



**青岛恒泽硅胶制品有限公司**  
QINGDAO HENGZE SILICA GEL PRODUCTS CO., LTD

- 📍 No. 22, Huiheng Road, Jimo District, Qingdao, China
- ☎ 0086(0)532-67760191 (EXT) 601
- 📞 0086 13070801087
- ✉ sales1@hz-silicagel.com
- 🌐 www.hz-silica.com



**青岛恒泽硅胶制品有限公司**  
QINGDAO HENGZE SILICA GEL PRODUCTS CO., LTD



## Company Profile 公司介绍

Qingdao Hengze Silica Gel Products Co., Ltd was established in 2014. We have been dedicating to the research, production and sales of silica gel. Our silica gel is widely used in various industries such as gas and oil industry, food, bio-pharmaceuticals, plant extraction, fine chemicals, scientific analysis, environmental monitoring, petrochemicals, and also daily life. We have been cooperating with some research institutions and universities in China. After a few years' development, we expanded our business scope to other chemical industries. Our main products include silica gel desiccant, indicating silica gel, column chromatography silica gel, catalyst silica gel, oil decoloring silica gel, FNG silica gel, silica alumina gel, molecular sieve, activated alumina...Our annual production is about 20,000 tons.

# 01

### PRODUCT

Silica Gel  
Molecular Sieve  
Activated Alumina

# 02

### USE

Separation Media	Drying
Filter Media	Dehydration
Catalyst Carrier	Desiccant
Catalyst	Adsorbent
Purification	

# 03

### APPLICATION

Fine Chemical Industry	Water Purification
Gas Industry	Oxygen Generation
Food Industry	Pharmaceutical
Petro Chemical Industry	Insulating Glass Industry
Power Industry	



# CONTENTS

# 目录



Silica Gel (Desiccant/Adsorbent/Catalyst)

White Silica Gel/ 细孔硅胶 ..... 03

Silica Gel Desiccant/ 硅胶干燥剂 ..... 04

Blue Silica Gel/ 蓝色硅胶 ..... 05

Orange Silica Gel/ 橙色硅胶 ..... 06

B Type Silica Gel/B 型硅胶 ..... 07

Macro Pore Silica Gel/ 粗孔硅胶 ..... 08

Silica Gel for Oil Bleaching/ 油品脱色砂 ..... 09

PSA Silica Gel/ 变压吸附硅胶 ..... 10

Water - resistant (FNG) Silica Gel/ 耐水硅胶 ..... 11

Silica Alumina Gel/ 硅铝胶 ..... 12

Molecular Sieve (Desiccant/Adsorbent/Catalyst)

Molecular Sieve 3A/3A 分子筛 ..... 13

Molecular Sieve 4A/4A 分子筛 ..... 14

Molecular Sieve 5A/5A 分子筛 ..... 15

Molecular Sieve 13X/13X 分子筛 ..... 16

Carbon Molecular Sieve/ 碳分子筛 ..... 17

Activated Alumina (Desiccant/Adsorbent/Catalyst)

Activated Alumina Balls/ 活性氧化铝球 ..... 18

## White Silica Gel/ 细孔硅胶



Milky white, transparent or translucent bead or lump, non-toxic and odorless.

### Application:

Mainly used for drying and moisture proof, may also be used as catalyst carriers, adsorbents, separators and variable-pressure adsorbents, etc.

### Technical Data:

Item		Specifications	
		Spherical	Lumpy
Adsorption capacity/ 吸附 @ T:25°C, 48h	RH=20%, % ≥	8	8
	RH=40%, % ≥	19	19
	RH=80%, % ≥	32	30
SiO <sub>2</sub>	% ≥	98	98
Pore diameter/ 孔径	Å	20-30	20-30
Bulk density/ 松散堆积	g/l, ≥	720	670
Loss on heating/ 加热减量	% ≤	2.0/5.0	2.0/5.0
Qualified size ratio/ 粒度合格率	% ≥	98	95
Size/ 规格	mm	0.5-1.5/1-3/2-4/3-5/2-5/4-8mm	0.3-1/0.5-1.5/0.5-2/1-3/2-5/4-8mm
Packing/ 包装		25kg/bag, 25kg/drum, 150kg/drum, 800kg/jumbo bag	

Remark: Special demands can be negotiable.



