



Engineering Plastics Business



CONTENTS

01 KOLON Group 03

02 KOLON Industries 06

03 ENPLA Business 11

APPENDIX 30



01

KOLON Group

Group Overview



1954

Established

47

Affiliates

12,798

Employees

USD 8.1 B

Annual revenue

(as of 2024)



KOLON Heritage



1954 - 1956 Foundation

First to Introduce Nylon in Korea

1963 - 1976 Growth

Growth in Synthetic Fiber Manufacturer

1990 - 1999 Selection & Focus

Development of 3-core* Business Pillars
*. Materials, Construction&Retail, Fashion

1957 - 1962 Takeoff

First to Manufacture Nylon Yarn in Korea

1977 - 1989 Diversification

Expansion into Strategic & New Industries

2000 - 2009 Challenges & Growth

Exploring New Markets &
Securing Future Growth Drivers

2010 - Present Evolution & Transformation

Expansion into Future Growth Areas



02

KOLON INDUSTRIES

Business Overview



Company	KOLON INDUSTRIES, INC.
CEO	Sung Huh
Founded	1957
Business Areas	Industrial Materials, Chemicals, Fashion, Others.
Employees	4,017 (March 2025)
Headquarters	(KOLON One&Only Tower) 110, Magokdong-ro, Gangseo-gu, Seoul, Korea
Listed	Feb, 01, 2010 (KOSPI 120110)



Unit: USD Billion*

IFRS Standards, 2025

*.translated into USD at the year-average exchange rates.

Mobility Solutions

Automotive Interior Materials, Airbag, Seat Module, Spunbond, CHAMUDE, HDPE, Hydrogen Fuel Cell Materials/Parts(Humidity Control System, PEM, MEA), Hydrogen Membrane

Specialty Film & Fiber

Tire Cord, Aramid, Flexible Display Materials(CPI), Barrier Film, IT Chemical Materials, DFR(Dry Film Resist)

Chemical Resins

Hydrocarbon, Phenol, Epoxy, PET Resins

Engineering Plastics

POM, PA, PBT, TPC-ET, Others.

Fashion (KOLON Industries FnC)

KOLON SPORT, Cambridge Members, Henry Cottons, Series, Couronne, Suecomma Bonnie, Others.

History



1957 Establishment of Korea Nylon Co., Ltd.
1963 Completion of Korea's first Nylon Yarn Plant
1968 Completion of PET yarn plant
1973 Entry into **Tire Cord** business
1976 Entry into **Phenol & Epoxy & Petroleum Resin** businesses

1991 Entry into **Nylon Film & Synthetic Leather** businesses
1996 Entry into **Airbag & Membrane** businesses
1998 Commercial Production of POM (Gimcheon Plant 3)

2012 POM capacity expansion (+35,000 tons)
2017 Completion of Gimcheon Plant 4 (PA, PBT Compound)
2018 Completion of 'Kolon Basf innoPOM' POM Plant
Entry into **Flexible Display Film** business
2019 World's first commercial production of
Hydrogen Fuel Cell Humidity Control System
2021 Production of specialty petroleum resins (Yeosu Plant)
2023 Aramid capacity expansion (double-up)
Entry into **EV Battery Recycling** business

~ 1980

1980's

1990's

2000's

2010~



1981 Entry into **PET Film** business
1985 Entry into **Spunbond** business



2004 Entry into **Aramid** business
2007 Merger with 'Kolon Chemical'
2009 Merger with 'Kolon FnC'



Sustainable Solutions for the Future



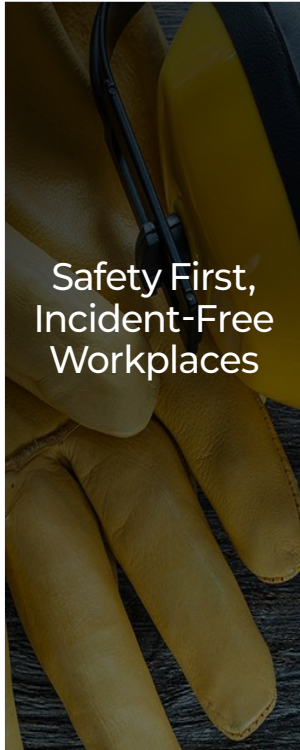
2050 Net Zero



Creating
Shared Value
across the
Value-Chain



Advancing
Eco-Products
& Expanding
Sustainable
Businesses



Safety First,
Incident-Free
Workplaces



Compliance &
Ethics
Management
System

Sustainability



Eco-life



Sustainable Living

- Eco-energy Class 『Eco Long Long』
- FnC upcycling Brand 『RE:CODE』
- Wildlife Conservation Campaign 『KOLON SPORT NOAH Project』, Community Development Program 『epigram Local Project』

Future-life



Empowering the Next Generation

- Foundation Scholarship Program
- Children Support Program
- Urban Playground Revitalization Project

