,000MT/yr → 100,000MT/yr)
1990's	1999	Took over PMMA business of LG Chem, Ltd.
	1994	Changed the firm name to LG MMA Corp
	1993	Completed MMA Plant 1
	1991	Lucky MMA Corp. established

LX MMA

Business Place Info

Seoul Office

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Phone : +82-2-6930-3800

R&D Center

188, Munji-ro, Yuseong-gu, Daejeon, Korea

Phone : +82-42-866-5828

MMA 1 Plant

759, Jungheung-dong, Yeosu, Jollanam-do, Korea

Phone : +82-61-688-2600

MMA 2 Plant

762-4, Jungheung-dong, Yeosu, Jollanam-do, Korea

Phone : +82-61-805-3932

MMA 3 Plant

762-6, Jungheung-dong, Yeosu, Jollanam-do, Korea

Phone : +82-61-805-3813

PMMA 1 Plant

70-1, Whachi-dong, Yeosu, Jollanam-do, Korea

Phone : +82-1-680-1721

PMMA 2 Plant

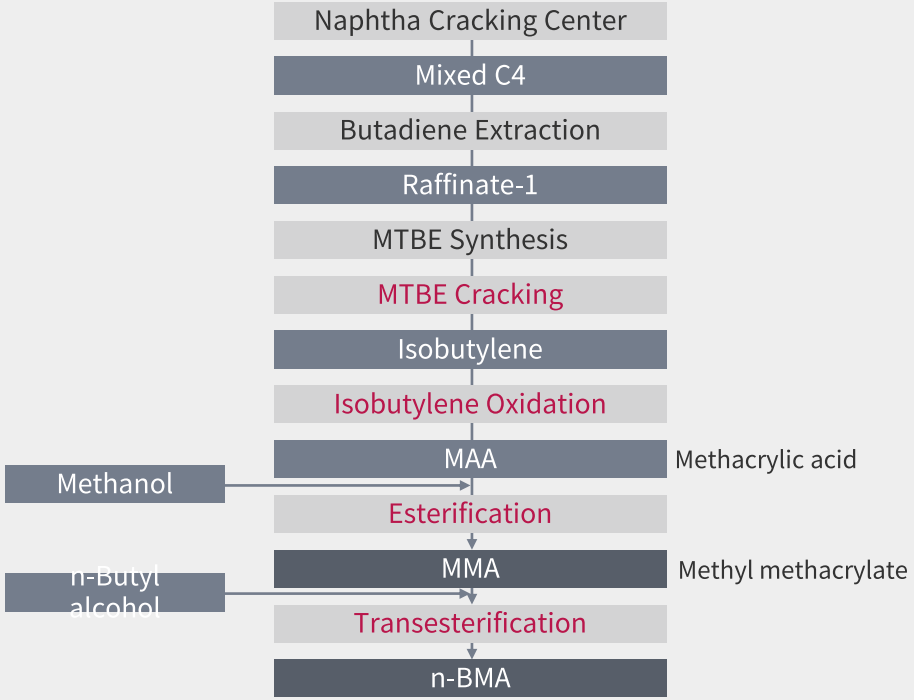
762-5, Jungheun-dong, Yeosu, Jollanam-do, Korea

Phone : +82-61-805-3953

MMA, MAA, BMA

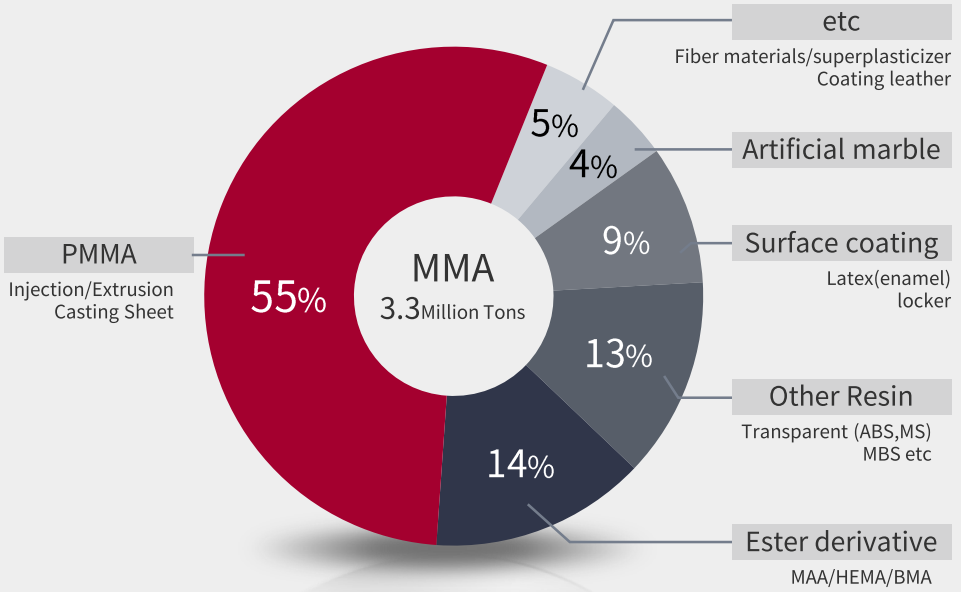
Manufacturing process of LX MMA uses isobutylene vapor phase oxidation (C4 direct oxidation) developed and industrialized by Japanese Sumitomo Chemicals and Nippon Shokubai. Unlike conventional manufacturing process, isobutylene vapor phase oxidation does not produce pollutants. It is a high-tech manufacturing process producing high quality MMA, which oxidizes isobutylene in vapor phase extracted from C4 residue crude, produces methacrylic acid (MAA), and esterifies methacrylic acid with methanol, MMA.