## Silica Gel Desiccant/ 硅胶干燥剂

Fine pored silica gel with colors in white/blue/orange, can be bead or granular kind. It is used as desiccant in many areas.

### Application:

1. Packed into small desiccant sachets with different sizes and different packing materials.
2. Used for flower drying purpose to make fresh flowers to dry flowers.

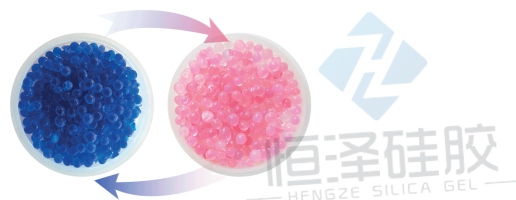
Product	Silica gel sachet	Packing machine
Size	0.5g, 1g, 2g, 3g, 5g, 10g, 20g, 30g, 50g, 100g...	220V/50HZ/1.9KW, 600*790*1780mm
Packing material	Normal paper, OPP, Non-woven fabric, Dulai paper, Aihua paper, Tea filter paper, Tyvek, Japanese non-woven fabric	Paper / polyethylene, cellophane / polyethylene, polyester / aluminized / polyethylene, BOPP thin mold, tea filter paper and other heat sealable composite materials.

Product	Silica gel for flower drying
Appearance	Beads or irregular granules
Size	0.3-1mm(most popular),1-3mm, 2-4mm, 3-5mm
Color	White/White+5-10%blue to pink/White+5-10%orange to green
Packing	1.5lb, 5lb, 500g, 1kg, 2kg per PE bag, 25kg/bag, jumbo bag

## Blue Silica Gel/ 蓝色硅胶



Blue bead or lump, when absorbing moisture, the color will change to kind of pink.



### Application:

Mainly used for drying and indicating the humidity, widely used in Precision instruments, Pharmaceutical industry, Petroleum and gas industry, Chemical industry, Food industry, Clothing industry, Household appliances industry, Aviation industry, Military industry and Power industry.

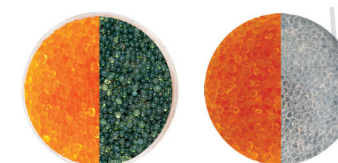
### Technical Data:

Item	Specifications	
Adsorption capacity/ 吸附 @ T:25°C, 48h	RH=20%, % ≥	8
	RH=40%, % ≥	18
	RH=80%, % ≥	28
SiO <sub>2</sub>	% ≥	98
Pore diameter/ 孔径	Å	20-30
Bulk density/ 松散堆积	g/l, ≥	700
Loss on heating/ 加热减量	%, ≤	3.0
Qualified size ratio/ 粒度合格率	%, ≥	98
Size/ 规格	mm	0.5-1.5/1-3/2-4/3-5/2-5/4-8mm
Packing/ 包装	25kg/bag, 25kg/drum, 150kg/drum, 800kg/jumbo bag	

## Orange Silica Gel/ 橙色硅胶



Orange bead or lump, when absorbing moisture, the color will change to green or transparent. Orange silica gel doesn't contain cobalt chloride, so it's non-toxic and harmless.



### Application:

Mainly used for drying and indicating the humidity, widely used in Precision instruments, Pharmaceutical industry, Petroleum and gas industry, Chemical industry, Food industry, Clothing industry, Household appliances industry, Aviation industry, Military industry and Power industry.