Culture-life



Culture, Arts and Sports

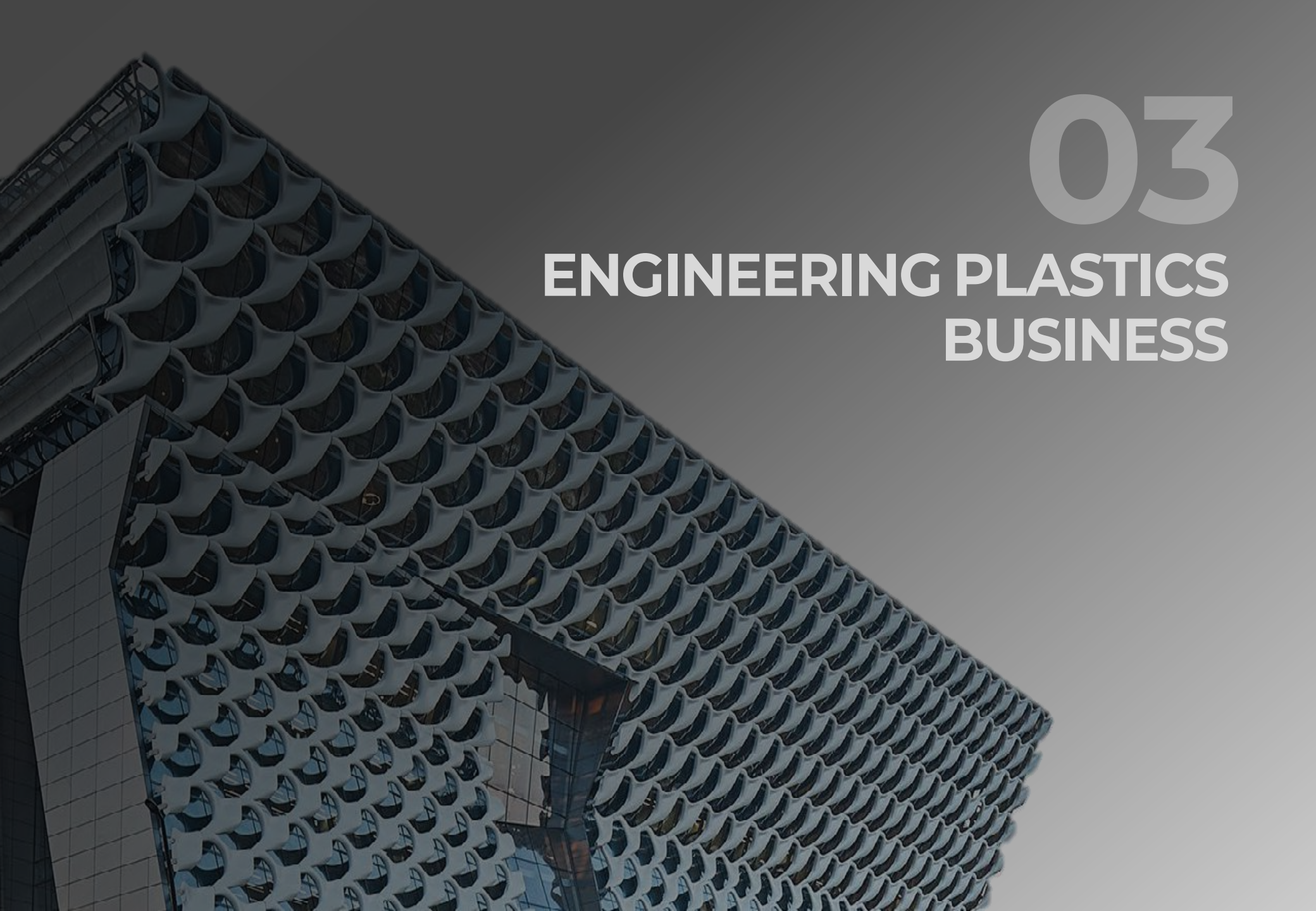
- Art Center 『Space K』
- Sponsorship of Marathon and Archery Teams
- SERIES: Warm Heart Campaign
- FnC Arts & Culture Sponsorship

Share-life



Stronger Communities

- 『Making a Better World』 Campaign
- KOLON Family Volunteer Program
- Dream Partners Week
- Blood Donation Campaign
- Others



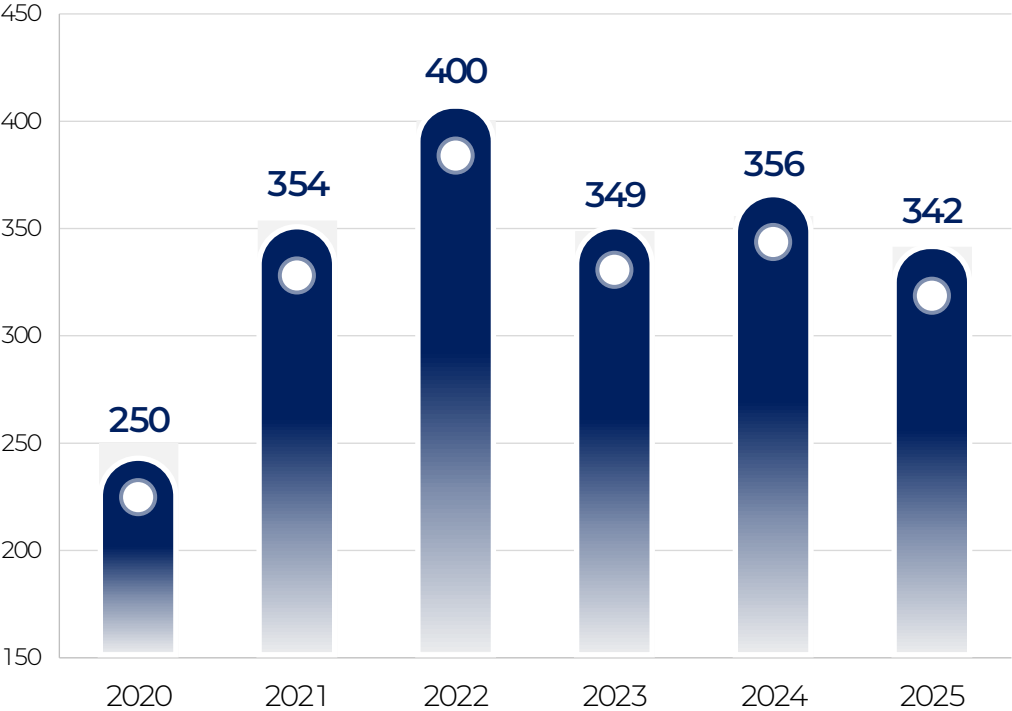
03

ENGINEERING PLASTICS BUSINESS

Business Overview



[Revenue Overview]



Unit: USD Billion*

IFRS Standards, 2025

*.translated into USD at the year-average exchange rates.