Chemical Down-Stream



Global MMA Rate of Application

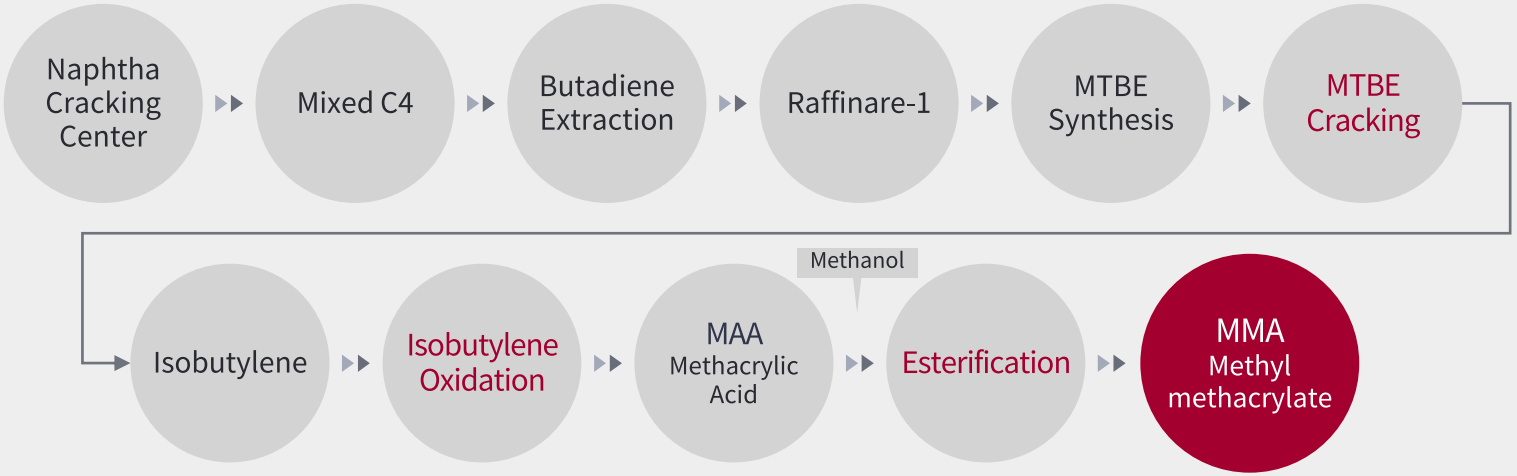
※ Ref : Acrylic Resins and Plastics(Chemical Economics Handbook)



MMA Manufacturing Process and Application

MMA, a clear, colorless liquid, is easily triggered to polymerization by light, heat and radiation. It is the main material of PMMA as well as transparent ABS, MBS, etc.

