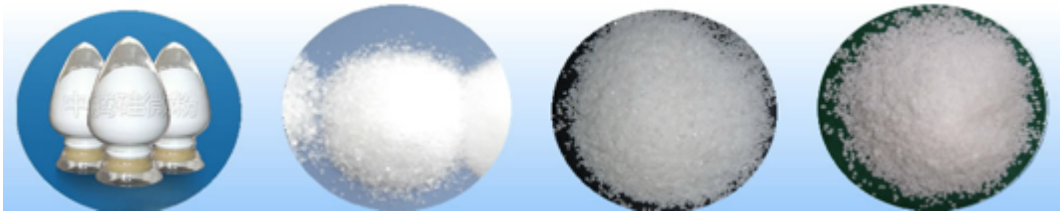
Wedge SSPL

Production of industrial (Amorphous and crystalline) silica materials. It is located in Wuxi-Xinyi Industrial Park, Xinyi Ciyi, Jinagsu Province, which is 20km form famous China Donghai-Xinyi quartz mine area. Nearest Seaport is 100 km “Lianyungang” sea port. The transportation is very convenient and economic.

Main Products are **Fused Silica** and **Crystal Silica.**

Our main customers are the world famous and top 500 companies in more than 20 countries worldwide.



Main Application Areas: **EMC filler, Technical Ceramic, PV crucible, Investment Casting, Refractory, Glass fiber, Organ silicon chips, Paint, Optical Glass, and Artificial Marble** etc.

The company production capacity is 30000 Mt annually, and become the leading enterprise in this field. Manufacturing facility adopts the world’s first class of production equipment, testing and quality controlling facilities, plus the perfect quartz minerals. It is also certificated by the ISO9001 quality warranty system. The factory and office area spread in the land 100000 square meters, production space 25000 square meters, office and living facilities 8000 square meters. The main Equipments are fusing furnace 30 sets and matching production, testing and quality controlling facilities.

With our excellent company credibility, advanced management, production/quality controlling system, and high quality employee, we are confident to supply you qualified and stable material, and help you to be more competitive in market.

India Office: 120 / 143, Silveroaks, Complex, DLF Phase – 1, Gurgaon, (NCR Delhi), Haryana, India – 122002; Tel : +91 124 4089664

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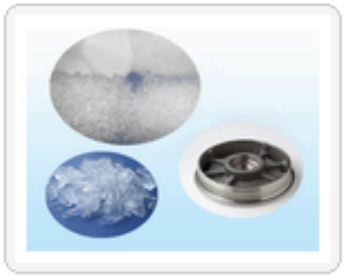
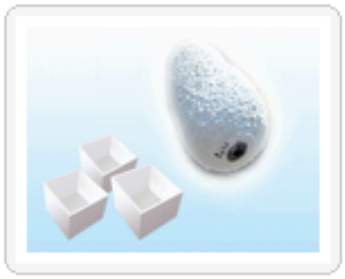
Products: Fused Silica & Crystal Silica

High-purity electronic grade fused silica powder

Temperature technology ceramic grade fused silica



Precision casting and refractory grade fused silica



PV Crucible Grade Fused Silica

Electronic and Electrical grade high-purity quartz crystal

Superfine quartz powder

Crystal Silica | Electronic Materials Grade:
Qmin-SIL Series crystal Silica is made of high purity natural quartz, by our unique technology as purifying, grinding, sieving/classfying, surface treating, drying, magnetic seperating, designed for EMC and other electrical application.

Fused Silica | Electronic Materials Grade:
Qmin-SIL Series Fused Silica is made of high purity Chinese crystal Silica by electrically fusing (fusing temperature 1800-2000℃) to amorphous Silicon dioxide, then by alumina ball mill grinding, unique air classifying, screening, magnetic and other impurity seperating techonology, designed for EMC and other electrical application.