[Production Capacity]

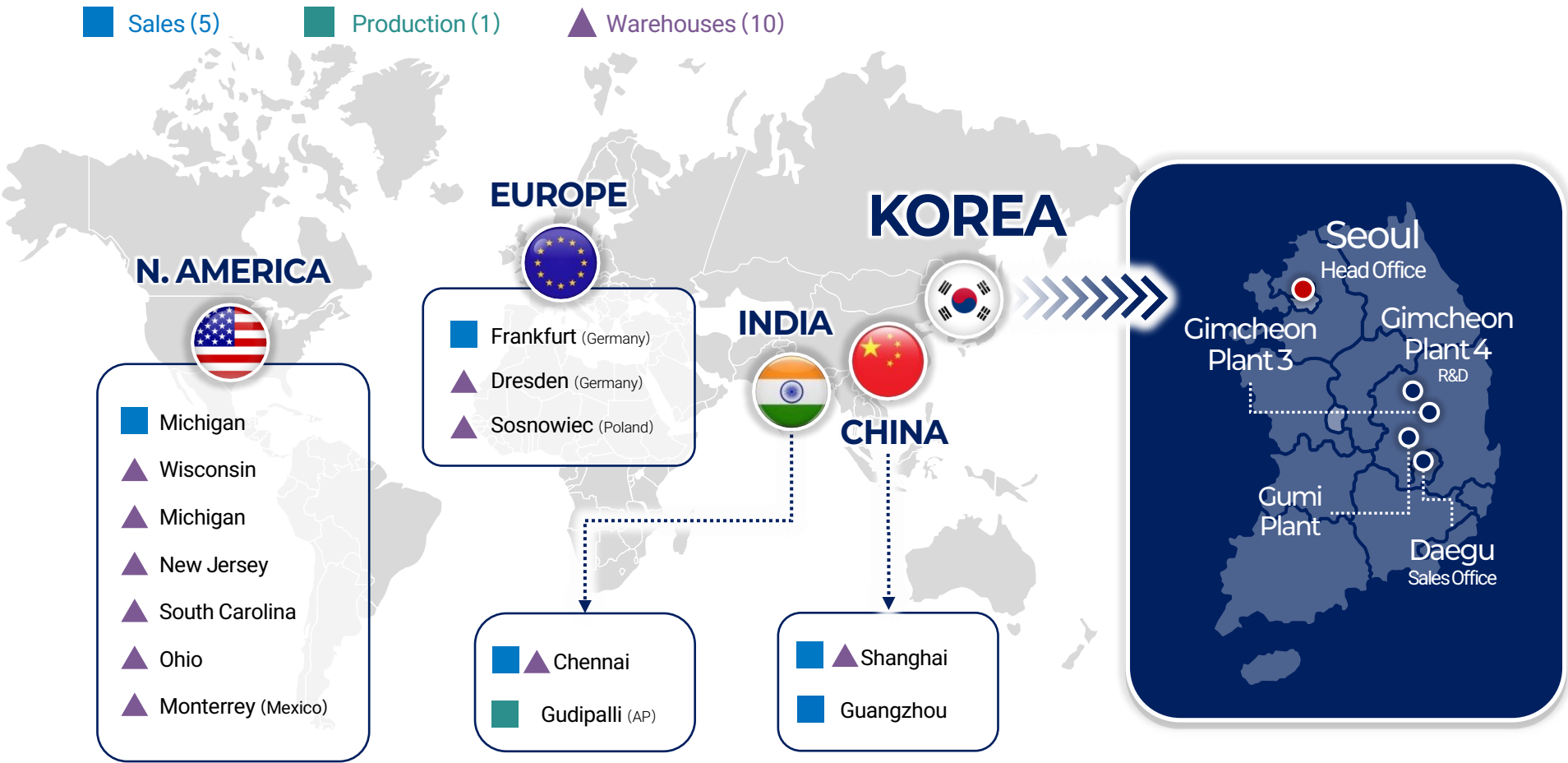


POM
150,000 MT
(incl. KolonBasfInnoPOM)



Compound
60,000 MT

Global Network



Product portfolio



Total 830 grades

[Polymerization]

KOCETAL®
POM

KOPEL®
TPC-ET

[Compound]

KOPA®
PA66

KOPA®
PA6

SPESIN®
PBT

KompoGTe®
LFT

[Recycled Products]



POM • PA6 • PA66 • PBT • TPC-ET

Conventional



Natural Gas



Conventional
POM

PCF 100%

ECO-B



Bio-originated
waste



Bio-POM

PCF 30% ↓

ISCC Plus

ECO-LC



Blue Hydrogen +
Non-Renewable CO2



Low-Carbon
POM

PCF 45% ↓

ISCC CFC

ECO-E



Green Hydrogen +
Renewable CO2



E-POM

PCF 100% ↓

ISCC Plus

ECO-R



Pre/Post
Consumer Recycled

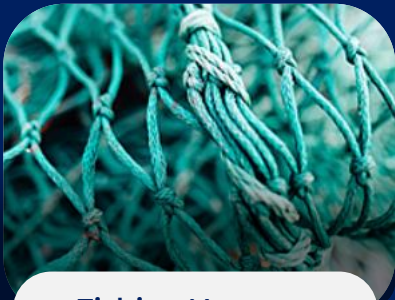


Recycled POM

PCF depends
on content

ISCC Plus

ECO-R **PA6**

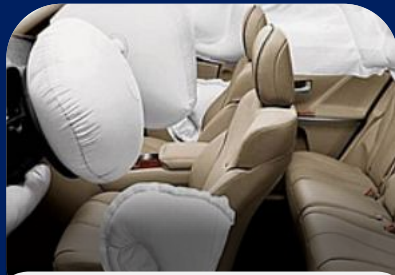


Fishing Net (OP¹⁾)

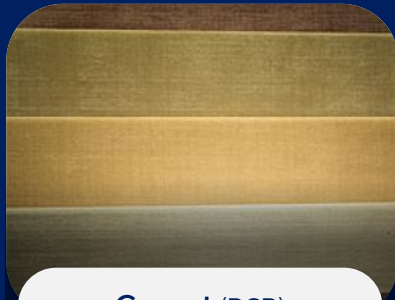


Mooring Rope

ECO-R **PA66**



Airbag (PIR²) / ELV PCR³)

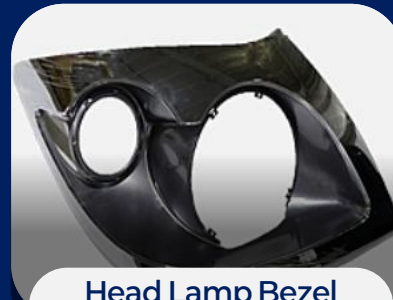


Carpet (PCR)

