

## Liquid Crystal Polymers (LCP) – A Global Market Overview

*The report reviews, analyzes and projects the global market for Liquid Crystal Polymers (LCP) for the period 2012-2022*

Published: July 2016

Report Code: CP048

Pages: 154

Charts: 113

Price: \$3600 Single User License, \$5400 Enterprise License

### SUMMARY

Liquid Crystal Polymer (LCP), a high performance engineering plastic, is partially crystalline aromatic polyester based on p-hydroxybenzoic acid (HBA) and other related monomers. The chemical structure and morphology of LCPs is vastly different compared to conventional polyester polymers, due to which there are considerable differences between the two not only in physical and mechanical properties, but also in processability. LCPs have outstanding mechanical properties at high temperatures, excellent chemical resistance, inherent flame retardancy and good weatherability. LCP molecules remain well-ordered even in the melt and slide past each other easily under shear. Due to their excellent flow properties, LCPs can be injection molded into thin-wall components and have outstanding strength at extreme temperatures of up to 300°C.

Due to these unique properties, LCP products have proven successful in a variety of applications, including sockets, bobbins, switches, connectors, chip carriers, dental tools, surgical instruments, pumps, meters and valve liners. In particular, the demand for LCPs in the trend of downsizing and thinning of the electrical and electronic components sector has dramatically increased. Electrical & electronic components sector is the largest end-user for LCP, followed by automotive and industrial sectors, among others. LCP demand is further driven by miniaturization of electrical & electronic components in smartphones, laptops and tablets and new emerging applications such as LEDs. However, in the developed regions such as United States and Europe, the fastest growth is expected to come from automotive sector, as vehicle manufacturers are using lightweight materials for automobile components to increase fuel efficiency and reduce carbon emissions.

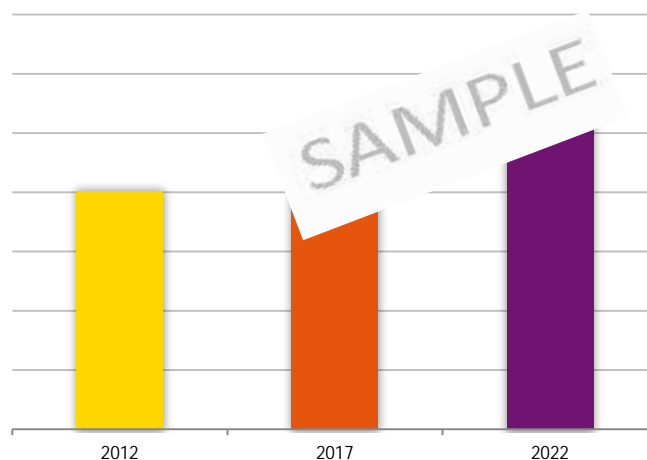
Global Liquid Crystal Polymers (LCPs) market standing at US\$650.1 million in 2016 and projected to touch US\$883.2 million by 2022 growing by a 2016-2022 CAGR of 5.2%. Asia-Pacific leads the global market for LCPs, forecast to be US\$525.7 million (80.9% share) in 2016, which is also likely to record the fastest CAGR of 5.5% over 2016-2022 and reach a projected US\$723.2 million by 2022.

The Liquid Crystal Polymers (LCP) global market report analyzes the key end-use sectors of LCP comprising Automotive, Electrical & Electronics, Industrial and Others. The global markets for the above mentioned end-use sectors are analyzed in terms of volume in metric tons and value in

USD for the period from 2012 to 2022. The study also explores the global market for neat resin LCPs by geographic region and by end-use sector. The report reviews, analyses and projects the Liquid Crystal Polymers (LCP) market for the period 2012-2022 globally and the regional markets including United States, Europe, Asia-Pacific and Rest of World. The regional markets further analyzed for 8 independent countries across North America – United States, Europe – France, Germany, Italy and the United Kingdom; and Asia-Pacific – China, Japan and South Korea.

This global LCP market report includes 113 charts (includes a data table and graphical representation for each chart), supported with meaningful and easy to understand graphical presentation, of market numbers. This report profiles 7 key global players and 9 major players across North America – 2; and Asia-Pacific – 7. Additionally, the report also profiles 6 key independent compounders and processors of LCP. The research also provides the listing of the companies engaged in manufacturing and processing of Liquid Crystal Polymers. The global list of companies covers the address, contact numbers and the website addresses of 25 companies.