Fused Silica | Investment Casting & Refractory Grade:
Qmin-SIL Series Fused Silica is made of high purity Chinese crystal Silica by electrically fusing (fusing temperature 1800-2000℃) to amorphous Silicon dioxide , then specially engineered ingots, granular and flour form designed for investment casting and high grade refractory application. This product has a very low thermal conductivity and excellent thermal shock resistance.

Fused Silica | Technical Thermal Ceramic Grade
Qmin-SIL Series Fused Silica is made of high purity Chinese crystal Silica by electrically fusing (fusing temperature 1800-2000℃) to amorphous Silicon dioxide , then specially engineered granular and flour form designed for fused silica roller and other high temperature technical creamics production.

Super Fine Silica Powder
Was produced in the ceramic linned ball mill so that dirt, contamination and impurity are prominently low. It is very pure(SiO2 99.8%), high white, high quality silica, with very low moisture. It is produced by a special processing technique and equipment, Plus Marlvern lasier PSD controller, to assure controlled particle size distribution also can assure the elimination of excessively coarse size and fine particles.

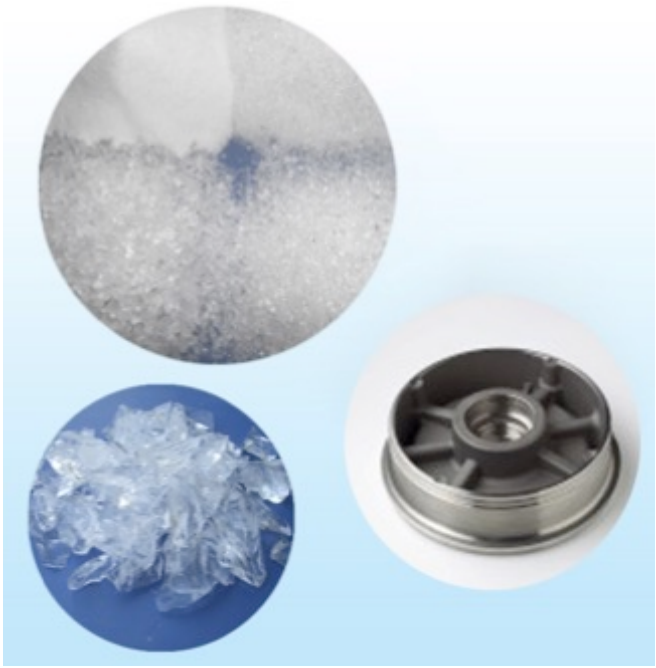
Wedge

Qmin—Sil Fused Silica

Qmin-SIL Series Fused Silica is made of high purity Chinese crystal Silica by electrically fusing (fusing temperature 1800-2000 C) to amorphous Silicon dioxide , then specially engineered ingots, granular and flour form designed for investment casting and high grade refractory application. This product has a very low thermal conductivity and excellent thermal shock resistance.

Special Features

- Very low coefficient of thermal expansion
- Very Low thermal conductivity
- Superior Heat Resistance & Chemical Resistance
- Pure (high SiO_2 content, low Fe, Na, K & Ti)
- Consistent Chemistry
- Statistically controlled particle size distribution



Main Applications

- Investment Casting, shell mould product
- High Grade Refractory Materials

Size Available: (Ingot, Granules and powder)

(1) 8-5mm | 5-3mm | 3-1mm | 1-0mm,1-0.5mm | 1-0.2mm
0-0.5mm | 0.5-0.2mm | 0.5-0.1mm | 0.2-0.1mm | -0.1mm

(2) -4+10mesh | -10+20mesh | -20+50mesh | -30+50mesh
-6+50mesh | -30+60mesh | -50+100mesh | -60-120mesh
-100mesh
120F, 200F, 325F, 400F, 600F, 800F, 1250F

(3) C grade is only granules avaiable.

