

Activated alumina, Pseudoboehmite & Molecular sieve

Quality and advanced Technology

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About XiangRun



Catalyst & Adsorbent

Why Choose Xiangrun?

Zibo XiangRun Environment Engineering Co., Ltd is a leading adsorbent ,desiccant and catalyst manufacturer in China and world. Our company was established in 2010, located in Zibo, Shandong. We manufacture activated alumina, Potassium permanganate alumina, pseudoboehmite alumina and alumina balls products. And we invest in the biggest molecular sieve factory In China.

Our group offers exceptional expertise in the development of technology. XiangRun can blend the perfect bulk mixture to solve your oxygen and moisture control issues. Our products pass ISO9001:2008 and SGS certificate.

Over the past years, we have established business relationships with many famous companies worldwide, including the China National Petroleum Cooperation, Sinopec, and the Petrochemical Industry Company. Our products are reliable and highly popular with customers from Germany, Britain, Kuwait, Saudi Arabia, Iran, Syria, Jordan, South Korea, New Zealand, Thailand, Indonesia, the Philippines, and many other countries.

Products Type

- ▶ * Activated alumina Desiccant * Activated alumina for Hydrogen Peroxide * Activated alumina for sulfur recovery
- ▶ * Activated alumina catalyst carrier * Activated alumina ball for defluorination agent
- ▶ * Activated alumina for removal of chloride * Activated alumina powder
- ▶ * Catalyst
- ▶ * Impregnated activated alumina
- ▶ * Molecular Sieve 13X * Molecular 5A *Molecular 4A * Molecular 3A * Molecular sieve powder
- ▶ * Pseudo boehmite
- ▶ * Alumina balls



Learn more about desiccant and more alumina products details , please email or call us. Our expert staff are happy to answer any questions you may have – just call us or e-mail us to ask.

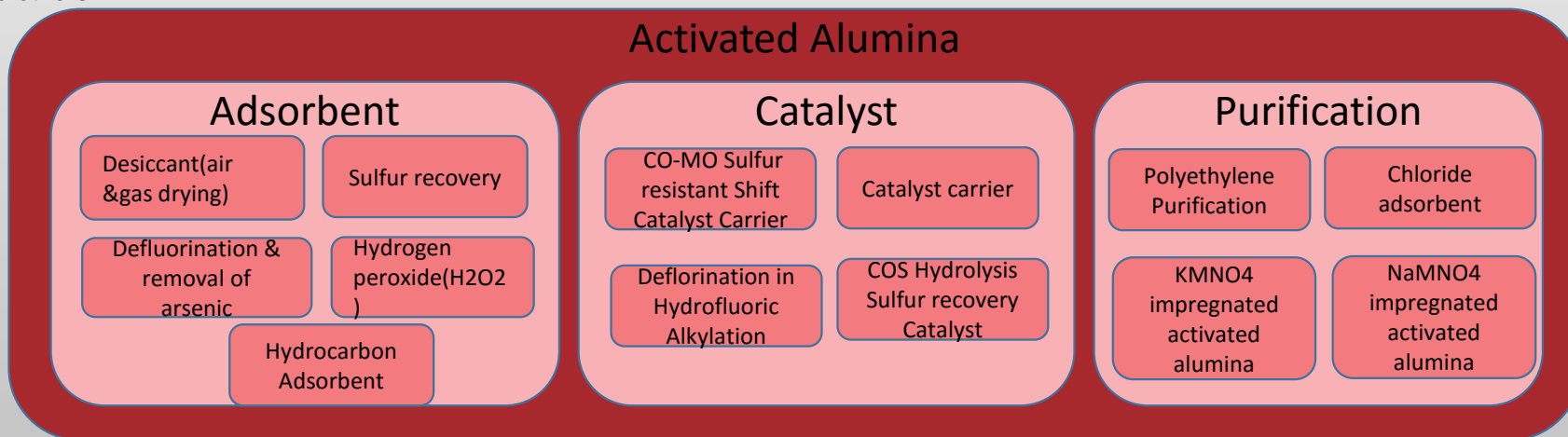


Activated Alumina

Activated alumina is a high-surface-area, highly porous form of aluminum oxide. It can adsorb gases and liquids without changing its form. It works as a desiccant through adsorption. As air passes through the alumina, the water in the air sticks to it and becomes trapped and air that passes through an activated alumina filter is dried out. Even if immersed in a liquid, AA won't fall apart or soften. You can restore the original adsorption efficiency of activated alumina by heating it to any temperature from 350° to 600° F (177° to 316° C). When the desiccant is heated as described above, the water stored in it is released. This means that filters with AA can be reused over and over again.