Manufacturing Process



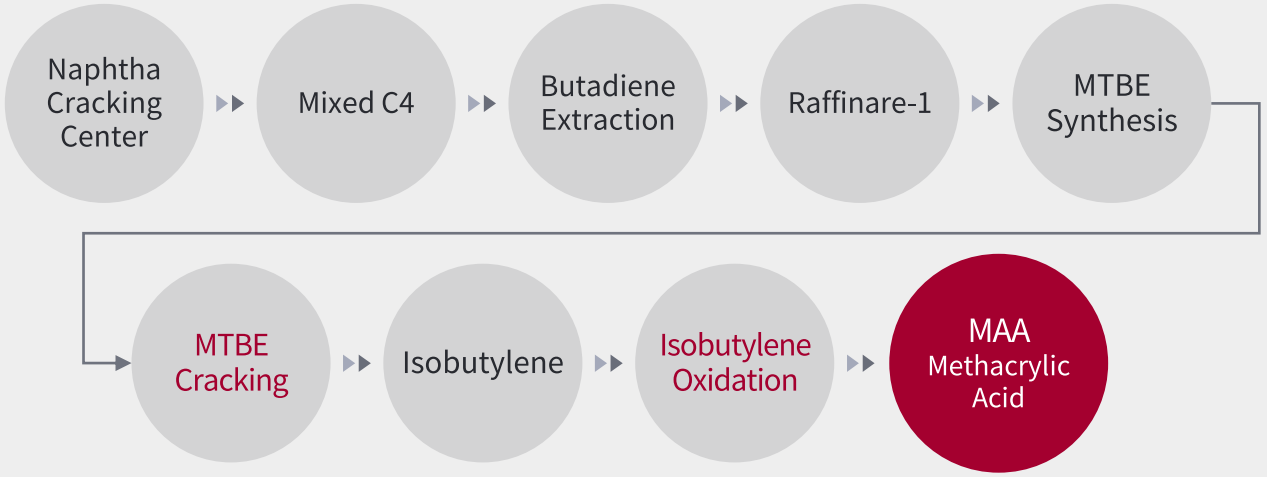
MMA Application

PMMA | Artificial Marble | MMA Polymer Concrete | Transparent ABS | Casting sheet | MBS | SB-Latex | Adhesives | Paint

MAA Manufacturing Process and Application

As a clear, colorless liquid with a pungent smell, MAA is extensively used as a necessary material in products of daily life such as paint, cement superplasticizer, textile paste and adhesive..

Manufacturing Process



MAA Application

Paint

Superplasticize For concrete / cement

Fiber Materials (fiber sizing agent)

Adhesives

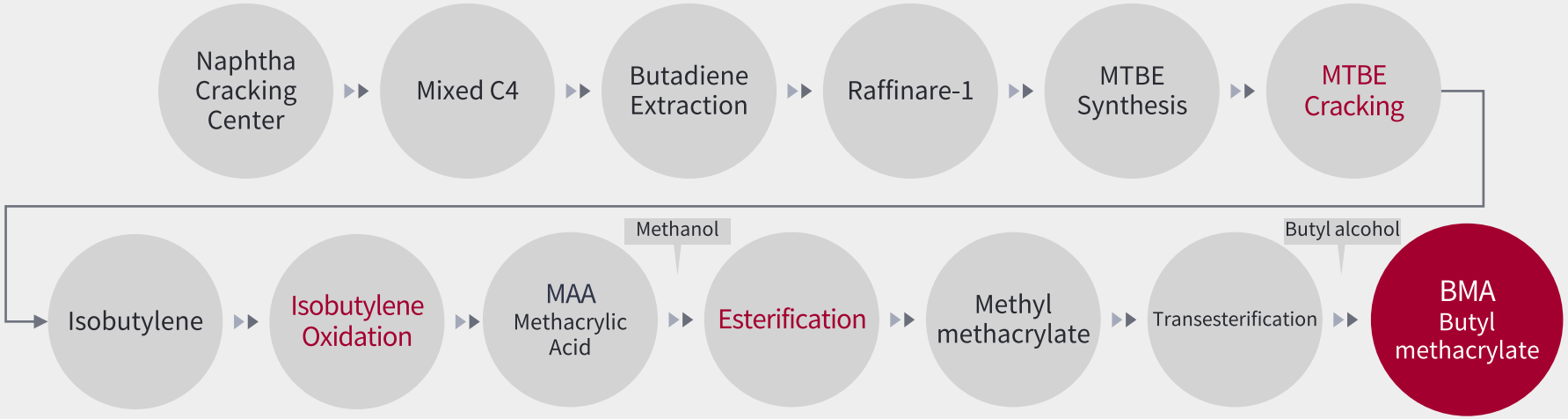
UP resin (Unsaturated polyester)

NBR latex

BMA Manufacturing Process and Application

As a clear, colorless liquid , BMA is extensively used as a necessary material in products of daily life such as paint, lubricating additive, paper finishing agent and textile paste.