***Remark**: the particle size can also be produced as customer's special requirement*

Chemical Composition

		AB grade	C grade
SiO_2	:	99.9 %Min	99.5%Min
AL_2O_3	:	0.02%Max	0.08%Max
Fe_2O_3	:	0.01%Max	0.06%Max
Na_2O	:	0.005%Max	0.02Max
TiO_2	:	0.002%Max	0.02%Max
K_2O	:	0.002%Max	0.02%Max.
	:	0.003%Max (For Powder)	
CaO	:	0.002%Max	0.06%Max.
MgO	:	0.002%Max	0.02%Max.
	:	0.003%Max(For Powder)	
Crystallinity	:	(Quartz+Tridymite+Cristoblite) 0.1% Max.	

Physical Properties

Appearance	:	Transparent Granules or White Powder
Specific Gravity	:	2.21
Moisture	:	0.05%Max.
Magnetic	:	0.01 Max.

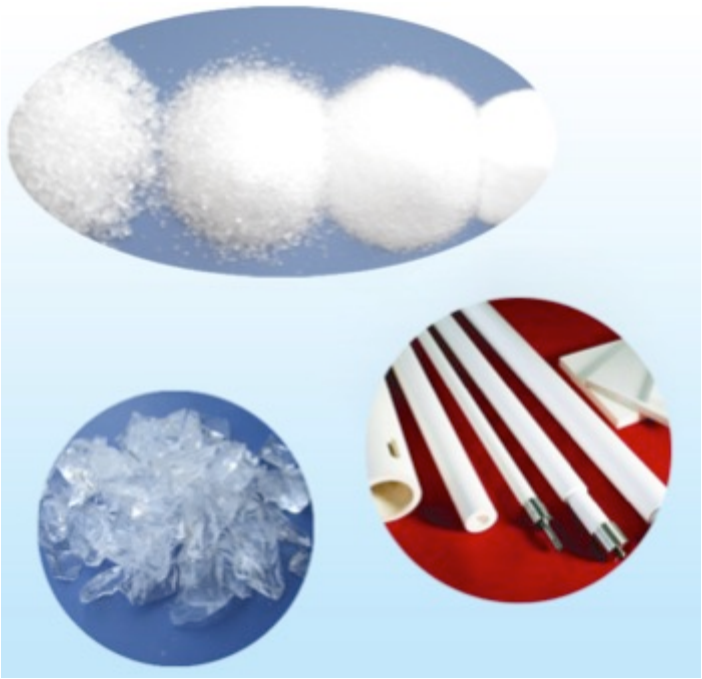
Wedge

Qmin—Sil Fused Silica

Qmin-SIL Series Fused Silica is made of high purity Chinese crystal Silica by electrically fusing (fusing temperature 1800-2000 C) to amorphous Silicon dioxide , then specially engineered granular and flour form designed for fused silica roller and other high temperature technical creamics production.

Special Features

- Very low coefficient of thermal expansion (0.54×10-6 -1, 0～1000C)
- Superior Heat Resistance & Chemical Resistance
- Pure(high SiO2 content, low Fe, Na, K & Ti)
- Consistent Chemistry
- Statistically controlled particle size distribution



Main Applications

- Fused Silica Roller
- Other High Temperature Technical Ceramics

Size Available: (Granules and powder)

4-20mesh | 20-50 mesh | 50-100mesh | 100-200 mesh

10-20 mesh | 30-50 mesh | 50-100 mesh | 120 mesh

200 mesh | 325 mesh | 400 mesh | 600 mesh | 800 mesh

1250 mesh | 2500 mesh

***Remark**: the particle size can also be produced as customer's special requirement*

Chemical Composition

		Granule	Powder
SiO_2	:	99.97%	99.9%
AL_2O_3	:	30 ppm	100 ppm
Fe_2O_3	:	15 ppm	50 ppm
Na_2O	:	30 ppm	50 ppm
K_2O	:	30 ppm	50 ppm
CaO	:	30 ppm	50 ppm
MgO	:	15ppm	50ppm
Cristobalite	:	0.1% Max	0.1% Max.

