



SUPPLIER

for Medical Device Advancement

Customizable, Compliant, Ready for Global Supply





2

6

8

16

17

18



Why LG Chem

① Introduction of LG Chem
② Why Choose LG Chem's Medical Device Materials?
③ Importance in Modern Healthcare Solutions

Medical-Grade Resin Portfolio

① ABS (Acrylonitrile Butadiene Styrene)
 ② PC (Polycarbonate)

Key Functionalities & Strengths

Supply Stability

Total Solution Provider
Sustainability Transition
Versatile Color Formulation

Application Case Studies & Benchmarking

Conclusion & Contact Point

Technical Data Sheet (TDS)







LG Chem extends beyond traditional chemistry to establish itself as a global science leader, delivering new value to our customers. By merging knowledge, technology, and solutions from petrochemicals, advanced materials, and life sciences, we connect science to life for a better future.

Business Performance and Business Areas



Sales in 2024 **KRW 48.9**trn (Approx.)





Petrochemicals

- NCC/PO Division
- PVC/Plastricizers



 Cathode Material Division

Life Science

 Primary Care Division



Domestic: 13,920 Overseas: 4,830



Production Capacity

Sites of Business 65

Domestic: 17 Overseas: 48

- Division
- ABS Division
- Acrylates/SAP Division
- High Performance Materials Division
- Sustainability Division
- Catalyst Division

- Electronic Material **Business Unit**
- Engineering Material Division
- Separator Material Division
- Water Solution **Business Unit**
- Specialty Care Division
- Aesthetic Division

Unit: KTA

Ethylene	3,350	HDPE	550	Acrylic Acid	650
Propylene	1,980	LLDPE	600	IPA	205
BD	510	PP	380	NPG	175
BZ	900	LDPE/EVA	460	Synthetic Rubber	365
BPA	505	PVC	1,100	Specialty Resin	310
ABS/SAN	2,380	Plasticizer	175	POE	380
PS	40	Alcohol	145	CNT	3
EPS	90	PC	170	SAP	500
Aerogel	200,000m²	NAOH	1,000	NBL	555
Chemical Recy	vcle 20	Binder	23		

510
900
505
2,380
40
90
200,000m ²
20

PP	380
LDPE/EVA	460
PVC	1,100
Plasticizer	175
Alcohol	145
PC	170
NAOH	1,000
Binder	23

*As of 1Q, 2025



Why Choose LG Chem's Medical Device Materials?

LG Chem is a leading materials science company committed to fulfilling customer needs and providing **comprehensive solutions**. We offer **a broad portfolio of high-performance materials**, specifically designed for the medical device industry. Our materials are engineered to meet the stringent demands of medical applications – ensuring **reliability**, **safety**, **and environmental responsibility**.

Key Advantages of LG Chem's Medical Device Materials



Supply Stability Global Network Dedicated Spec Lock-in



Total Solution Provider

Global Certification
Global Technical Support
Diverse Portfolio for Customization
Partnering for Innovation



Sustainability Transition
Reliability
Pre-Verification



• Global Color Order System

Variety
 Certification

Trend Research & Insight
 Color Forecasting & Proposal

Product Portfolio

Application	Medical Equipment, Connectors	Autoinjector Housing, Connectors	Connectors, Luer Locks, LED Masks, Renal Device (Dialyzer Housing)
Product	General ABS (p.6)	Transparent ABS (p.6)	PC (p.7)
Grade	HF380-M	TR558A-L	PC2001-10 (EtO/Steam), PC2001-20

(EtO/Steam), PC2080-20 (Gamma sterile)

Feature

Offering durability and chemical resistance

Providing clarity and strength

Offering excellent transparency, heat resistance, and gamma sterilization compatibility



Importance in Modern Healthcare Solutions

In today's rapidly evolving healthcare landscape, the role of medical device materials has become increasingly critical in enhancing patient care, safety, and operational efficiency. As medical devices become more advanced and specialized, the materials used in their construction must meet stringent requirements for biocompatibility, durability, and regulatory compliance.

According to recent industry reports, the global medical device materials market is projected to reach **\$67.32 billion by 2034**, growing at **a CAGR of 13.24%** from 2025 to 2034. This growth is driven by the increasing demand for minimally invasive procedures, personalized medicine, and the integration of smart technologies in medical devices^[1].

