

Air Pollution Control Catalysts

Clean Air, Smart Catalyst

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VOC / CO Oxidation Catalyst

Product Overview

Product Name	VOC / CO Oxidation Catalyst
Application	Removal of volatile organic compounds (VOCs) and carbon monoxide (CO) from industrial exhaust streams
Description	Precious metal (Pt/Pd)-based catalyst designed for industrial air pollution control systems(CTO and RCO)
Operating Temp.	200~550°C
Removal Efficiency	95~99% VOC / CO conversion



Product Line-up

Model	HE-450K1	HE-0940	HE-0950	HE-1050
Dimension	150 × 150 × H (H=50~100mm)	150 × 150 × H (H=50~200mm)	150 × 150 × H (H=50~200mm)	150 × 150 × H (H=50~200mm)
Active Phase	Pt, Pd	Pt	Pt	Pt
Substrate Type	Cordierite honeycomb or Metal Corrugate	Cordierite honeycomb or Metal Corrugate	Cordierite honeycomb or Metal Corrugate	Cordierite honeycomb or Metal Corrugate
Operating Temp.	250~650°C	200~400°C	200~400°C	200~550°C
SV	15,000~40,000(h ⁻¹)	15,000~40,000(h ⁻¹)	15,000~40,000(h ⁻¹)	15,000~40,000(h ⁻¹)
CPSI	100~400	100~400	100~400	100~400
Max Temp.	750°C	600°C	600°C	600°C
Recommended Use	High-temperature / high-boiling compounds	Low-temp. applications	Exhaust gas containing high-boiling point compounds	SO ₂ -resistant applications

Key Features



High Removal Efficiency

95-99% VOC and CO removal efficiency
Simultaneous treatment of multiple VOCs



Wide Operating Window

Wide operating temperature range (220-550°C)
Adaptable to diverse process conditions



Excellent Durability

Poison-resistant product lineup (e.g., Sulfur, SiO₂)

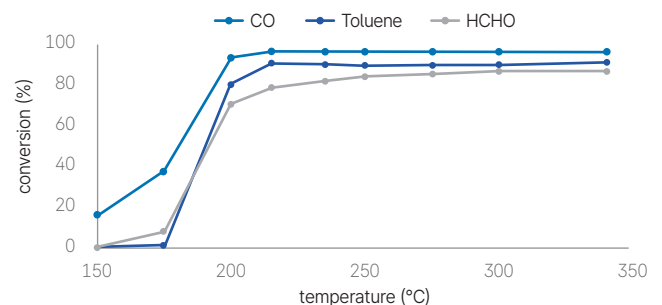


Customized Solutions

Process-tailored product portfolio
Optimized catalyst selection based on operating conditions

Performance Data

CO, Toluene & HCHO Conversion



Applications

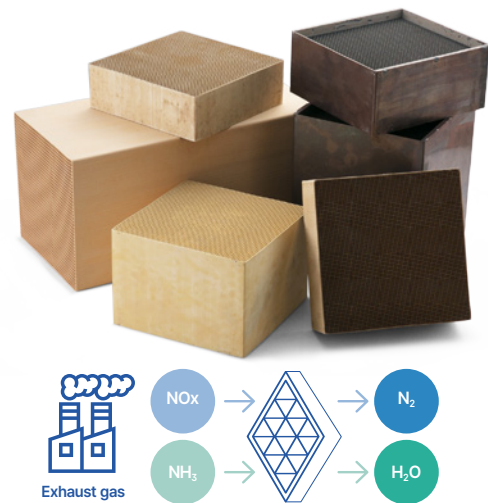
Contributes to improved air quality by effectively removing VOCs and CO from industrial emissions



Air Pollution Control SCR Catalysts

Product Overview


Product Name	SCR (Selective Catalytic Reduction) Catalyst
Application	Reduction of NOx from industrial flue gas generated by boilers, incinerators, and combustion processes
Technology	Patented Washcoat-in-Wall (wiw) structure enabling both high activity and enhanced durability
Operating Temp.	230–480°C
Efficiency	85–95% NOx reduction
Type	Honeycomb type (ceramic or metallic), lightweight and high surface area design




Product Line-up

Model	KE-5590M/4690M/ 4700M	KE-6180M	KE-5610M	HE-1600
Dimensions	150 × 150 × H (H=50~500mm)	150 × 150 × H (H=50~500mm)	150 × 150 × H (H=50~500mm)	460 × 460 × H (H=200~500mm)
Active Material	V ₂ O ₅ /TiO ₂	Fe-Zeolite	Cu-Zeolite	V ₂ O ₅ , Cu-zeolite
Operating Temp.	250~500°C	300~600°C	250~500°C	250~500°C
CPSI	26~200	26~200	26~200	CPSI : 26~200
Specific surface area (m ² /m ³)	660~1,823	660~1,823	660~1,823	660~1,823
Applications	Industrial boilers, general DeNOx	High-temperature processes, smelters, incinerators	Low-temperature / chemical processes	Large-scale systems, high-efficiency applications