ECO-R **PBT**

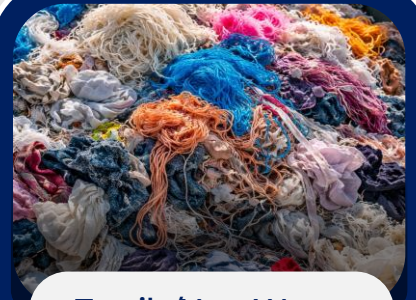


PET(PCR) for PBT Alloy



Head Lamp Bezel
(PIR, PCR)

ECO-BR **TPC-ET**



Textile/Yarn Waste



Bio-Waste

1) OP : Ocean Plastic

2) PIR : Post Industrial Recycled

3) ELV : End of Life Vehicles , PCR : Post Consumer Recycled

Applications

PA6 / 66



[Automotive parts]



FEM carrier
PA6

- Sufficient strength
- Easy to flow in mold
- Good adhesion to metal



Inside door handle
PA6

- Enhanced resistance to scratch
- Resistance in UV & weather



Air vent wing
PA6

- Good surface quality
- Low warpage
- Extra high strength/Stiffness



DVRS* Camera
PA6

- Low VOCs emission
- High stiffness
- Low friction * Drive Video Record System



H2 pressure vessel liner
PA6

- Processability for Blow & Injection molding



Console bracket
PA6 (PCR)

- Eco-friendly
- High strength



Cylinder head cover
PA66

- NVH reduction
- Long-term heat resistance
- Dimensional stability

[Industrial products]



Railroad plate
PA6

- Wear resistance
- Electrical insulating property

Applications

PA6 / 66



[Automotive parts - EV]



Battery pack bus bar cover
PA6

- Broad & stable color portfolio
- High temperature resistance



Battery pack housing
PA66

- Dimensional stability



Charging door module
PA66

- High strength & stiffness
- Dimensional stability



VESS*
PA66

- High strength & stiffness
- Dimensional stability

** Virtual Engine Sound System*

[Electrical & Electronics]



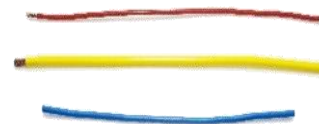
Door lock housing for washing machine
PA6

- Flame retardancy



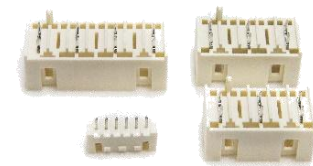
High voltage connector
PA66

- Good mechanical properties with pigments



Cable jacketing
PA66

- Good for extrusion
- Good surface quality



Connector
PA66

- Flame retardancy (V0 class)
- Halogen-free

Applications

PBT



[Automotive parts]



Headlamp bezel

- Excellent surface (Low fogging)
- High flowability



Door latch housing

- Sufficient strength
- Dimensional stability



Wiper blade

- Resistance in UV light
- Weather resistance
- Dimensional stability



MoC
(Motor on Caliper)

- Laser transmittance
- Dimensional stability

[Auto parts - EV]



Inlet charging protector

- High strength & stiffness
- Dimensional stability
- Easy to flow

[Electrical & Electronics]



Connector

- Impact modified
- Dimensional Stability
- Hydrolysis resistance



High voltage connector

- Good mechanical properties with pigments



Optical cable loose tube

- High viscosity & stiffness
- Dimensional Stability

Applications

POM



[Medical devices]



Insulin Pen



Medical valve



Nest board

- Complaint with Global Medical Standards
- Excellent Creep & Fatigue Resistance
- Excellent Resilience & Chemical Resistance

[Electrical & Electronics]



Connector lever

- Low VOCs emission
- Sufficient stiffness
- Low friction

[Consumer products]



Gas lighter

- Bio-POM (from Bio-Methanol)



Cosmetic dispenser

- Low VOCs emission

[Food contact]



Electric dough maker shaft

- Complaint with Global Drinking Water & Food Contact Standards



Faucet (Water Tab)

Applications

POM



[Automotive parts - EV]



HVAC part

- Low Formaldehyde Emission based on Global OEM Standard



Fuel Pump

- Chemical Resistance
- Dimensional Stability



Door handle

- Advanced Metallic Texture
- Low VOCs Emission based on Global OEM Standard



Seatbelt button

- Low Formaldehyde Emission based on Global OEM Standard



Clip, Fastener

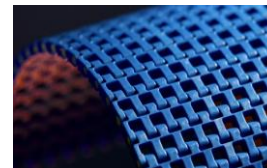
- Low VOCs Emission
- High stiffness
- Low friction

[Industrial products]



Water pump inner housing

- Wear Resistance
- extra-high Strength



Conveyor belt

- Wear Resistance
- Excellent mechanical properties



Extruded rod

- Fatigue Endurance for Extrusion & Injection
- Dimensional Stability

Applications

TPC-ET, LFT



[Automotive parts]



CVJ boots
TPC-ET

- Long-term durability
- Heat resistance



Headlamp bracket
LFT

- High strength
- Impact modified



Battery tub
LFT

- High mechanical properties



Speaker frame
LFT

- High strength

[Consumer products]