Global Liquid Crystal Polymers (LCP) Market Analysis (2012-2022) in Volume (Metric Tons)



## SAMPLE COMPANY PROFILE

### POLYPLASTICS CO., LTD. (JAPAN)

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 Minato-ku, Tokyo 108-8280, Japan  
 Phone: 81-3-6711-8600  
 Fax: 81-3-6711-8606  
 Website: www.polyplastics.com

#### Business Profile

Established in Tokyo, Japan, Polyplastics Co., Ltd. is engaged in the production and sales of a broad range of engineering plastics and polymers. The product line offered by the company encompasses liquid crystal polymer (LCP), acetal copolymer (POM), polybutylene terephthalate (PBT), fiberglass reinforced polyethylene terephthalate (GF-PET), polyphenylene sulfide (PPS), and cyclic olefin copolymer (COC). Polyplastics is the joint venture of Daicel Corporation, Japan (55%) and Celanese, USA (45%). Currently, Polyplastics is the largest LCP producer in the world with an installed production capacity of 15,000 tons/year at its plant in Fuji, Japan. Previously, the Company used trademark Vectra to market LCP under license from Celanese (formerly Ticona). Recently Polyplastics developed latest technology to manufacture LCP and now marketing that product under LAPEROS® LCP brand.

#### Product Portfolio

Products	Particulars
<b>LAPEROS® LCP</b>	Applications encompass low profile narrow pitch connectors, cellular phone antennas, SIMM socket, QFP package, LED case, transistor package (encapsulated parts), parts of injection molded circuits board (MID), LED(MID), PLCC(MID), light sensor (MID), quartz oscillator base (MID), chip carrier socket, CD pickup parts, headphone parts, stereo cassette tape case, cruise control sensor parts, inhibitor switch parts, optical fiber tension member, optical fiber coupler, optical fiber connector, dot printer coil bobbin, dot printer base, motor fan, shutter plate of camera, pump parts, dental tray, setting of the lens base to biaxial base, and slide base
<b>FREQTIS® PPS/LCP</b>	FREQTIS® is high dielectric constant resin compound series using PPS and LCP as the base polymer, jointly developed by Polyplastics Co., Ltd. and Otsuka Chemical Co., Ltd.  Applications include patch antenna (2.65GHz), wireless LAN antenna, RF-ID antenna, cellular phone internal antenna, and board connector

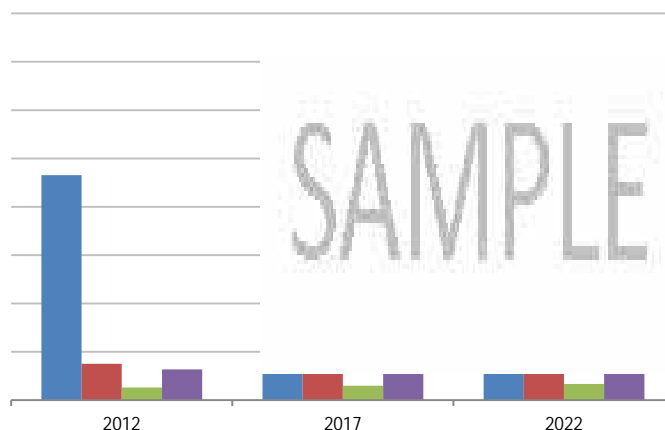
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## SAMPLE TABLE/CHART

Glance at 2017 Global Liquid Crystal Polymers (LCP) Volume Market Share (%) by Geographic Region – United States, Europe, Asia-Pacific and Rest of World



United States Liquid Crystal Polymers (LCP) Market Analysis (2012-2022) by End-use Sector – Electrical & Electronics, Automotive, Industrial and Others in USD Million



## KEY PLAYERS PROFILED

- Celanese Corporation
- JX Nippon Oil & Energy Corporation
- Polyplastics Co., Ltd.
- Shanghai PRET Composites Co., Ltd.
- Shenzhen Wote Advanced Materials Co., Ltd.
- Solvay SA
- Sumitomo Chemical Company Limited
- Toray International, Inc.
- Ueno Fine Chemicals Industry, Ltd.

## REGIONS COVERED

- **United States**
- **Europe** (France, Germany, Italy, The United Kingdom and other countries)
- **Asia-Pacific** (China, Japan, South Korea and Rest of Asia-Pacific)
- **Rest of World**

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