Key Features




Washcoat-in-Wall (WiW) Structure
Enhanced catalyst adhesion and dispersion within substrate walls
Improved durability and long-term activity



Layered Corrugated Design
High specific surface area, lightweight construction, and low pressure drop

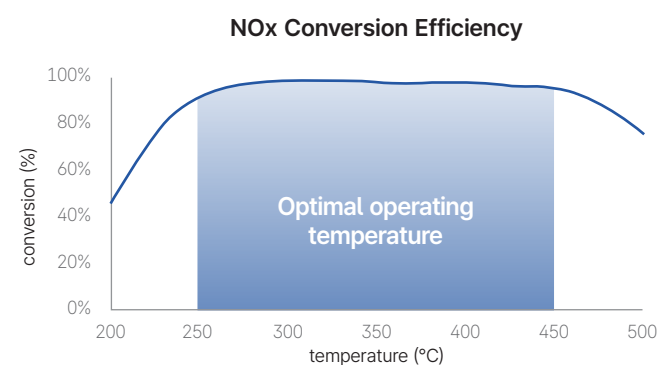


Broad Dust Handling Capability
Suitable for High/Medium/Low dust environments
Flexible application across diverse flue gas conditions



SV up to 20,000 hr⁻¹
Adaptable to varying gas flow rates
Customized design for optimal performance

Performance Data



Applications

Enables efficient NOx abatement and supports regulatory compliance for industrial emission standards



Industrial Boilers
Treatment of exhaust gas from industrial boilers of various capacities



Steel plants
NOx reduction in steelmaking processes (e.g., sintering furnaces)



Incineration Facilities
Municipal and industrial waste treatment



Chemical Processing
Emission control from chemical processes

Clean Air, Smart Catalyst

NO₂ Adsorbent

Product Overview

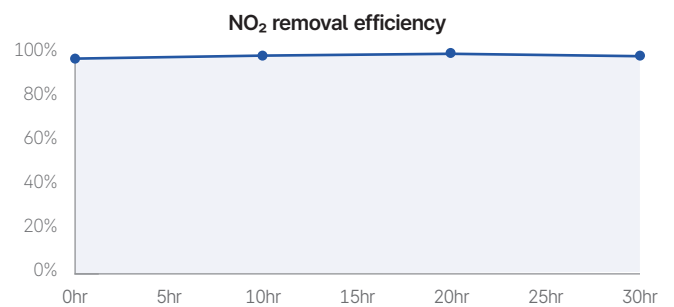
Product Name	NO ₂ Adsorbent HE-1660 (Zeolite-Based)
Application	Efficient removal of nitrogen dioxide (NO ₂) at ambient conditions
Key Feature	Operates effectively without external heating
Operating Temperature	50–200°C (ambient to low-temperature operation)



Product Forms & Properties

Item	Ball Type (Spherical)	Pellet Type (Extruded)
Shape	2.0 mm Ball	1.4 mm Extrudate
Bulk Density	0.65–0.85 g/mL	0.55 ~ 0.92 g/mL
Adsorption Efficiency	80–99%	80–99%
Recommended Application	Fixed-bed adsorption	Moving bed, Dense packing

Performance Data



Key Features



Ambient Temperature Adsorption

Effective NO₂ removal across 50–200°C without additional heating
Reduced energy consumption and simplified system design



Hybrid Adsorption Mechanism

Combination of physical adsorption and chemisorption
Enhanced removal efficiency and stable performance across varying concentrations

Applications



Tunnel air purification

NO₂ removal from vehicle exhaust in tunnels



Boiler Start-Up Emissions

NO₂ removal during boiler start-up



Tail Gas

Residual NO_x control

Reference Sites in Korea



Sinwol IC Underpass



Seobu Urban Expressway Underpass



Busan Mandeok Tunnel Underpass

Tunnel Air Purification System

Enhances air quality and safety by removing NO₂ from vehicle exhaust in tunnels

Clean Air, Smart Catalyst

Company Overview

Industrial manufacturing processes generate emissions such as VOCs and CO, requiring effective and reliable abatement solutions. Heesung Catalysts delivers optimized emission control solutions tailored to specific industrial applications, leveraging proprietary catalyst technologies. Our solutions contribute to energy savings and environmental protection by improving process efficiency and reducing harmful emissions.

Key Metrics



300+

VOC Catalyst Supply
References



500+

SCR Catalyst Supply
References



10M units

Annual Production
Capacity



ISO 9001

ISO 14001
Certified

Resource Circularity Services



Fresh Catalyst



Spent Catalyst



Precious Metal Recovery



Regenerated Catalyst

Customer Services

01 | Catalyst Replacement

02 | Catalyst Regeneration

03 | Customized Catalyst Design

04 | Process & Equipment Consulting

05 | Catalyst Analysis & Evaluation

06 | T/S & A/S

Key Industries

01 | Industrial Boilers

02 | Incineration Systems

03 | Power Generation Plants

04 | Smelting & Steel Industry

05 | Chemical Processing

06 | Printing / Coating / Drying Processes

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