Physical Properties

Appearance	:	Transparent Ingots, Granule or White Powder
Specific Gravity	:	2.21

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Electrical & Electronic Grade | Crystal Silica

Qmin—Sil Crystal Silica

Qmin-SIL Series crystal Silica is made of high purity natural quartz, by our unique technology as purifying, grinding, sieving / classfying, surface treating, drying, magnetic seperating, designed for EMC and other electrical application.

Special Features

- High electric insulation property
- Particle shape good for flowability
- High chemical Resistance
- Pure(high SiO_2 content, low Fe, Na, K & Al))
- Statistically controlled particle size distribution
- High whiteness
- High Hardness, good wearable

Main Applications

- EMC (Epoxy Molding Compound) Filler, coating powder
- Electrical Insulators
- Silicon rubber, paint etc.

GRADE

(1) 6-16mesh | 16-26mesh | 26-70mesh | 70-140mesh

(2) 120mesh | 200mesh | 325 mesh | 400 mesh
600 mesh | 800 mesh | 1250 mesh

***Remark**: the particle size can also be produced as customer's special requirement*

Chemical Composition

SiO_2	:	99.8%Min. (Typical: 99.82%)
Fe_2O_3	:	200ppm Max. (Typical: 100 ppm)

Extracted Water

Na^+	:	8 ppm Max.
Cl^-	:	5 ppm Max.
Electric Conductivity	:	6um/cm Max

Physical Properties

Appearance	:	White granules / powder
Specific Gravity	:	2.65
Hardness(Mohs)	:	7.0
PH	:	6-8
Whiteness	:	95 Min.
Igniting Loss	:	0.1%Max

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Qmin—Sil Fused Silica

Qmin-SIL Series Fused Silica is made of high purity Chinese crystal Silica by electrically fusing (fusing temperature 1800-2000 C) to amorphous Silicon dioxide, then by alumina ball mill grinding, unique air classifying, screening, magnetic and other impurity seperating techonology, designed for EMC and other electrical application.

Special Features

- Very low coefficient of thermal expansion
- Excellent conductivity and Electrical property
- High Chemical Resistance
- Pure(high SiO_2 content, low Fe, Na, K & Ti)
- High Whiteness
- High Hardness, good wearable

Main Applications

- EMC (Epoxy Molding Compound) Filler, coating powder
- Electrical Insulators
- Others

GRADE

(1) QMin-F/S-E200 d50: 20Micron +/-1
(2) QMin-F/S-E325 d50: 15Micron +/-1
(3) QMin-F/S-E600 d50: 9Micron +/-1
(4) QMin-F/S-E800 d50: 6Micron +/-1

Remark: *the particle size is from d50 2-50um, the PS distribution is controllable*

Chemical Composition:

SiO_2	:	99.85%Min. (Typical: 99.91%)
AL_2O_3	:	800ppm Max. (Typical: 300-500ppm)
Fe_2O_3:	:	80ppm Max. (Typical: 25ppm)

Extracted Water:

Na^+	:	3ppm Max.
Cl^-	:	2ppm Max.
Electric Conductivity	:	3um/cm Max.

Physical Properties:

Appearance	:	White Powder
Specific Gravity	:	2.2
Hardness(Mohs)	:	6.0
PH	:	6.5-8
Whiteness	:	96 Min.
Igniting Loss	:	0.1%Max.

Produced in the ceramic linned ball mill so that dirt, contamination and impurity are prominently low. It is very pure(SiO2 99.8%), high white, high quality silica, with very low moisture. It is produced by a special processing technique and equipment, Plus Marlvern lasier PSD controller, to assure controlled particle size distribution also can assure the elimination of excessively coarse size and fine particles.

Special Features:

- High whiteness (whitness>95, >90)
- High chemical resistance
- Pure(high SiO_2 content, low Iron, no visible impurity)
- Super Fine, PSD stable,controllable and free of coarse size.