Medical Engineered Materials Market Size 2024 to 2034 (USD Billion)^[1]



[1] Medical Engineered Materials Market Size and Forecast 2025 to 2034, Precedence Research, 2025.

Meeting Regulations Without Compromising Performance

As regulations become more stringent, medical device manufacturers are now expected to deliver solutions that not only **meet these standards** but also **ensure outstanding performance**, especially in high-stress environments such as surgical settings.





As a leading materials science company, LG Chem has dedicated significant resources to developing high-performance materials that meet these demanding requirements.

We understand that the modern healthcare sector is no longer focused on one-size-fits-all solutions but rather requires materials tailored to specific applications and patient requirements.

As a Trusted Partner and Total Solution Provider

Our extensive portfolio of medical device materials includes General ABS (Acrylonitrile Butadiene Styrene), Transparent ABS (Acrylonitrile Butadiene Styrene), and PC (Polycarbonate), each engineered to provide optimal performance in various applications such as dental chairs, insulin pens, and dialyzer housings.



These materials offer superior transparency, heat resistance, and chemical resistance, ensuring reliable performance in critical healthcare environments.

By leveraging our advanced material science expertise and robust global network, LG Chem is well-positioned to support our customers in navigating the complexities of the healthcare industry.



We are not just a supplier; we are a trusted partner that offers stability, innovation, and a commitment to delivering customized, comprehensive total solutions that meet the unique demands of medical device manufacturers.

Why ABS and PC Are Commonly Used in Medical Devices

ABS (Acrylonitrile Butadiene Styrene) and PC (Polycarbonate) are among the most widely used plastic materials in medical devices.

This is because they offer a well-balanced combination of mechanical strength, processability, cost-efficiency, and safety.





 Excellent mechanical property balance

Excellent processability

High flowability

 Biocompatibility complied with international standard



Excellent transparency

 Excellent mechanical property balance

- Excellent processability
- Biocompatibility complied with international standard



- Exceptional transparency
- High strength with excellent heat and impact resistance
- Excellent biocompatibility
- Excellent dimensional stability



2. Medical-Grade Resin Portfolio

ABS (Acrylonitrile Butadiene Styrene)

ABS (Acrylonitrile Butadiene Styrene) is a highly-functional plastic known for its excellent **processability**, **mechanical properties**, and **chemical resistance** – making it ideal for medical device and components. **LG Chem is the global No.1** in ABS market share, **trusted by top medical brands**.

Specification

Category	General ABS (Acrylonitrile Butadiene Styrene)	Transparent ABS (Acrylonitrile Butadiene Styrene)
	HF380-M	TR558A-L
Production	- Production line can be assigned and operated	
Degulatory and	- Certified to ISO 10993-4, 5 (Certificates available)	
Regulatory and Quality Certification	- USP Class VI certified	
Quality ocranoution	- FDA DMF listed	

Environmental Regulations and Global Standards	- ROHS, SVHC satisfied - Animal-free statement available	
Decumentation	- TDS can be provided	
Documentation	- Supporting data such as chemical resistance test reports available	
Management	- 12-month Notification of Change (NOC) program available	
	- No restrictions within Capa	
Supply Chain Stability	- Manufactured in Yeosu, Korea	
and Global Response	- Lead time to US/Europe 8–10 weeks	
	- Warehouse in operation	
Technical Support	- Injection molding guide available (including processing guide in TDS)	
and Collaboration	- New project collaboration is possible (RFQ~)	





07



PC (Polycarbonate) is a high-performance engineering plastic which offers great transparency. It is resistant to impact and heat, and is stronger and lighter than general plastics.

Specification

Category

PC (Polycarbonate)

PC (Polycarbonate)



category

PC2001-10 (EtO/Steam) PC2001-20 (EtO/Steam) PC2080-20 (Gamma sterile)

Production	 Production line can be assigned and operated 		
Regulatory and Quality Certification	- Certified to ISO 10993-3, 4, 5, 10, 11 (Certificates available)	- Certified to ISO 10993-3, 4, 5, 6, 10, 11 (Certificates available)	
Environmental Regulations and Global Standards	- ROHS, SVHC satisfied - Animal-free statement available		
Documentation	- TDS can be provided - Supporting data such as chemical resistance test reports available		
Management	- 12-month Notification of Change (NOC) program available		