Shoes (Mono-filament)
TPC-ET

- Translucent & Elasticity



Microcellular foaming
TPC-ET

- Elasticity & Foamability



Artificial leather
TPC-ET

- Good Texture
- Wear resistance
- Low VOCs Emission

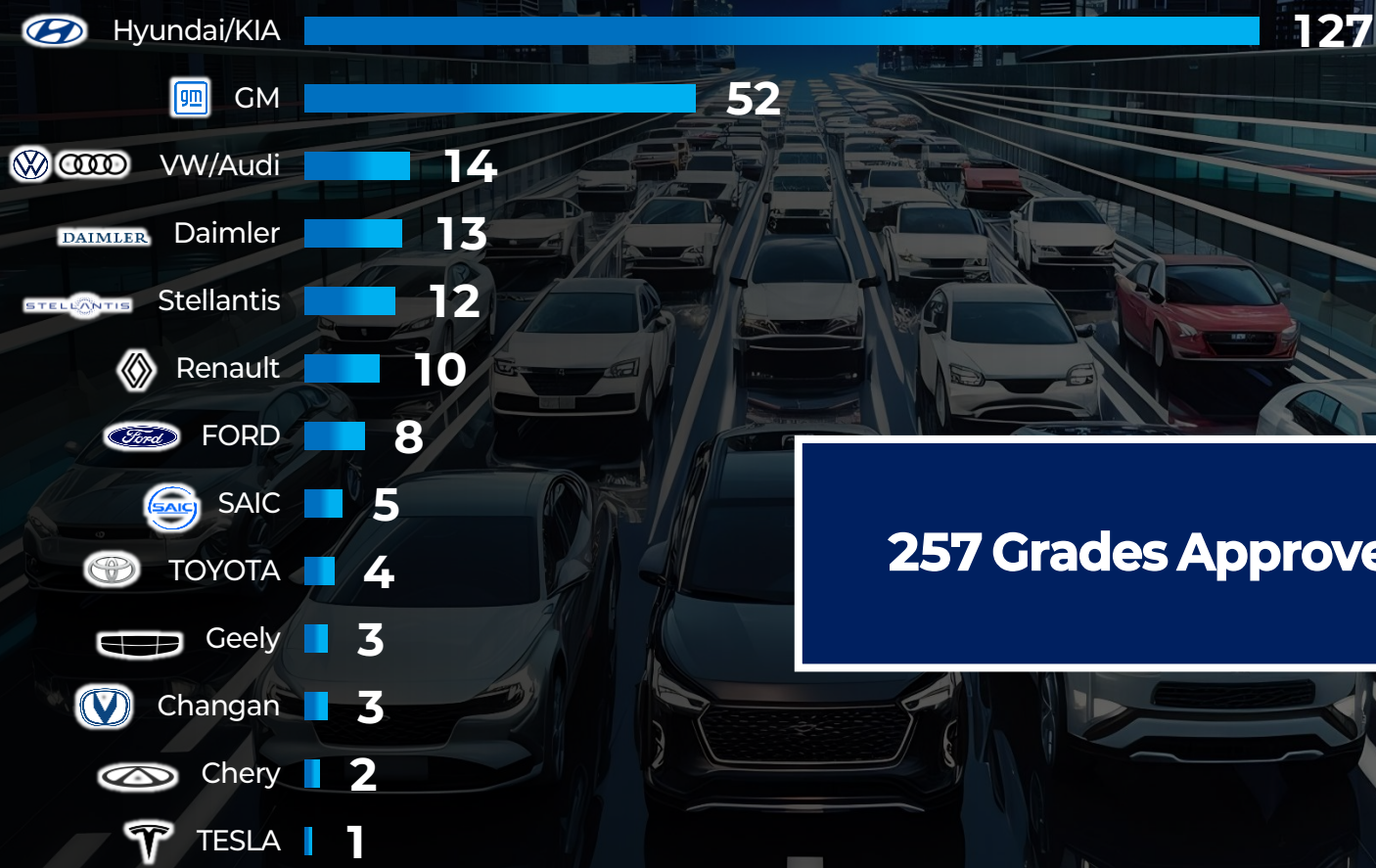
[Industrial products]



Rail pad for railway
TPC-ET

- High temp. resistance
- Hydrolysis resistance

Automotive OEM Certifications



257 Grades Approved by Auto OEM

Automotive OEM Certifications



eco-friendly materials

[9 Grades Approved by Auto OEM]

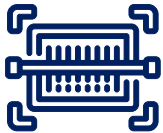
※ PCR PET : PET Bottles / PCR PA6 : Fishing Nets

OEM	Application	Material Desc.	Recycled Content	SPEC No.
HKMC	Connector	PBT+PET – GF30%	PCR PET 20%	MS941-91 Type A-1 (Nov.2023)
	Head lamp bracket	PA6 – GF30%	PCR PA6 20%	MS211-96 Type B-1 (Apr. 2025)
	Head lamp Base plate	PBT+PET – GF50%	PCR PET 20%	MS216-91 Type A-1 (Apr. 2025)
	Outside Handle base	PA6 – GF30%	PCR PA6 30%	MS211-96 Type B-1 (Jun. 2025)
	Console bracket	PA6 – GF30%	PCR PA6 40%	MS211-96 Type B-1 (Jul. 2025)
	FEM carrier	PA6 – GF30%	PCR PA6 35%	MS211-97 Type C-1 (Sep. 2025)
	Air strut	PA6 – GF30%	PCR PA6 35%	MS211-90 Type D-1 (Jan. 2026)
	AT/MT Lever bracket	PA6 – GF30%	PCR PA6 50%	MS211-90 Type D-2 (Jan. 2026)
Renault	-	PBT+PET – GF30%	PCR PET 30%	PBT-GF (Mar. 2025)

[5 Grades Pending HKMC Approval]

Auto lever lower bracket	AT knob insert	Canister	Stack Vent Filter Cover	Stabilizer Bar Bushing
• PA66+PA6 – GF30% • PCR PA6 50% (Fishing Nets)	• PA6 – GF30% • PCR PA6 50% (Fishing Nets)	• PA66 • PCR PA66 50% (Airbag)	• PP - LGF40% • PCR PP 30% (Others)	• PA66 – GF30% • PCR PA66 30% (Airbag)

In-Process Control Management



Barcode and QR System



- Raw material data tracking
- Automatic alerts for incorrect input with full traceability



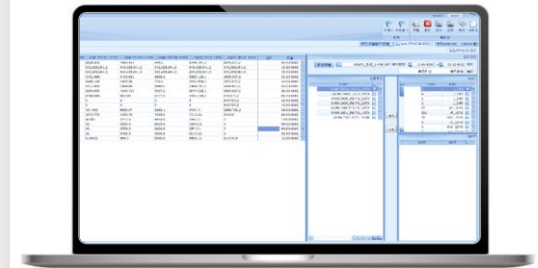
Process Control : DCS



- Real-time process control from the DCS Room
- Rapid respond to process troubles

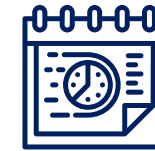
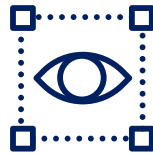


Analysis & Inspection System



- Analysis from monomers to final products
- Automatic linkage with process data for real-time feedback

[Real-time Tracking on a single Dashboard]