Available Types of Activated Alumina

Activated alumina has several applications, like desiccant, catalyst carrier, sulfur recovery, and others. After adding different additive, activated alumina is used for catalyst and purification, like dechlorination agent, polyethylene purification and others.



Activated alumina

Technical data for adsorbent

| Technical Parameter | | | | | | |
|--------------------------------|----------------------------------|---|--------------------------|---------------------|---------------------|--|
| Appearance | | white, sphere, odourless, insoluble in water, innocuous | | | | |
| Application | | Adsorbent | defluorination | adsorption H2O2 | catalyst carrier | Dehydrating and drying in air separation |
| Tipo de cristal | | x-p | x-p | y | y | x-p |
| chemical Composition | Al ₂ O ₃ % | ≥93 | ≥93 | ≥93 | ≥93 | ≥93 |
| | Na ₂ O % | ≤0.40 | ≤0.3 | 0.3-1.0 | ≤0.35 | ≤0.4 |
| LOI | % | 6-8 | 6-8 | ≤8 | ≤5 | 6-8 |
| Bulk density | g/ml | ≥0.75 | ≥0.75 | 0.65-0.8 | 0.45-0.95 | ≥0.75 |
| Surface area | m ² /g | ≥320 | ≥300 | 250-280 | 10-380 | ≥350 |
| Pore Volume | ml/g | ≥0.42 | ≥0.40 | 0.40-0.46 | ≥0.45 | ≥0.42 |
| Satic Adsorption(RH=60%) | % | water adsorption 17-19 | Fluorine adsorption 0.12 | water adsorption 50 | water adsorption 50 | water adsorption 17-19 |
| Active | % | | | 56-62 | | |
| Attrition Loss | % | ≤1.0 | | | | ≤0.8 |
| Crushing Strength (N/Particle) | φ1-2mm | ≥50 | ≥40 | | | ≥50 |
| | φ2-3mm | ≥70 | ≥80 | ≥80 | ≥40 | ≥70 |
| | φ3-5mm | ≥160 | ≥120 | ≥100 | ≥60 | ≥160 |
| | φ4-6mm | ≥200 | | ≥130 | ≥80 | ≥200 |
| | φ5-7mm | ≥240 | | | | ≥240 |
| | φ6-8mm | ≥260 | | | | ≥260 |

Our Characteristics

High bulk density

Large pore volume

Large surface area

Low abrasion

Low dust

Impregnated Activated alumina

Technical data for Impregnated activated alumina

| Item | Unit | Technical requirement | | |
|------------------------------------|-------------------|-----------------------------|-----------------------------|-----------------------------|
| Particle size | mm | 2-4 | 3-5 | 4-6 |
| AL ₂ O ₃ | % | ≥80 | ≥80 | ≥80 |
| KMnO ₄ | % | 6-10 | 6-10 | 6-12 |
| Bulk density | g/ml | 0.85-0.9 | 0.85-0.9 | 0.85-0.9 |
| Surface area | m ² /g | ≥250 | ≥250 | ≥250 |
| Pore Volume | ml/g | ≥0.42 | ≥0.42 | ≥0.42 |
| Crushing Strength (N/Particle) | N/particle | ≥50 | ≥80 | ≥100 |
| Pressure Drop @ 50 fpm (0.25 m/s): | | 1.0 in. of water/ft. of bed | 1.0 in. of water/ft. of bed | 1.0 in. of water/ft. of bed |
| H ₂ S Capacity | g/ml | 0.85-1.2 | 0.85-1.2 | 0.85-1.2 |

Our Characteristics

Mixed material technology

Stable content

Low moisture

High crush strength

Low dust



Pseudoboehmite

Pseudoboehmite alumina is also called pseudo boehmite, which is supplied as loosely agglomerated, easily dispersed, spray-dried powders (about 50 microns mean diameter) possessing high-purity, high surface area and low bulk density. Each Versal alumina particle is built from nominal 30 angstrom (3.0 nm) crystallites through a unique acid-base precipitation process using a proprietary reactor configuration that allows control of density, particle morphology, colloidal dispersibility and thermal conversion processes.

Pseudo boehmite is material of catalyst, binder, desiccant and their carrier. It used in nitrogen fertilizer, environmental protection, medicine, petrochemical industry, refractory and other industries , which is the most widely used material of catalyst and catalyst carrier.