### Technical Data:

Item	Specifications	
	Orange-green	Orange-null
Adsorption capacity/ 吸附 @ T:25°C, 48h	RH=20%, % ≥	8
	RH=40%, % ≥	19
	RH=80%, % ≥	30
SiO <sub>2</sub>	% ≥	98
Pore diameter/ 孔径	Å	20-30
Bulk density/ 松散堆积	g/l, ≥	720
Loss on heating/ 加热减量	%, ≤	3.0
Qualified size ratio/ 粒度合格率	%, ≥	98
Size/ 规格	mm	0.5-1.5/1-3/2-4/3-5/2-5/4-8mm
Packing/ 包装	25kg/bag, 25kg/drum, 150kg/drum, 800kg/jumbo bag	

## B Type Silica Gel/B 型硅胶

Milky white, transparent or translucent bead or lump, non-toxic and odorless.



### Application:

1. Used as liquid adsorbents, drier and perfume carriers.
2. Used as catalyst carriers.
3. Used as raw materials for refining chemical products such as chromatography silica gel, etc.

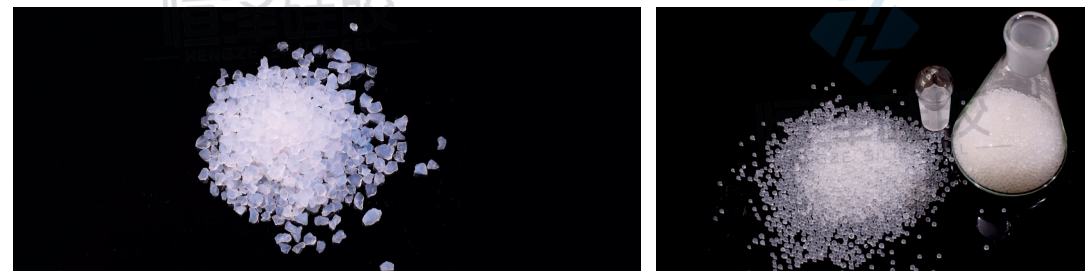
### Technical Data:

Item		Specifications	
		Spherical	Lumpy
Adsorption capacity/ 吸附 @ T:25°C, 48h	RH=20%, % ≥	4	4
	RH=50%, % ≥	11	11
	RH=90%, % ≥	70	70
SiO <sub>2</sub>	% ≥	98	98
Pore diameter/ 孔径	Å	50-80	50-80
Bulk density/ 松散堆积	g/l	450-600	450-600
Loss on heating/ 加热减量	% ≤	5.0/8.0	5.0/8.0
Qualified size ratio/ 粒度合格率	% ≥	90	90
Size/ 规格	mm	2-6mm	2-6mm
Packing/ 包装	25kg/bag, 25kg/drum, 150kg/drum, 500kg/jumbo bag		

Remark: Special demands can be negotiable.

## Macro Pore Silica Gel/ 粗孔硅胶

Milky white, transparent or translucent bead or lump, non-toxic and odorless.



### Application:

1. Used for moisture proof packing.
2. Used for dehydration and purification of industrial gases.
3. Used for removing the organic acids and high polymers in the insulation oils.
4. Used for adsorbing the high molecular proteins during the industrial fermenting process.
5. Used as catalysts and catalyst carriers, etc.

### Technical Data:

Item		Specifications	
		Spherical	Lumpy
Adsorption capacity/ 吸附	% ≥	90	90
SiO <sub>2</sub>	% ≥	98	98
Pore diameter/ 孔径	Å	80-110	80-110
Bulk density/ 松散堆积	g/l	400-500	400-500
Loss on heating/ 加热减量	% ≤	5.0/8.0	5.0/8.0
Qualified size ratio/ 粒度合格率	% ≥	85	85
Size/ 规格	mm	1-8/2-6mm	1-8/2-8/4-8mm
Packing/ 包装	20kg/bag, 450kg/jumbo bag		

## Silica Gel for Oil Bleaching/ 油品脱色砂

White powder, non-toxic and odorless.