RMS, Unified View (Tracking System)

- All manufacturing process data available through a dashboard

Traceability by LOT number

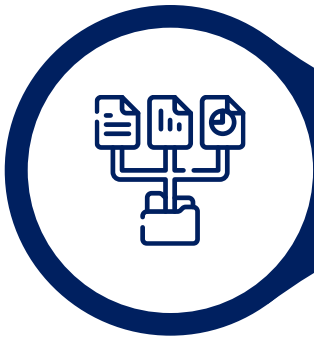
- Auxiliary material management, Process control, Product classification, Quality management, Packaging management

포장 입고 기간		~		Lot no.		B Class product		Polymerization material		DL030		제품명		Additive management		Product classification		Packing management	
7/7	Date	Plant no.	Line	Grade	LC	A Class product	A 입	Polymerization Plant	중	가	Polymerization workshop	Start time	Finish time	Process	Quality				
1																			
2																			
3																			
→ 4																			

Technical Support



01



Failure Analysis

- Material Analysis
- Physical Property & Performance Evaluation

02



Trouble Shooting

- Defect Prediction Simulation
- Optimization of Molding Conditions

03



CAE

- Injection Molding Analysis
- Structural Analysis

04



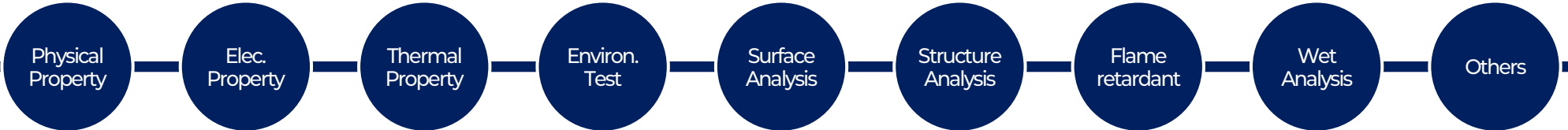
Material Development

- Optimal Material Recommendation
- Development Support & Technical Training

Technical Support



Equipped with over 100 Testing & Evaluation Instruments



Environment & Quality Management



[Certification]

ISO 9001·IATF
16949·ISO 14001

REACH

Medical
(GMP, DMF)

FOOD CONTACT
(EU Regulation No. 10/2011)

KTW-BWGL

WRAS
(BS6920)

ACS

NSF51/NSF61

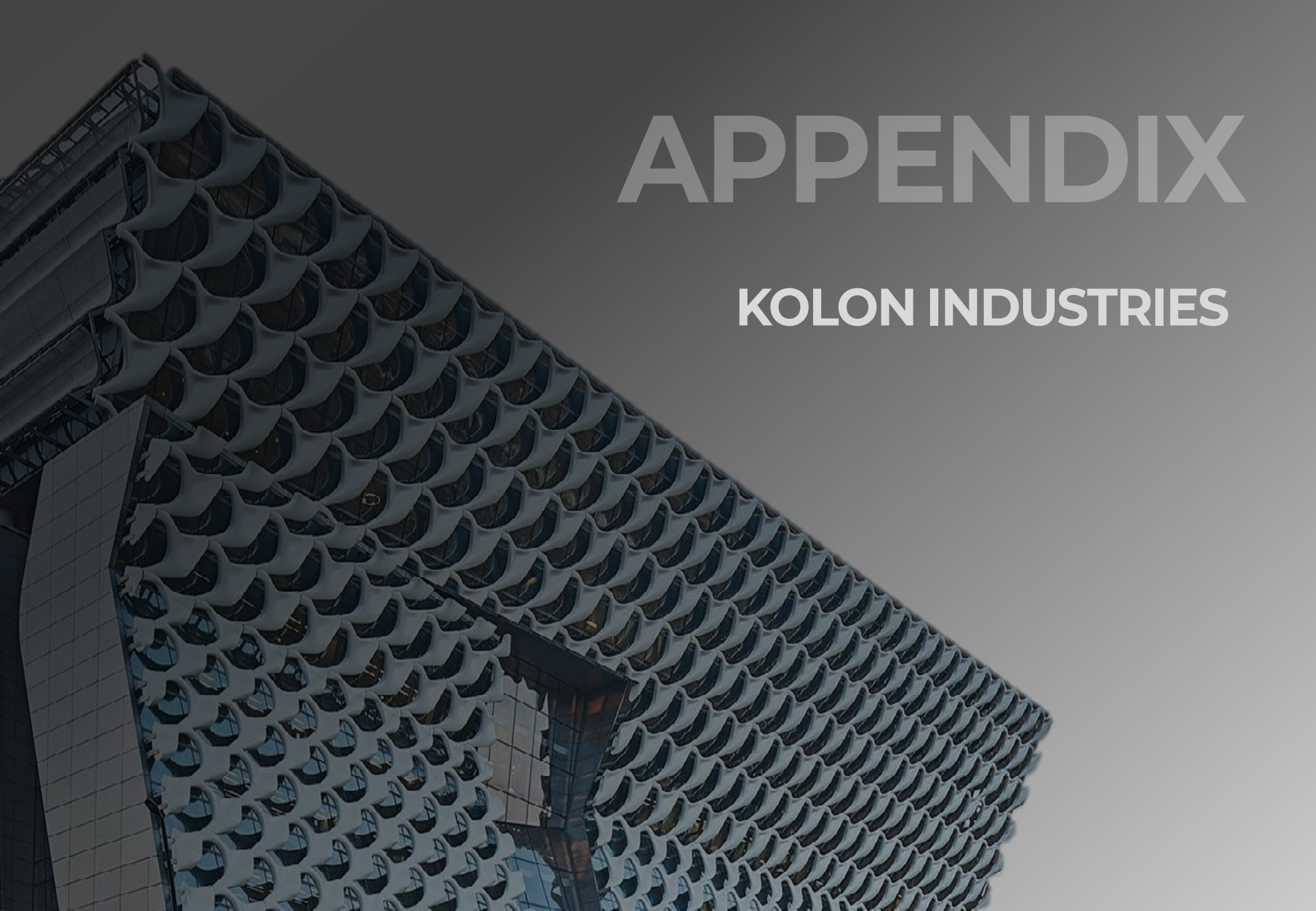
UL

ISCC Plus



International
Organization for
Standardization





APPENDIX

KOLON INDUSTRIES

Business Portfolio



Powered by our diversified business portfolio and industry-leading R&D capabilities,
We continue to drive future growth in an ever-changing market environment.