Manufacturing Process



BMA Application

Paint

Lubricating additive

Paper finishing agent

Textile paste

PMMA

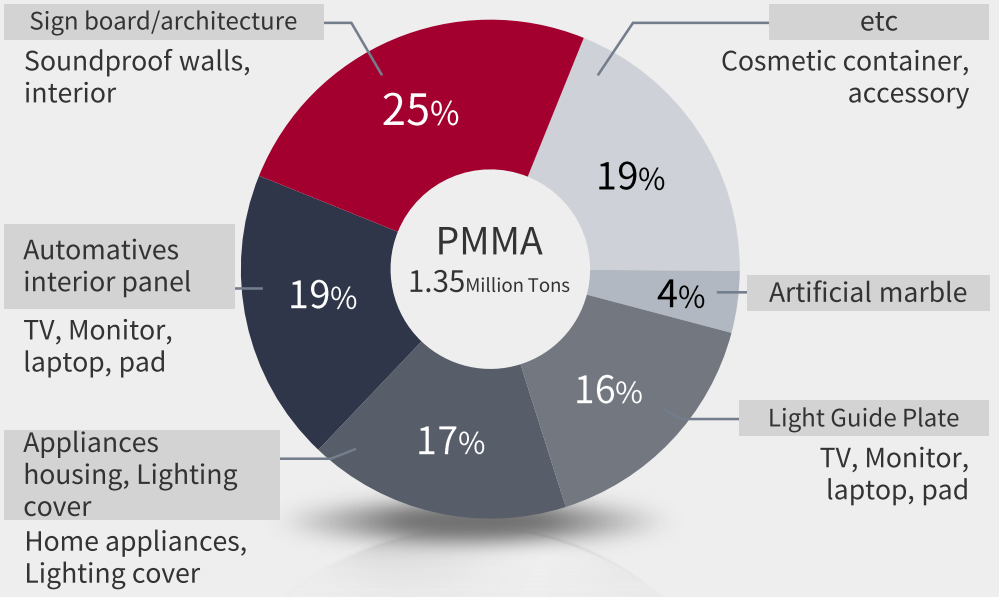
Manufacturing method of PMMA uses suspension polymerization and bulk polymerization industrialized by Sumitomo Chemicals. Suspension method needs dehydration process to control temperature and suitable for small quantity batch production. After the dehydration, it produces type of Bead and extruded Pellet. The bulk polymerization is suitable for continuous mass production and only produces type of extruded Pellet, it does not have dehydration process because of no water used.

PMMA Process Capacity

	Process	Products	MT/Year
PMMA No.1	Suspension Batch	Bead Pellet	70,000
PMMA No.2	Bulk Continuous	Pellet	50,000
	Emulsion Batch	Pellet (Acrylic Rubber)	5,000

Global PMMA Rate of Application

※ ref : Acrylic Resins and Plastics(Chemical Economics Handbook)



PMMA Manufacturing Process and Application

PMMA, MMA monomer-based synthetic resin. It has excellent weather and scratch resistance and the ability to be tinted, so it is widely used as a material for vehicles, optical products, and electrical/electronic instruments.

Manufacturing Process

Suspension Batch Process

MMA → Make-up → polymerization → dehydration (Bead) → extrusion (Pellet) → packaging → PMMA

Bulk Continuous Process

MMA → Make-up → polymerization → extrusion/ collect (Pellet) → packaging → PMMA

PMMA Application

PMMA Grade

General PMMA

Optical grade is of the best optical characteristics among our products. Applied to laptop displays and light guide panels inside LCD monitors, it is of high brightness and transparency

Impact Resistant PMMA

PMMA is excellent in impact resistance compared to general glasses, but relatively lower among plastics so it is demanded to be improved in this respect

SMMA

SMMA resin is a transparent co-polymer based on MMA and SM. While possessing optical characteristics and transparency similar to acrylic resin, it also has low moisture absorption rate compared to general acrylic resin allows for application to high temperature and humidity.

Acrylic Coating Resin

With its unique polymerization technology, LG MMA Corp. produces Bead Grades used for artificial marbles, acryl coatings, acrylic adhesives and paints. Low Tg, high thermal expansion, excellent gloss, acid values required in some cases

Acrylic Impact Modifier

An acrylic impact modifier, has excellent weather resistance and a structure that has been specially designed to have the same refractive index as PMMA, so it helps maintain the high transparency of the existing PMMA.

Characteristics of PMMA

High Transparency

The most excellent transparency among all plastics (Transmits more than 92% of the visible ray area)

Excellent Weatherability

The most excellent weatherability among plastics

High Scratch Resistance

Excellent scratch resistance with its high degree of surface hardness among plastics

LX MMA

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