### Application:

Mainly used for filtering the impurities, oxides and part of the odor in the oil, integrating impurity removal, deodorization and separation, making the blackened oil into light transparent liquid.

Decolorization, and purification of black diesel, hydraulic oil, base oil, engine oil, lubricant oil, plastic oil, and vegetable oil.

### Technical Data:

Item	Specifications
Water adsorption/ 水分吸附	RH=100%, % ≥ 98
Decoloring rate/ 脱色率	%, ≥ 98
SiO <sub>2</sub>	%, ≥ 98
Pore diameter/ 孔径	Å 85-110
Bulk density/ 松散堆积	g/l, ≥ 380
Qualified size ratio/ 粒度合格率	%, ≥ According to customer's demands
Size/ 规格	mesh 20-40/30-80/40-120/80-200mesh
Packing/ 包装	20kg/bag, 450kg/jumbo bag

## PSA Silica Gel/ 变压吸附硅胶

Transparent or translucent bead, non-toxic and odorless.



### Application:

Variable-pressure adsorption is used for gas separation and purifying. Mainly used for the recovery, separation and purifying of carbon dioxide gas. It is used for preparation of carbon dioxide in synthetic ammonia industry, food & beverage processing industry, etc. It may also be used for drying, moisture absorption as well as dehydration of organic products.

### Technical Data:

Item	Specifications
Adsorption capacity/ 吸附 @ T:25°C, 48h	RH=20%, % ≥ 10
	RH=50%, % ≥ 23
	RH=90%, % ≥ 36
SiO <sub>2</sub>	%, ≥ 98
Pore diameter/ 孔径	Å 20-30
Bulk density/ 松散堆积	g/l, ≥ 720
Loss on heating/ 加热减量	%, ≤ 2.0
Qualified size ratio/ 粒度合格率	%, ≥ 95
Size/ 规格	mm 1-3/2-4/3-5mm
Packing/ 包装	25kg/bag, 800kg/jumbo bag

## Water - resistant (FNG) Silica Gel/ 耐水硅胶



FNG silica gel is white bead. Compared with normal silica gel, it has better water resistance, no cracking in water and long service life.

### Application:

1. Used for drying and purifying compressed air and as adsorbent for acetylene and carbon dioxide in air separation industry.
2. Used as liquid adsorbent and catalyst carrier for petrochemical, power and brewing industries.
3. Used as buffer desiccant for ordinary silica gel protective bed.

### Technical Data:

Item		Specifications	
		FNG-A	FNG-C
Adsorption capacity/ 吸附	% ≥	36	72
Pore diameter/ 孔径	Å	20-30	85-110
Bulk density/ 松散堆积	g/l	600-700	400-500
Loss on heating/ 加热减量	% ≤	5.0	5.0
Crushing strength/ 抗压强度	N ≥	80	80
No breaking rate/ 不炸裂率	% ≥	95	95
Qualified size ratio/ 粒度合格率	% ≥	95	95
Size/ 规格	mm	3-5mm, 4-8mm, 8-12mm	
Packing/ 包装		20/25kg bags/drums, 150kg/drum, jumbo bag	

## Silica Alumina Gel/ 硅铝胶



Silica alumina gel is white or light yellow bead. Chemical formula is  $m\text{SiO}_2 \cdot n\text{Al}_2\text{O}_3 \cdot x\text{H}_2\text{O}$ . It has stable chemical properties, no combustion, insoluble in solvents except strong alkali and hydrofluoric acid. It also has good thermal stability.

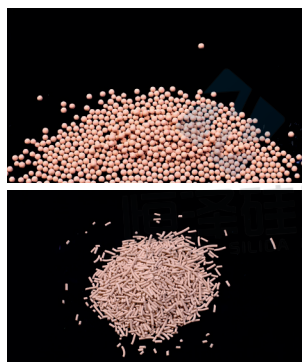
### Application:

Used for drying compressed air, natural gas, liquefied gas and other gases.

