Chemical Process Catalysts

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Heesung Catalysts

Founded in 1983, Heesung Catalysts is a leading catalyst specialist delivering eco-friendly, catalyst-based solutions that help customers enhance productivity and competitiveness across multiple industries.

Technology for a Sustainable Future

Our catalyst technologies reduce harmful emissions and greenhouse gases while improving energy efficiency in industrial processes. By optimizing catalysts for specific reaction conditions, we help customers meet environmental regulations, achieve ESG goals, and transition toward carbon neutrality.

Integrated Solutions with Proven Expertise

We manage the full catalyst lifecycle—from development and mass production to application and performance analysis—using real industrial data. This enables continuous technology advancement and creates a virtuous cycle that drives next-generation products and process innovation.

Trusted Partnership & Circular Value Creation

Through long-term collaborations with leading companies, we deliver customized design, joint development, and mass production capabilities. In addition, our precious metal recovery and recycling services further contribute to a circular economy.

From Catalyst to Solution — partnering for sustainability and growth.

Business Areas

Chemical Catalysts
Process & Chemical catalysts
Carbon-neutral & clean energy catalysts

Environmental Catalysts
GHG reduction catalysts
Industrial catalysts

Automotive Catalysts
Vehicle emission control catalysts

Electrode Catalysts
Fuel cells,
Water electrolysis, MEA

Precious Metal Materials
Electroplating materials,
Dental materials

Vision & Core Values

VISION
Catalyst-based green technology leader enabling a carbon-free society

Core Values
Harmony · Collaboration · Challenge

Chemical Process Catalysts

Technology & Know-how

- Over 40 years of catalyst technology experience
- Extensive application experience across diverse industrial sectors (petrochemicals, refining, pharmaceuticals, automotive, etc.)

Improvement of Customer Profitability

- Enhanced conversion and selectivity
- Improved process efficiency and operational stability
- Reduced catalyst procurement and operating costs through extended catalyst life and improved operating efficiency

Customer Partnership

- Joint development and technical services
- Customized catalyst and technical support
- Strict protection of trade secrets and proprietary technologies

Applicable Business Fields

- Petrochemicals, refining, pharmaceuticals, semiconductors, battery materials
- Expansion into all areas requiring chemical materials

Paraffin Dehydrogenation Catalysts

Catalysts for the production of high-value olefins via the dehydrogenation of paraffins such as propane and butane, delivering high activity, extended catalyst lifetime, and superior olefin yield.

Key Features

- High conversion and selectivity
- Minimized coke formation and side reactions
- High mechanical strength and uniformity
- Drop-in replacement capability
- Long catalyst life and excellent regeneration stability
- Extensive commercial track record worldwide

Application Process	Product	Type
Propane Dehydrogenation Butane Dehydrogenation C3 ~C10 Dehydrogenation	HS-1323H HS-1324H HS-1323HL HS-1324HL	Pt on Alumina

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Activated Carbon-Supported Precious Metal Catalyst

High-performance catalysts for hydrogenation reactions and for the synthesis of fine chemicals and pharmaceutical products.

Key Features

- High conversion and selectivity
- Minimized coke formation and side reactions
- High mechanical strength and uniformity
- Drop-in replacement capability
- Long-term operational stability
- Extensive commercial track record worldwide

Application Process	Product	Type
Terephthalic Acid	CBA 400 CBA 300 KCBA-04	Pd on Carbon (Granule)
Aniline	HS-200K3 HS-400K	Pd on Carbon (Powder/Slurry)
Fine Chemicals / Pharmaceutical Synthesis / Hydrogenation Process	SU 2200 series (3% / 5% / 10% Pt, Pd)	Pd/Pt on Carbon (Powder)

Selective Hydrogenation and Isomerization Catalyst

Catalysts for selective hydrogenation and isomerization of pyrolysis gasoline, butadiene, and DCPD.