Supply Chain Stability and Global Response

No restrictions within Capa
 Manufactured in Yeosu, Korea
 Lead time to US/Europe 8–10 weeks
 Warehouse in operation

Technical Support and Collaboration Injection molding guide available
 New project collaboration is possible (RFQ~)







3. Key Functionalities & Strengths





LG Chem has a robust **global network** with various functions, including production, R&D, sales, and marketing, operating worldwide. To maintain the specifications and quality that meet customer needs, LG Chem manufactures products in dedicated lines based on a **Notification of Change (NOC)** for at least 12 months. Through this, LG Chem promises a reliable and stable supply under any circumstances.

LG Chem's Commitment to Supply Stability



Global Network

Dedicated Spec Lock-in

Global Network

When the world was engulfed in the tumult of a pandemic, many of our competitors faced supply crises due to the shutdown of medical material factories. They were forced to urgently seek alternatives, and the process of evaluation and certification posed significant physical challenges. There was also an anticipated risk of production delays and reduced profitability for our customers.

However, LG Chem was different. Thanks to our **solid global network** and **rapid response capabilities**, we were able to transform the crisis into an opportunity.



Global Regional Network



During the COVID-19 pandemic, LG Chem overcame the crisis by maintaining supply stability through our systematically established regional networks worldwide. LG Chem's ability to provide reliable supply under any circumstances is renowned in the industry.

Global Functional Network



Sales / Marketing Offers Spec-In product solutions tailored to local market and customer needs



10

Dedicated Spec Lock-in

When customers select materials for medical devices, what is most critical to them? It is the **accurate specifications and consistent quality**. In fact, 73% of customers consider these factors as their top priorities, according to a survey.^[1]

To meet these customer demands, LG Chem supplies products with **precise specifications and quality** from our **dedicated production lines**.

Dedicated Product Line



Specifically, LG Chem operates dedicated production lines **specialized for medical device materials**, ensuring a stable supply under stringent safety and quality standards.

Consistent Supply



Additionally, LG Chem adheres to the **Notification of Change (NOC)** guidelines and guarantees continuous supply for **at least 12 months** based on dedicated specifications tailored to meet customer requirements.

[1]Source: ClickUp Blog - Customer Needs Analysis (clickup.com/ko/blog/236593/customer-needs-analysis)



Total Solution Provider



At LG Chem, we understand that medical device manufacturers require not just high-quality materials, but also a seamless support system that ensures compliance, flexibility, and innovation throughout the product lifecycle. As a **total solution provider**, we offer a holistic approach to address all your needs, from material selection to finished product delivery.



Global Certification

Our commitment to excellence is reflected in our ability to meet stringent global standards, including **ISO 10993**, **USP Class VI**, and **FDA**. These certifications ensure that our materials not only meet but exceed the safety and quality requirements of the medical device industry.

ISO 10993

ISO 10993

Evaluates biocompatibility of medical materials, including cytotoxicity, sensitization, and irritation.



USP Class VI

Confirms material safety through rigorous biological testing, as defined by the U.S. Pharmacopeia.



FDA

Certifies that the material or device meets safety and performance requirements for market approval.

11



Global Technical Support



Providing Materials



Comprehensive Assistance



Injection

Molding



Processing Guidance



Sample Testing

Total Process Support

Our global customer solution center is at the heart of our technical support system. Beyond simply providing materials, we offer comprehensive assistance, including injection molding and processing guidance, sample testing, and support throughout the entire manufacturing process. Our team of experts is dedicated to helping you bring innovative medical devices to market efficiently.

Diverse Portfolio for Customization

We offer a wide range of products that can be tailored to meet your specific requirements. Whether you need enhanced flexibility, durability, or biocompatibility, we have the solutions to support your innovation.





By partnering with LG Chem, you gain a trusted ally that not only supplies high-quality material but also provides the technical expertise and flexibility needed to bring your medical devices to life. Let us help you shape the future of healthcare with our comprehensive solutions.

Partnering for Innovation

LG Chem is a reliable partner that provides an all-in-one solution to assist you throughout the entire process of medical device manufacturing, backed by expertise.