### Technical Data:

Item		Specifications	
		H	WS
Adsorption capacity/ 吸附 @ T:25°C, 48h	RH=20%, % ≥	9	6
	RH=40%, % ≥	18	20
	RH=80%, % ≥	42	32
SiO <sub>2</sub>	%	90-97	90-97
Al <sub>2</sub> O <sub>3</sub>	%	3-10	3-10
Bulk density/ 松散堆积	g/l, ≥	650	650
Loss on heating/ 加热减量	%, ≤	3.0/5.0	3.0/5.0
Crushing strength/ 抗压强度	N/pcs ≥	150	80
Qualified size ratio/ 粒度合格率	% ≥	92	92
Size/ 规格	mm	2-5mm	2-5mm
Packing/ 包装		25kg/bag, 25kg/drum, 150kg/drum, jumbo bag	

## Molecular Sieve 3A/3A 分子筛



Molecular sieve 3A's formula is:  $2/3K_2O \cdot 1/3Na_2O \cdot Al_2O_3 \cdot 2SiO_2 \cdot 9/2H_2O$ .  
According to the industrial application characteristics, it has fast adsorption speed, more regeneration times, strong crushing strength and anti pollution ability, which improves the utilization efficiency and prolongs the service life.

### Application:

1. Gas drying (e.g. petroleum cracking gas, gas refining plant, oilfield gas, natural gas, methane gas, unsaturated hydrocarbon and cracked gas, ethylene, acetylene, propylene and butadiene).
2. Various liquids drying (e.g. ethanol).
3. Air drying.
4. Refrigerant drying.
5. Drying agent for chemical, pharmaceutical, and insulating glass industries.

### Technical Data:

Item	Specifications				
		Sphere/ 球形		Strip/ 条形	
Shape/ 形状					
Size/ 规格	mm	1.7-2.5	3.0-5.0	1.6	3.2
Qualified size ratio/ 粒度合格率	% ≥	98	98	96	96
Bulk density/ 堆积密度	g/cm <sup>3</sup> ≥	0.72	0.70	0.66	0.66
Wear ratio/ 磨耗率	% ≤	0.20	0.20	0.20	0.20
Crushing strength/ 抗压强度	N/PC ≥	55	85	30	40
Static H <sub>2</sub> O adsorption/ 静态水吸附	% ≥	21.0	21.0	21.0	21.0
Ethylene adsorption/ 乙烯吸附	% ≤	3.0	3.0	3.0	3.0
Water content/ 包装水含量	% ≤	1.5	1.5	1.5	1.5
Packing/ 包装	25kg/bag, 25kg/drum, 150kg/drum, jumbo bag				

## Molecular Sieve 4A/4A 分子筛



Molecular sieve 4A's formula is:  $Na_2O \cdot Al_2O_3 \cdot 2.0SiO_2 \cdot 4.5H_2O$ .  
It's one of the most widely used molecular sieves in industry. It adsorbs water, methanol, ethanol, hydrogen sulfide, sulfur dioxide, carbon dioxide, ethylene and propylene. Its selective adsorption ability to water is higher than other molecular sieves.

### Application:

1. Deep drying of gases and liquids such as air, natural gas, alkanes and refrigerants.
2. Production and Purification of Argon.
3. Static Drying of Pharmaceutical Packaging, Electronic Components and Perishable Substances.
4. Use as dehydrating agent in paint, fuel and coatings.

