

Ammonia Catalyst

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Ammonia, as one of the most highly produced inorganic chemicals, is largely used for fertilizing agricultural crops. It also serves as a building block for the synthesis of many pharmaceuticals. As regards catalyst for ammonia, or ammonia catalyst, Chempack provides ammonia synthesis catalyst and ammonia decomposition catalyst, which are specified as follows.

Ammonia Synthesis Catalyst ASC-80

The ASC-80 ammonia synthesis catalyst used for ammonia synthesis can work well at low temperature with high space velocity. The ammonia catalyst comes in the form of irregular black granules, with diameters of 1.5-3.0, 2.2-3.3, 3.3-4.7, 4.7-6.7, and 6.7-9.4mm available.

Physical Properties

Appearance	Irregular Black Granules
Size (mm)	1.5-3.0, 2.2-3.3, 3.3-4.7, 4.7-6.7, 6.7-9.4
Bulk Density (kg/L)	2.7-3.0
Total Fe Content (%)	67.5-69.5
Fe ₂ + / Fe ₃ + Ratio	0.5-0.6

Operation Conditions

Temperature (°C)	400-530
Pressure (MPa)	10-35
Space Velocity (h ⁻¹)	10,000-90,000

Packing: Shrink wrap the ammonia synthesis catalyst in 200L steel drums lined with plastic bags, with 3 or 4 drums per pallet.

Ammonia Decomposition Catalyst ADC-99

The ammonia decomposition catalyst ADC-99, a kind of nickel-based catalyst, is typically applied in the secondary reformer of ammonia plant, which uses gaseous hydrocarbon as the raw material. The ammonia catalyst also suits hydrogen production and ammonia decomposition devices. The ammonia decomposition catalyst can be shaped like rasching rings or customized. □

Application

The ammonia decomposition catalyst is commonly applicable to devices used for hydrogen production and ammonia decomposition, as well as secondary reformers in ammonia plants.

Physical Properties

Appearance	Slate Gray Rasching Ring
Particle Size (mm) Diameter x Height x Thickness	19x19x10
Crushing Strength (N/particle)	Min. 400
Bulk Density (kg/L)	1.10-1.20
Attrition Loss (wt %)	Max. 20
Catalytic Activity	0.05NL CH ₄ /h/g Catalyst

Chemical Composition

Nickel (Ni) Content (%)	Min. 14.0
SiO ₂ (%)	Max. 0.20
Al ₂ O ₃ (%)	55.0
CaO (%)	10.0
Fe ₂ O ₃ (%)	Max. 0.35
K ₂ O+Na ₂ O (%)	Max. 0.30

The ammonia decomposition catalyst provides strong heat resistance, with long-term operation under 1200°C and no adhesion or fracture in two hours at 1300°C. The ammonia catalyst is non-melting, non-shrink, offering no deformation, excellent structure stability and high strength. The maximum percentage of the low-intensity (below 180N/particle) particles can be up to 5.0%.

Operation Conditions

Process Conditions	Pressure (MPa)	Temperature (°C)	Ammonia Space Velocity (hr ⁻¹)
	0.01 -0.10	750-850	350-500

Ammonia Decomposition Rate	99.99% (Min.)
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Service life: 2 years Packing: Shrink wrap the ammonia catalyst in 200L steel drums lined with plastic bags, with 3 or 4 drums per pallet.

Chempack, founded in 1970, is an experienced ammonia catalyst manufacturer located in China. We are specialized in the production and sale of a full range of chemical products, including oxygen removal, alumina support ball, tower packing, and others, for customers all over the world. As a result of our consistent focus on product quality, our company is ISO9001:2000 approved. Our products now are increasingly popular with customers in the international market, due to their reliable quality and economical prices. If you are in need of these chemical products, please see our specific product webpage to find the right product for your application, or contact us directly for assistance. The staff at Chempack is ready and waiting to serve you.

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