Key Features

- High conversion and selectivity
- High mechanical strength and uniformity
- Minimized coke formation and side reactions
- Drop-in replacement capability
- Long-term operational stability
- Extensive commercial track record (domestic and global)
- Broad product portfolio

Application Process	Product	Type
Selective hydrogenation ▪ Acetylene ▪ Propadiene ▪ Butadiene ▪ DCPD ▪ Pyrolysis Gasoline Di-olefins,Mono-olefin, Aromatic ring,Styrene's, Pentadiene ▪ Isoprene ▪ Hexadienes **Isomerization** ▪ Butadiene ▪ Pentadiene ▪ Butene-1 ▪ Pentene-1	PGC 3 PGC 5 PGC S3 PGC S5 E143 SDU E144 SDU E347 SDU E443 SDU E445 SDU E447 SDU	Pd on Alumina Sphere/Pellet

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DME (Dimethyl Ether) Synthesis Catalysts

Catalysts for DME synthesis processes as an environmentally friendly alternative fuel.

Key Features

- Catalyst products for DME production processes
- Excellent conversion rate and selectivity
- Minimization of coke formation
- Long-term durability and extended catalyst life
- Outstanding strength and attrition resistance
- Extensive commercial references worldwide

Application Process	Product	Type
DME Direct Synthesis	HSC-601 Series	Polycrystalline metal Catalyst (Pellet type)
Dehydration Process for DME Production	HSC-602 Series	Alumina-based catalyst (Extruded)

Methanol Synthesis Catalysts

Catalysts for methanol synthesis for e-fuel applications.

Key Features

- High conversion and selectivity
- Long-term operational stability
- Excellent low-temperature performance and durability
- High mechanical strength and uniformity

Application Process	Product	Type
Methanol Synthesis Process	HSC-600 Series	Polycrystalline metal Catalyst (Pellet type)

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Go Together with Heesung Catalysts

Building a sustainable future together with Heesung Catalysts

Quality Competitiveness

Quality 5-Star
First in Korea to receive the Grand 5-Star Certification for Automotive Catalysts

Certifications
ISO, KOLAS, OSHA, GMP and other accredited certifications

Facilities
Global Top-Tier production and R&D facilities

Commercial Track Record
40+ years of accumulated global business experience

Cost Competitiveness

Customs / Tariff Advantage
Approx. 6.6% reduction in import duties

Manufacturing Efficiency
Optimized infrastructure and operational efficiency
CAPEX and OPEX improvement

Delivery
Shortened lead time
Improved supply stability

Recycling
Precious metal recovery through Heesung PMTech

Technical Support

R&D Center
World-class research centers

R&D
Continuous technology development and improvement

Technical support
Global Technical support
Monitoring of process performance trends

Supply Stability

Minimal Impact from Global Geopolitical Risks

Technical Service

Providing optimal solutions to customer needs

Catalyst Design Proposal
Based on operating conditions

Inspection Service
Loading / replacement / handling

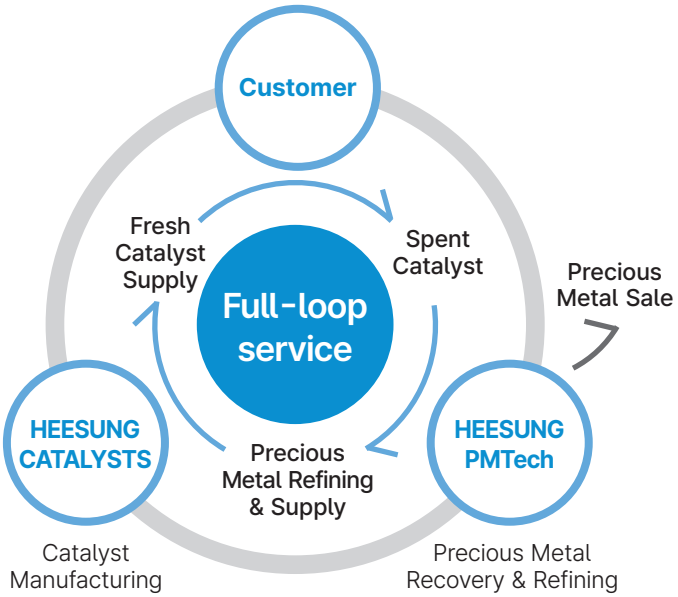
Catalyst Improvement & R&D

Procedures & Guidelines
Loading, regeneration, handling

Catalyst Analysis Service
Physical properties, precious metal & special property analysis, performance evaluation

Resource Recycling

Full-Loop Precious Metal Recovery Service



Chemical Process Catalysts

Partner for a Sustainable Chemical Industry

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