### Technical Data:

Item	Specifications				
		Sphere/ 球形		Strip/ 条形	
Shape/ 形状					
Size/ 规格	mm	1.7-2.5	3.0-5.0	1.5-1.7	3.0-3.3
Qualified size ratio/ 粒度合格率	% ≥	98	98	98	98
Bulk density/ 堆积密度	g/cm <sup>3</sup> ≥	0.70	0.70	0.66	0.66
Wear ratio/ 磨耗率	% ≤	0.20	0.20	0.20	0.40
Crushing strength/ 抗压强度	N/PC ≥	30	70	30	45
Static H <sub>2</sub> O adsorption/ 静态水吸附	% ≥	21	21	21	21
Methanol adsorption/ 甲醇吸附	% ≥	15	15	15	15
Water content/ 包装水含量	% ≤	1.5	1.5	1.5	1.5
Packing/ 包装	25kg/bag, 25kg/drum, 150kg/drum, jumbo bag				

## Molecular Sieve 5A/5A 分子筛



Molecular sieve 5A's formula is:  $0.70\text{CaO} \cdot 0.30\text{Na}_2\text{O} \cdot \text{Al}_2\text{O}_3 \cdot 2.0\text{SiO}_2 \cdot 4.5\text{H}_2\text{O}$ .  
It can adsorb any molecules smaller than pore diameter 5A.

### Application:

1. Used in pressure swing adsorption and separation. Molecular sieve 5A is suitable for pressure swing adsorption. It can be used in various sizes of PSA devices for oxygen, hydrogen and carbon dioxide production. It is an ideal product in PSA industry.
2. Used in the separation of normal and isomeric hydrocarbons.
3. Used in Co-adsorption of water and carbon dioxide.

### Technical Data:

Item	Specifications				
		Sphere/ 球形		Strip/ 条形	
Shape/ 形状					
Size/ 规格	mm	1.7-2.5	3.0-5.0	1.6	3.2
Qualified size ratio/ 粒度合格率	% ≥	98	98	96	96
Bulk density/ 堆积密度	g/cm <sup>3</sup> ≥	0.72	0.70	0.66	0.66
Wear ratio/ 磨损率	% ≤	0.20	0.20	0.20	0.20
Crushing strength/ 抗压强度	N/PC ≥	45	40	100	75
Static H <sub>2</sub> O adsorption/ 静态水吸附	% ≥	22	22	22	22
Water content/ 包装水含量	% ≤	1.0	1.0	1.0	1.0
Packing/ 包装	25kg/bag, 25kg/drum, 150kg/drum, jumbo bag				

## Molecular Sieve 13X/13X 分子筛



Molecular sieve 13X is gray bead which is used for oxygen production.

With high nitrogen adsorption capacity, excellent nitrogen and oxygen separation coefficient, higher oxygen purity, faster adsorption speed and longer service life, molecular sieve 13X is a good partner for household and medical oxygen generators.

### Technical Data:

Item		Specifications			
		Sodium Based/ 钠基		Lithium Based/ 锂基	
Size/ 规格	mm	1.6-2.5	3-5	0.4-0.8	1.3-1.7
Static water adsorption/ 静态水吸附, RH=75%, 25°C	%wt	≥ 27	≥ 30	—	—
Static CO <sub>2</sub> adsorption/ 静态 CO <sub>2</sub> 吸附, 25°C, 250mmHg	%wt	≥ 18	≥ 18	—	—
Static N <sub>2</sub> adsorption/ 静态 N <sub>2</sub> 吸附, 25°C, 760mmHg	%wt ≥	8	8	22	22
N <sub>2</sub> /O <sub>2</sub> separation/ 氮氧分离系数, 25°C, 1bar	≥	3	3	6	6
Density/ 堆积	g/l	≥ 620	≥ 620	600-670	600-660
Loss on heating/ 加热减量 575°C, 1hr	%, ≤	1.0	1.0	0.5	0.5
Crushing strength/ 抗压强度, AVG 25pcs	N/PC	25+/-3	-	8	15
Qualified size ratio/ 粒度合格率	% ≥	97	97	97	97
Packing/ 包装	As per customer's demands				

## Carbon Molecular Sieve/ 碳分子筛

CMS series carbon molecular sieves is black columnar solid, which can be used to separate oxygen and nitrogen in the air. Carbon molecular sieve has the advantages of large amount of nitrogen production, high nitrogen recovery rate and long service life. It is suitable for various types of pressure swing adsorption nitrogen generator.



