HENGYE®

At HengYe® Inc., we are committed to meeting the ever-evolving adsorption needs of industries worldwide. With our comprehensive services—including custom designs, bed sizing, technical support, optimization, and turnaround solutions—we deliver expertise every step of the way.

Industries We Serve

Air Separation

Renewable Fuels

Natural Gas

Refining

Petrochemicals

Industrial Drying

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Houston, Texas 77079 USA

We Offer You

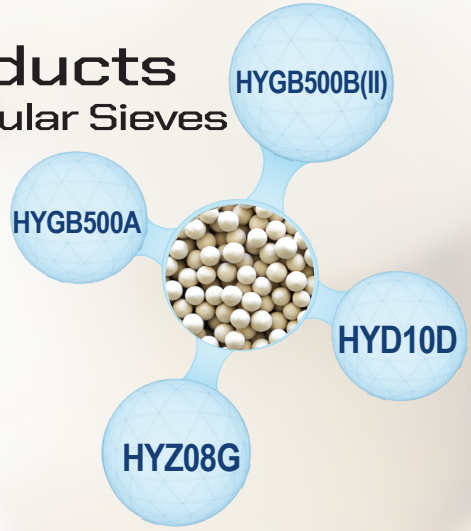
- Molecular Sieve or Activated Alumina
- ISO Certified Manufacturing, World-Class Quality
- Ideal adsorption capacity and product durability

We Can Supply

- Reliable Sieve and Alumina with proven success
- Sales, Engineering, and Technical Service Support
- Material analysis and capacity evaluation
- Change-out, Turnaround Services

Products

Molecular Sieves



Applications

A Trusted Global Solution Provider

HENGYE®

Hydrogen & Renewable Fuels

hengyeinc.com

Hydrogen Purification with PSA Technology

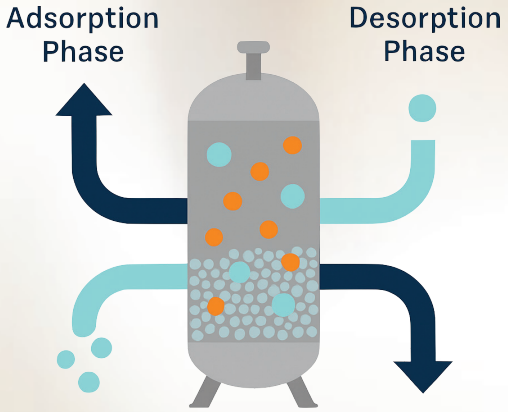
Hydrogen is widely recognized as the fuel of the future—clean, efficient, and derived from diverse sources like fossil fuels, biomass, and water electrolysis powered by wind or solar energy.

Before hydrogen can be used in fuel cells for vehicles, power backup, or industrial systems, it must be purified to meet strict quality standards.

Pressure Swing Adsorption (PSA)

At the core of hydrogen purification lies PSA—an advanced technology using zeolite adsorbents in two alternating phases:

Adsorption Phase: Impurities are trapped in the zeolite bed under high pressure, allowing hydrogen to pass.



Desorption Phase: Pressure drops, and hydrogen is released—ready for use.

Just like a sponge, zeolite captures and releases hydrogen, ensuring high purity and consistent performance. Tailored adsorbents from Hengye® Inc. optimize this process — maximizing efficiency and reducing costs.

HYGB500B (II) Molecular Sieve

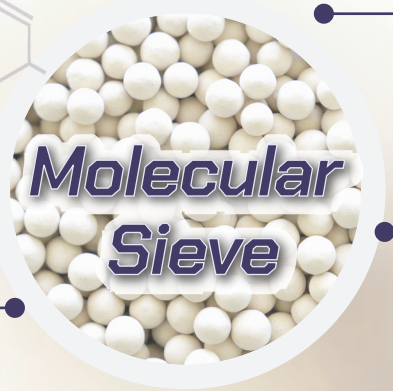
HYGB500B(II) is a synthetic zeolite of A-type crystal structure in calciumsodium form with a pore opening of 5Å (0.5 nm).

	8 x 12 Mesh	*10 x16 Mesh*
Size Distribution (mm)	1.6 – 2.5	1.2 – 2.0
Bulk Density (g/mL)	0.70 - 0.74	0.72 - 0.78
(lb/ft³)	43.7 - 46.2	44.9-48.7
Crush Strength (N)	≥ 25	≥ 18
(lb)	≥ 5.6	≥ 4.0
Static Water Adsorption (wt%)	≥ 26	≥ 26
Static CO_2 Adsorption (wt%)	≥ 18	≥ 18
Attrition Rate (wt%)	≤ 0.3	≤ 0.3
Moisture Content	≤ 1.0	≤ 1.0
Standard Packaging	150kg Drum	1000kg Super Sack

Molecular Sieve HYGB500A

HYGB500A is a synthetic molecular sieve of A-type crystal structure in calcium sodium form with a pore opening of 5Å (0.5 nm).

	8 x12 Mesh
Diameter (mm)	1.6 – 2.5
Bulk Density (g/mL)	0.76-0.80
(lb/ft³)	47.4 - 49.9
Crush Strength (N)	≥ 40
(lb)	≥ 9
Static Water Adsorption (wt%)	≥ 25
Static CO_2 Adsorption (wt%)	≥ 17.5
Attrition Rate	≤ 0.3
Moisture Content	≤ 1.0
Standard Packaging	150kg(330lb) Drum



HengYe®

HYD10D Molecular Sieve

HYD10D is a synthetic zeolite of X-type crystal structure in sodium form with a pore opening of 9Å (~0.9 nm).

	8x12 Mesh	*6x8 Mesh*	*4x8 Mesh*
Size Distribution (mm)	1.68 - 2.36	2.36 - 3.35	2.36 - 4.76
Average Diameter (mm)	1.9 - 2.1	2.9 - 3.1	3.8 - 4.1
Bulk Density (g/mL)	0.65 - 0.71	0.65 - 0.71	0.64 - 0.70
(lb/ft³)	40.6 - 44.3	40.6 - 44.3	40.0 - 43.7
Crush Strength (N)	≥ 25	≥ 45	≥ 60
(lb)	≥ 5.6	≥ 10.1	≥ 13.5
Water Adsorption (wt%)	≥ 28	≥ 28	≥ 28
CO_2 Adsorption (wt%)	≥ 19	≥ 19	≥ 19
Attrition Rate (wt%)	≤ 0.1	≤ 0.1	≤ 0.1
Moisture Content (wt%)	≤ 1.0	≤ 1.0	≤ 1.0
Standard Packaging	140kg(309lb) Drum		

HYZ08G Molecular Sieve

HYZ08G Molecular Sieve is a synthetic zeolite of X type crystal structure in calcium sodium form with a pore opening of 10Å (1 nm).

	8x12 Mesh
Particle Size Distribution (mm)	1.68 - 2.36
Average Diameter (mm)	1.91 - 2.13
Bulk Density (g/mL)	0.63 - 0.70
(lb/ft³)	39.3 - 43.7
Crush Strength (N)	≥ 21
(lb)	≥ 4.7
CO Adsorption Capacity (mL/g)	≥ 25.5 (250 torr, 25 °C)
Attrition Rate (wt.%)	≤ 0.2
Residual Water (wt.%)	≤ 0.5 (575°C KF)
Standard Packaging	136.2kg(300 lb) Drum