Available Types of Pseudoboehmite

Pseudoboehmite

NH-P-D Normal
Pseudoboehmite

XR-DF-03-LS Low
sodium(Soda)
Pseudoboehmite

Large
pore(Macroporous)
Pseudoboehmite

Pseudoboehmite

Technical data

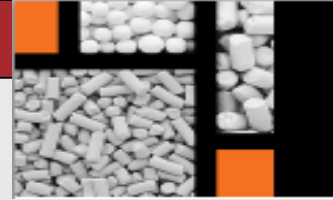
| Item | Unit | Macroporous Pseudoboehmite | | | Low sodium Pseudoboehmite | Common Pseudoboehmite |
|--------------------------------|-------------------|----------------------------|-----------|-----------|---------------------------|-----------------------|
| | | NH-P-DF-1 | NH-P-DF-2 | NH-P-DF-3 | XR-DF-03-LS (NH-P-DF) | NH-P-D |
| Fe ₂ O ₃ | % | ≤0.015 | ≤0.015 | ≤0.015 | ≤0.015 | ≤0.015 |
| Na ₂ O | % | ≤0.05 | ≤0.05 | ≤0.05 | ≤0.1 | ≤0.30 |
| SiO ₂ | % | ≤0.2 | 1-2 | 2-4 | ≤0.2 | ≤0.2 |
| Bulk density | g/ml | ≤0.70 | ≤0.70 | ≤0.70 | ≤0.70 | ≤0.70 |
| Surface area | m ² /g | ≥320 | ≥320 | ≥380 | ≥260 | ≥260 |
| Pore Volume | ml/g | 0.85-0.95 | 0.9-1.0 | 1.0-1.2 | ≥0.34 | ≥0.34 |
| Dry basis | % | ≥70 | ≥70 | ≥70 | ≥70 | ≥65 |
| impurity | % | ≤3 | ≤3 | ≤3 | ≤3 | ≤3 |
| Peptizing index | % | | | | ≥97 | ≥97 |

Our Characteristics

High peptizing ability

Large pore volume

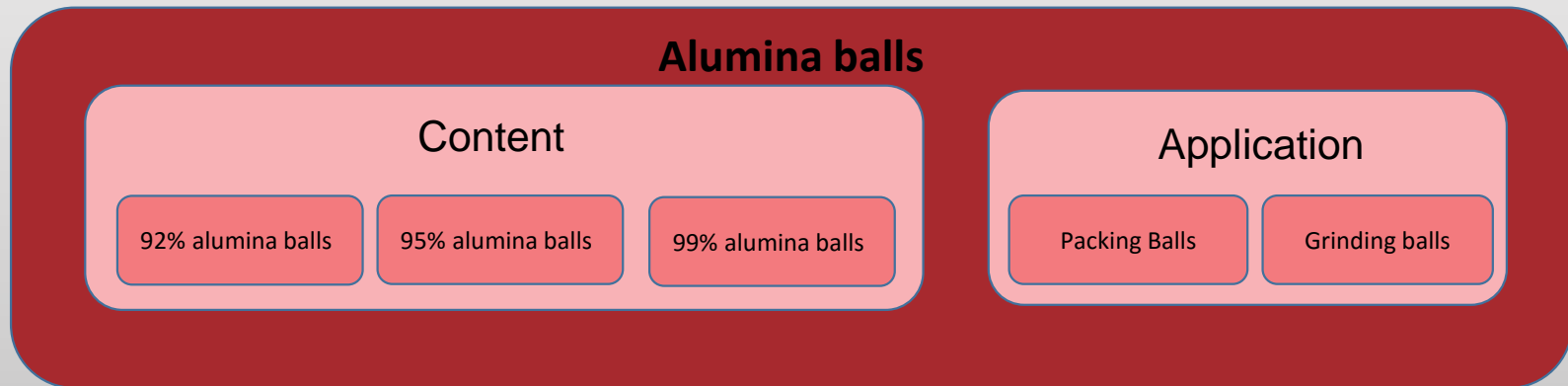
Large surface area



Alumina balls

Our alumina ball(also called alumina ceramic ball) is made of α alumina (α aluminium oxide--the most thermodynamically stable form) by cool isostatic pressing and fired at a very high temperature in the tunnel kiln. Our alumina ball product series include: alumina grinding ball for grinding, alumina packing balls and inert alumina ball/ceramic ball for tower packing, catalyst bed support, column internals and catalyst carrier.