Mobility Solutions

- Airbag, Car Seat, Artificial Leather, Spunbond (Nonwoven fabric), Others.
- Automotive Interior Materials
- HDPE (cooling textiles)



Specialty Film & Fiber

- 5G & EV Tire Materials, Aircraft, Air Defense Composites
- Flexible Display & Panel Film Materials



Chemical Resins

- Hydrocarbon, Phenol, Epoxy Resins
Adhesives and additives for composite materials



Secondary Battery

- Battery Recycling



Eco-friendly

- Recycled PET (Cr-PET)
- Bio-degradable Fiber (Lyocell Fiber)



Hydrogen Economy

- FCH First commercial production in Korea for HKMC (2013)
- PEM
- MEA





Car Interior Materials

The World's Only Provider of Complete Automotive Interior Materials and Processing Solutions

- Utilizing a portfolio of 9 materials(Woven, Tricot, Circular knit, N.Suede, PU, PVC, TPO, Geonic, Chamude), we bring automotive interior concepts to life and deliver interiors tailored to each occupant's preferences.



Airbag

Airbag Cushion & Fabric

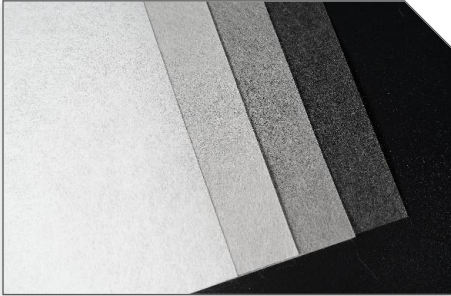
- As a key safety component alongside seat belts, our airbag cushions & Fabrics are manufactured to the highest standards.
- Partnering with leading automotive parts and module manufacturers worldwide, we are advancing toward global leadership.



Car Seat Module

Materials covering the seat frame that directly contacts the occupant's skin

- Leveraging punching & quilting techniques, we deliver an optimal balance of design, breathability, and airbag deployment reliability.
- From fabric production to sewing, we offer end-to-end customized solutions.



Spunbond (Nonwoven Fabric)

First in Korea to achieve EPD Certification for nonwoven fabrics used in filters, carpets, automotive, and geotextiles.

- High-performance nonwoven made from continuous PET Long Fibers, delivering superior strength and durability.



Chamude (Artificial Leather)

World's top-3, offering a rich range of colors

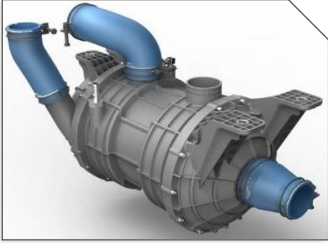
- Ultrafine fibers replicate the elegance of natural leather while delivering enhanced durability.
- A global top-3 manufacturer for automotive interiors, luxury goods, and furniture.



HDPE

High-performance material used in Gloves and Cooling blankets

- Ideal for bedding and apparel with excellent cooling performance.
- The first and only company in Korea to produce OEKO-TEX-Certified dope-dyed yarn, holding a 70% share of the domestic cooling bedding market.



FCH (Fuel Cell Humidifier)

The world's first commercial production and development of FCH

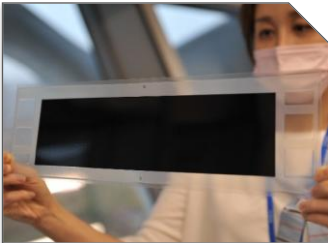
- Regulates the temperature and humidity of the air supplied to the fuel cell stack.
- Selectively controls moisture penetration within the stack to enhance power generation efficiency.



PEM (Polymer Electrolyte Membrane)

Core material of hydrogen fuel cells

- Functions both as a membrane that separates hydrogen and oxygen and as an electrolyte that transfers hydrogen ions from the anode to the cathode.



MEA (Membrane Electrode Assembly)

Generates electricity and thermal energy through hydrogen-oxygen reactions within fuel cells

- Consists of two electrodes (anodes and cathode) and a PEM.
- (Anode) hydrogen is oxidized, generating electricity. (Cathode) hydrogen ions and electrons react with oxygen to form water.



VENT

Protects electronic devices from environmental factors

- Provides waterproof, dustproof, and breathable protection to prevent liquid and dust intrusion while maintaining internal pressure stability in devices such as smartphones, wireless earbuds, and tablets.



Tire Cord

Backbone of Tires

- An industrial yarn used as a reinforcement material to protect tires from friction and impact.
- Supplied to leading global tire manufacturers through production facilities in Korea and Vietnam.



Aramid

High-performance 'Super' Fiber

- A yarn with 5-times the tensile strength of steel at the same weight & excellent heat resistance.
- Used in bulletproof products, fiber optic cables, and industrial reinforcement applications requiring high strength and lightweight properties



CPI Film

Key material for flexible displays, first commercialized in the world.

- A versatile film that remains crease-free when folded, is highly scratch-resistant, and withstands high temperatures for circuit fabrication.
- Used as a cover window for foldable displays and as a transparent flexible electronic substrate.



Barrier Film (QD Barrier & Metalized films)

Protective Film for Displays and QLED TV

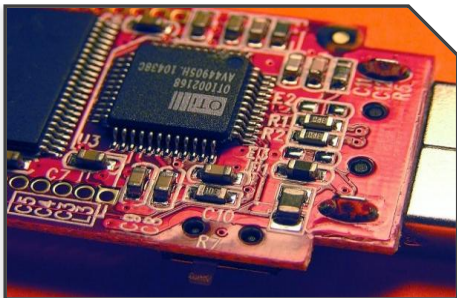
- A barrier that protects OLED and QD materials from moisture and oxygen.



IT Chemical Material (OC, OLED Encapsulation)

Enhancing Display Quality & Reducing Defects

- OC improves panel reliability by flattening the color filter surface, preventing process defects, and protecting RGB pixels.
- OLED encapsulation materials protect the emitting layers of flexible OLED panels from moisture and oxygen.