Providing an All-in-One Solution Across All Areas







For a Sustainable Tomorrow, with LG Chem Medical Device Materials

LG Chem's medical device materials are not just products; they are a reliable partner supporting customers in their **sustainable transition**. This journey is akin to preparing in advance for a rapidly evolving future.

LG Chem has **sustainable offsets for nearly all virgin products**, enabling customers to expedite their journey towards achieving eco-friendly goals. This is similar to having pre-prepared traffic signals on the road, allowing for a smooth transition without unnecessary delays.



Reliability: Trust Through Consistent Supply

LG Chem consistently supplies high-quality, diverse eco-friendly material products through **product investment** and **global partnerships**, earning trust.



Pre-Verification: Comprehensive Solutions Through Pre-Testing

LG Chem supports comprehensive risk assessments for all products through pre-customer testing at our **Global Customer Solution Centers** located worldwide. This enables us to provide customers with **holistic and tailored solutions**.

Global Customer Solution Center





Variety: Diverse Portfolio of Eco-Friendly Materials

LG Chem offers a **diverse portfolio of eco-friendly materials** catering to customer needs, ranging from Recycled to Bio options.

Eco-Friendly Product Line-Up





Certification: Trusted Partner with Verified Eco-Friendly Credentials

LG Chem's products contribute to customers achieving their environmental goals by acquiring **global eco-friendly certifications**.

LG Chem's Global Eco-Certification Footprint

ULECV (Environmental Claim Verification)



GRS (Global Recycled Standard)

ISCC Plus

Verifies environmental claims like recyclability Certifies product safety and quality Validates recycled content and traceability Certifies bio-based and circular materials

14



Versatile Color Formulation

LG Chem offers a **comprehensive color solution** for medical device materials, combining a **global color order system** for quick and reliable supply, **trend research and insights**, and **color forecasting**. Our expertise ensures that your products not only meet but exceed color expectations, blending innovation with precision.

Color Design Capabilities



Global Color Order System

LG Chem provides a broad range of colors for stable supply, with customization options available through LG Chem On.



Trend Research & Insight

LG Chem provides the latest trend insights across society, culture, lifestyle, design, and color through design newsletters.



Color Forecasting & **Proposal**

LG Chem analyzes color trends to propose tailored materials and shades, anticipating industry-specific changes.

In particular, due to the increasing demand for **diverse colors for different components** within a single Medical Device product, driven by **high quality expectations**, the ability to supply high-quality materials in various colors with consistent specifications within a short timeframe has become crucial.

LG Chem has independently established a **Color Design Center**, leveraging insights from in-depth industry color trend research to predict and propose **customized colors** for customers. LG Chem possesses the capability to produce and supply these colors **reliably** and **efficiently**.

Diverse Color Palettes





4. Application Case Studies & Benchmarking



ABS on Connector

Product

General ABS, Transparent ABS

Background

Customer desired for high processability, chemical resistance, and transparency led to applying LG Chem's products.

Effect

Customer company produced products efficiently without major process changes, achieving high customer satisfaction with durable products.

PC on Connector

Product

PC

Background

Customer wanted a balanced product with physical, mechanical properties and necessary certifications.

Effect

Customer company secured high customer satisfaction by achieving the desired product quality with excellent properties and gained trust from final users through obtaining necessary certifications.







Product

PC

Background

Customer desired a material with excellent physical mechanical properties and chemical resistance for a premium LED mask intended for home use.

Effect

Customer company achieved high customer satisfaction with its luxurious color representation and excellent durability.



5. Conclusion & Contact Point

Beyond Materials: LG Chem as Your Growth Catalyst

1. Supply Stability

LG Chem ensures global product supply consistency with dedicated production lines for over a year, adhering to NOC regulations.

2. Total Solution Provider

LG Chem offers end-to-end solutions for customers, supported by global certifications, technical support, customization, and partnerships.

3. Sustainability Transition

LG Chem helps customers transition smoothly to eco-friendly practices with reliable, certified solutions.

4. Versatile Color Formulation

LG Chem guarantees swift, reliable color supply for medical devices through a global order system, with trend research and forecasting.

Innovative Medical Device Material Renaissance

Contents Series on Advanced Medical Device Materials



17

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6. Technical Data Sheet (TDS)

Download the Technical Data Sheet (TDS) of materials appropriate for your medical devices.

ABS (Acrylonitrile Butadiene Styrene)





PC (Polycarbonate)