Available Types of Alumina balls



Alumina Balls

Technical data

| Performance Index | Grinding balls | | | Packing balls | |
|--------------------------|----------------|-------|---------|---------------|-------|
| Particle Size | 0.5-95mm | | | | |
| Alumina (%) | 92 | 95 | > 92 | ≥92 | ≥99 |
| Si2O3 | ≤5 | ≤5 | | ≤5 | ≤5 |
| Fe2O3 (%) | ≤0.02 | ≤0.02 | <1% | ≤0.23 | ≤0.04 |
| Hardness(Mosh) | 9 | 9 | >6.5 | ≥9 | ≥9.5 |
| Water Absorption (%) | ≤0.01 | ≤0.01 | <0.5 | ≤4 | ≤5 |
| Volume Density (g/cm3) | ≥3.60 | ≥3.70 | 2.3-2.4 | ≥3.3 | ≥3.7 |
| Compression Strength MPa | ≥2000 | ≥2500 | - | ≥2000 | ≥2500 |
| Abrasion(‰) | ≤0.10 | ≤0.08 | - | ≤0.10 | ≤0.10 |
| Color | White | White | Grey | White | White |

Our Characteristics

high specific gravity and density

Low abrasion, corrosion resistance
and wear resistance

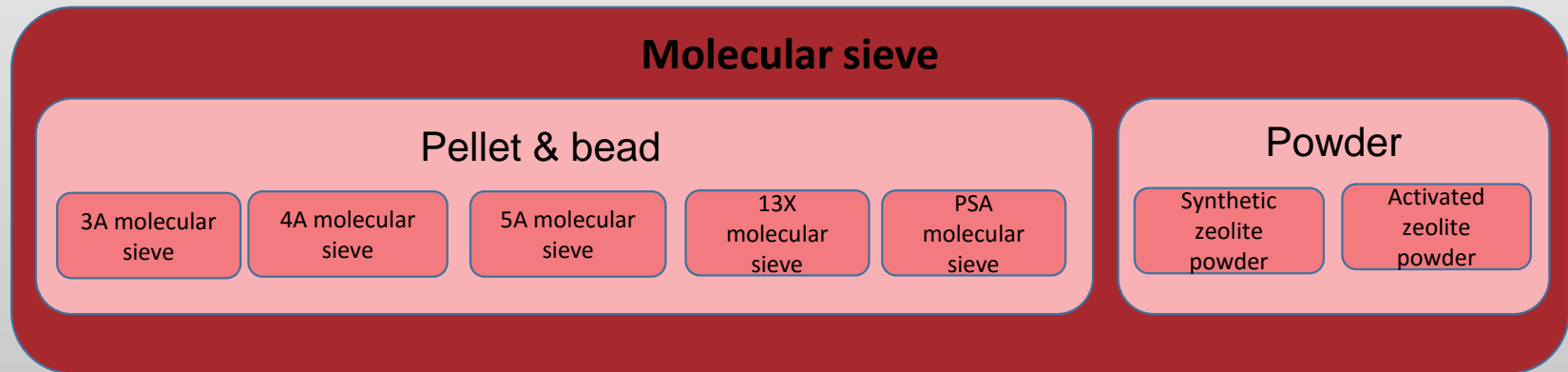
withstands high temperature



Molecular Sieves

Molecular sieve usually means zeolite molecular sieve, it is crystalline, highly porous materials, which belongs to the class of aluminosilicates. The crystals of molecular sieve is characterized by a three-dimensional pore system, with pores of precisely defined diameter. Molecular sieve adsorbent, this diameter is in the dimension of the size of molecules such as water, CO₂ and H₂S.

Available Types of Molecular sieve



Technical data- Simple

| Property | Unit | Bead | | Pellet | | Note |
|-------------------------|---------------------|---------|---------|---------|---------|----------------|
| | | 8X12 | 4X8 | 1/16" | 1/8" | |
| Static Water Adsorption | %wt | ≥ 21.00 | ≥ 21.00 | ≥ 20.00 | ≥ 20.00 | RH50% , 25°C |
| Crush Strength | N | ≥ 30.00 | ≥ 80.00 | ≥ 30.00 | ≥ 70.00 | Average 25 pcs |
| Crush Strength | lbs | ≥ 7.00 | ≥ 18.00 | ≥ 7.00 | ≥ 16.00 | Average 25 pcs |
| Bulk Density | g/ml | ≥ 0.70 | ≥ 0.70 | ≥ 0.65 | ≥ 0.65 | Settled |
| Bulk Density | lbs/ft ³ | ≥ 43.00 | ≥ 43.00 | ≥ 40.00 | ≥ 40.00 | Settled |
| Loss on Ignition | %wt | ≤ 1.50 | ≤ 1.50 | ≤ 1.50 | ≤ 1.50 | 575°C,1hr |
| Loss on Attritioin | %wt | ≤ 0.10 | ≤ 0.10 | ≤ 0.30 | ≤ 0.30 | |
| Particle Ratio | % | ≥ 97.00 | ≥ 99.00 | ~ | ~ | |

Our Characteristics

stable and excellent static and kinetic adsorption capacity

higher crush strength

Even size

Package & Loading



Thanks a lot for your visit!

We trust our best quality, best service, and competitive price could let our customers believe in us.

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