DFR (Dry Film Resist)

PET Essential Material for High-density Miniaturization

- A PET film-based material used in PCB circuit patterning processes, utilizing photosensitive properties activated by specific wavelengths of light.
- Applied in PCBs, lead frames, semiconductor packaging, and BGA patterning.



Hydrocarbon Resin

Specialty Material

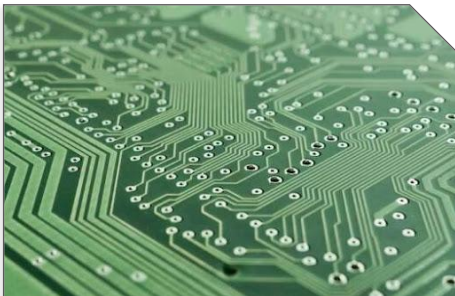
- An essential additive that plays a key role in determining the performance of adhesives.
- Used in road marking paints, hygiene adhesives, tire adhesives, durability enhancement applications, office tapes, printing inks, and electrical cables.



Phenol Resin

Heat-resistant · Chemical-resistant · Electrical Insulation

- Excellent heat resistance, chemical resistance, mechanical strength, and electrical insulation, enhancing product durability and performance.
- Applied in tires, paints, electronic materials, construction materials, coatings, adhesives, and inks.



Epoxy Resin

Electronic Circuits · Specialty Paints

- Provides superior electrical properties, water-resistance, chemical-resistance, and improved storage stability to enhance performance.
- Used in electronic materials, coatings, and sports equipment in combination with hardeners.



Fashion

From Outdoor to Luxury

- Well-balanced brand portfolio, from Korea's leading outdoor brand 'Kolon Sport' to golf, contemporary, unisex casual, and international luxury brands.
- We are expanding our presence in global markets while developing a differentiated workwear brand.



Online-Offline Platform

Optimized E-Commerce & Integrated Logistics Center

- The online platform 'Kolon Mall' offers over 600 fashion, beauty, and lifestyle brands based on customer data, while 'The Cart Golf' curates golf & sports content.
- We operate Korea's first container mall as a street-style select shop and provide optimized infrastructure for brand operations through an integrated online and offline logistics center.



Sustainability

Structuring Circular Fashion with RE:CODE

- Launched Korea's first upcycling fashion brand, RE:CODE, recognized as a leading example of ESG-driven fashion.
- Advancing circular fashion by repurposing discarded materials through the 'Circular Factory'.

Domestic Sites (Korea)



**Seoul HQ,
R&D Center**

EST 2018



Daesan Plant

EST 2014

(Hydrocarbon resin)



Cheonan Plant

EST 1988

(Car seat)



Gyeongsan Plant

EST 1973

(Airbag, Chamude)



Gwangju Plant

EST 2015

(Car seat)



Yeosu Plant

EST 2004

(Hydrocarbon resin)

**Gumi Plant,
R&D Center**

EST 1969

(Tire cord, Aramid, CPI film)



Gumi Plant 2

EST 1987

(Car interior materials)



Gimcheon Plant 1

EST 1991

(Dry film resist)



Gimcheon Plant 2

EST 1989

(Phenol, epoxy resin)



Ulsan Plant 1

EST 1977

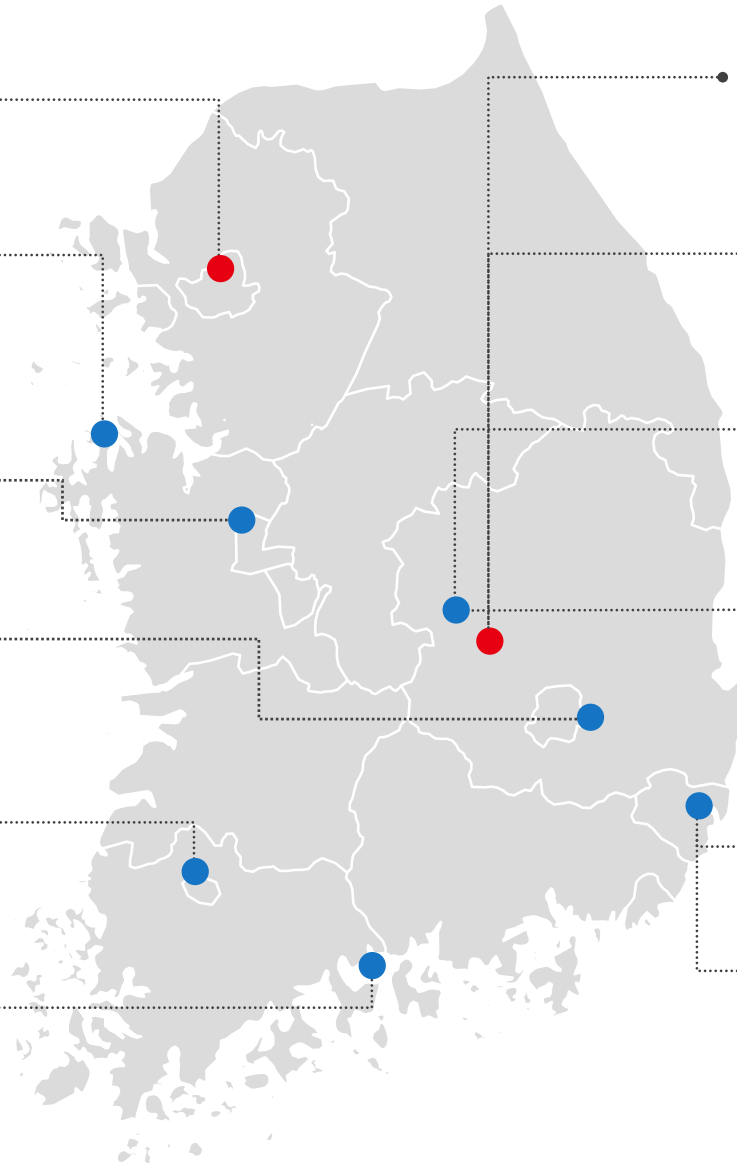
(Hydrocarbon resin)



Ulsan Plant 2

EST 2000

(Car seat)



Global Sites