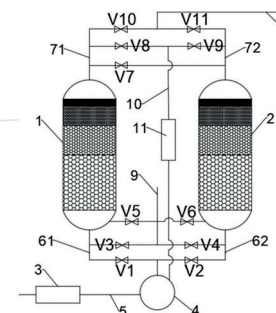
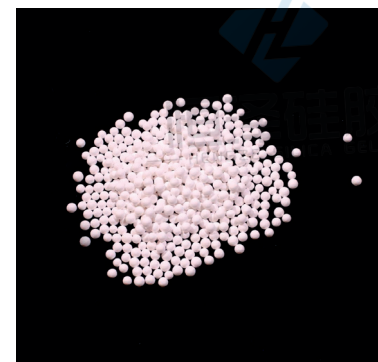
### Application:

Carbon molecular sieve air separation has been widely used in petrochemical, metal heat treatment, electronic manufacturing, food preservation and other industries.

### Technical Data:

Type	Adsorption pressure (M.pa)	Nitrogen purity (%)	Nitrogen production (NM <sub>3</sub> /h.t)	Nitrogen recovery (%) (N <sub>2</sub> /Ar)
CMS-220	0.8	99.99	90	≥ 25
		99.9	160	≥ 34
		99.5	220	≥ 43
		99.0	290	≥ 48
		98.0	360	≥ 54
CMS-240	0.8	99.99	100	≥ 26
		99.9	175	≥ 35
		99.5	240	≥ 44
		99	300	≥ 49
		98	370	≥ 55
CMS-260	0.8	99.99	110	≥ 27
		99.9	190	≥ 36
		99.5	260	≥ 45
		99	310	≥ 50
		98	380	≥ 56

## Activated Alumina Balls / 活性氧化铝球



White bead, non-toxic, odorless and insoluble in water and ethanol. According to different uses, its raw materials and preparation methods are different.

### Application:

1. Used as desiccant to selectively adsorb water in some gases, vapors and liquids.
2. In addition to being used as a desiccant, it can also absorb the vapor of lubricating oil from contaminated oxygen, hydrogen, carbon dioxide, natural gas, etc.
3. Used as catalyst, catalyst carrier and chromatographic analysis carrier.
4. Used as adsorbents, water purifiers.

### Technical Data:

Item	Specifications		
	Desiccant	Catalyst	Complex Type
Water adsorption/ 水分吸附	%, ≥ 45	50	50
Static Adsorption/ 静态吸附	%, ≥ 17	17	17
Al <sub>2</sub> O <sub>3</sub>	%, ≥ 92	92	92
SiO <sub>2</sub>	%, ≤ 0.1	0.1	0.1
Fe <sub>2</sub> O <sub>2</sub>	%, ≤ 0.04	0.05	0.04
Na <sub>2</sub> O	%, ≤ 0.45	0.6	0.45
Pore volume/ 孔容	cm <sup>3</sup> /g ≥ 0.45	0.5	0.5
BET/ 比表面积	m <sup>2</sup> /g ≥ 300	250	380
Bulk density/ 松散堆积	g/l, ≥ 650	600	650
LOI/ 灼失量	%, ≤ 8.0	8.0	8.0
Crushing strength/ 抗压强度	N/G ≥ 130	150	200
Loss on attrition/ 磨耗率	%, ≤ 0.6	0.4	0.4
Qualified size ratio/ 粒度合格率	%, ≥ 98	98	98
Size/ 规格	mm	3-5/4-6mm	3-5/4-6mm
Packing/ 包装	25kg/bag, 800kg/jumbo bag		