Main Applications:

- Paints (Marine, Container, Architectural, Automotive, Protective Coatings, PCM)
- Organosilicon, Seal glue,
- Wire coating materials,
- Silicon rubber
- Electronic Materials

Physical Property:

Appearance(whiteness)	White powder(>95, >90)
Hardness(mohs)	7
Specific Grarvity	2.65
PH	7-8.5

Chemical Analysis (wt%)

SiO2	>99.5	CaO	Trace
Al2O3	<0.15	MgO	Trace
Fe2O3	<0.03	H2O	<0.05
TiO2	<0.02	L.o.I	<0.2

Particle Size Specification & Oil Absorption

ITEM GRADE	Particle Size (Micron) Top	Median	Oil Absorption (ASTM D—281)	Sieve Residue (%) (325mesh)
QS - 150	70	21	13-16	< 25
QS -200	40	17	16-19	< 3.0
QS -300	30	9	18-21	< 0.1
QS -1500	20	7	20-24	< 0.05
QS -5000	15	4	22-26	< 0.01
QS -10	10	2	32-35	< 0.01
QS-5	5	1.5	35-38	< 0.01

Remark: *We also can produce product in accordance to customer's special*

Grades Ch	Q	R	P
0.5 - 0.2 MM (20/50)	1250	43	563
0.1 - 0.5 MM (50/100)	464	16	935
A Grade Lump 5 - 50 MM / 150 MM	308	10	706
100 MESH	370	13	532
30/50	142	5	887
325 MESH	119	4	667

PARTICLE SIZE DISTRIBUTION - GRAIN GRADES

4/10 Grade (4 - 1.7mm)

BSS Mesh	Aperture (mm)	%
3/8	9.5	0
1/4	6.3	0
3/16	4.75	0-5
5	3.35	25-50
10	1.70	45-70
16	1.0	0-15
30	0.5	0-1
60	0.25	0
-60		0

10/20 Grade (1.7 - 0.85mm)

BSS Mesh	Aperture (mm)	%
7	2.36	0-1
10	1.7	0-15
14	1.18	30-60
18	0.85	20-50
25	0.6	10-30
52	0.3	0-5
-52		0-1

30/50 Grade (0.5 - 0.3mm)

BSS Mesh	Aperture (mm)	%
25	0.6	20-35
36	0.425	20-40
52	0.3	15-30
85	0.18	0-20
-350		0-0.5

20/50 Grade (0.85 - 0.3mm)

BSS Mesh	Aperture (mm)	%
10	1.7	0
16	1.0	0-5
30	0.5	35-70
60	0.25	25-60
100	0.15	0-5
200	0.075	0-1
-200		0-1

50/100 Grade (0.3 - 0.15mm)

BSS Mesh	Aperture (mm)	%
36	0.425	0-5
52	0.3	0-1
70	0.212	15-50
100	0.15	25-55
150	0.106	10-35
200	0.075	0-10
-200		0-2

-30 Grade (0.5mm)

BSS Mesh	Aperture (mm)	%
30	0.5	0.5-5
-70	<0.212	15-35
-200	<0.075	0-1

PARTICLE SIZE DISTRIBUTION - FLOUR GRADES

-120 Grade (125µm)

d10	5.07µm
d50	34.23µm
d90	97.50µm

BSS MESH	Aperture (mm)	%
100	0.15	0-1
150	0.106	0-10
200	0.075	0-20
350	0.045	20-40
-350		45-65

-200 Grade (75µm)

d10	4.82µm
d50	26.55µm
d90	88.60µm

BSS MESH	Aperture (mm)	%
150	0.106	0-2
200	0.075	2-10
350	0.045	15-22

-350 Grade (45µm)

d10	2.84µm
d50	15.19µm
d90	55.4µm

BSS MESH	Aperture (mm)	%
350	0.045	0-5
-350	<0.045	95-100

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Production & Rearching Facilities