TIANJIN SUNWARD BUILDING MATERIALS CO.,LTD.

20+ years Experience

Provide High Quality Raw Materials for Construction Industry

Fl15, Yintai Building A, No. 48 Xianyang North Road, Hongqiao Dist. Tianjin 300131, China

86-13682090415

86-22-58301016

info@tjsunward.com

Our service

- We provide customers with various modes of transportation and route solutions, including air transportation, sea transportation, land transportation and multimodal transportation. LCL, FCL, bulk cargo, etc. to ensure customers receive goods on time.

- We provide financing services, settlement risk management, exchange rate management and other financial services for customers with good credit standing.

- We provide real time information of relative industry, including supply information, manufacturer information, new product/new application information, logistics information, financial information, policy and laws information to assist our customers to fully and accurately understand China's market in time.

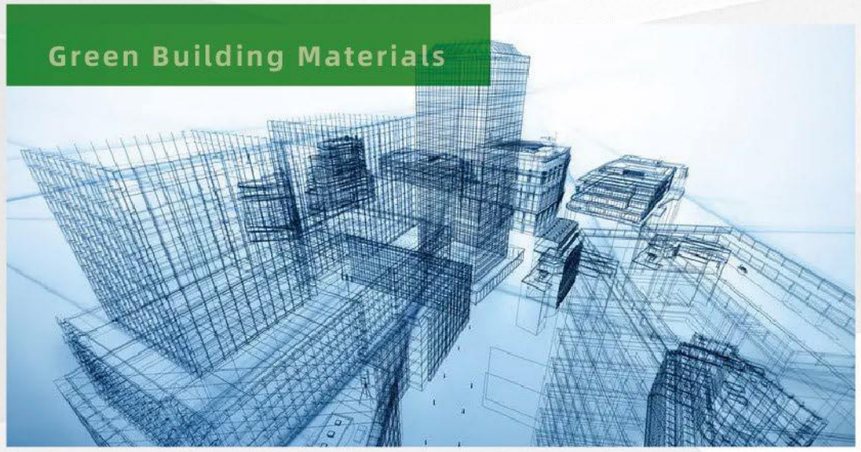
- We provide one-to-one professional after-sales service with our comprehensive and effective after-sales service system. Including business consulting, product application, technical assistance, order and logistics tracking, customer satisfaction survey etc.

About us

Established in 2009, Tianjin Sunward Building Materials Co., Ltd. was formed by industrial professionals with experience spanning over two decades. We actively create a resource integration platform, build an integrated service system, and connect with the customer industry chain. Now successfully grow as an one-step provider with goods, logistics, finance, information and after-sales service.

Our products involve every link of basic building materials. From cement, cement raw materials, concrete admixtures, refractory materials. We supervise and track all aspects from raw material source, production process, product quality testing, ready delivery date, etc., to ensure full compliance with customer's requirements.

We adhere to the comprehensive utilization of resources, and improve ability to develop green building materials. Strive for the sustainable development of enterprises and society.

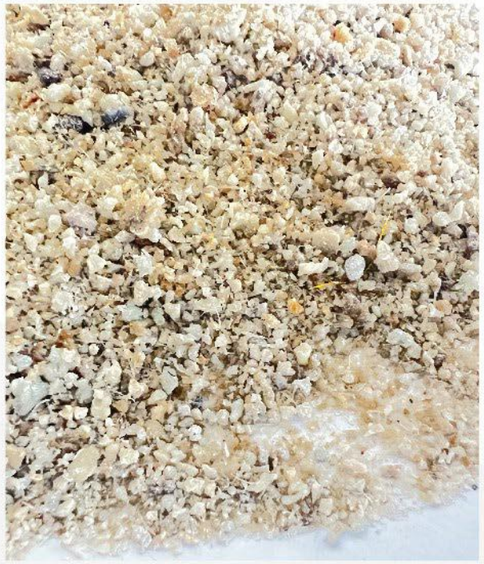


Products

Granulated Blast Furnace Slag (GBFS)

Granulated Blast Furnace slag (GBFS) is a by-product from the iron making process. It is produced when smelting iron ore in a blast furnace to separate iron from the minerals present in the ore. The hot slag molten liquid to be cooled or quenched by water very rapidly from about 1400°C-1500°C, to minimise crystallisation and to produce amorphous (or glassy) slag. The rapid cooling associated that creates a granular glassy material which gives blast furnace slag its cementitious properties.

In addition to the mineral fraction of the ore, it also contains the minerals added as process additions in the blast furnace, in particular limestone or dolomite. The chemical composition of blast furnace slag is close to the one of clinker.



GBFS Typical Properties

Item	Indication (%)
CaO	37--42
SiO_2	30--36
Al_2O_3	10--17
MgO	6--11
MnO	1.0 max
Fe2O3	1.0 max
S	1.3 max
Moistore	10 max
LOI	1 max
Glass	95 min
Size under 5mm	95 min

Application

- GBFS is the most used raw material in cement industry to make slag cement.
- To be used as a substitute for sand in building materials
- Fill behind reinforced earth wall construction
- Raw material for the manufacture of glass
- As a stabilising agent in road construction.
- As a grit-blasting medium.

Quality control

① The chemical composition and physical properties are regularly tested.
② Inspection before delivery.
③ Provide SGS inspection certificate as per customer's requirements.

Transport and Storage

① Can be stored outside.
② Can be handled and transported in bulk, like clinker.

Packaging & Shipping

① Packing: In loose bulk
② Shipping: Bulk carrier

Ground Granulated Blast Furnace Slag (GGBFS)

Ground Granulated Blast Furnace slag (GGBFS) is formed when GBFS is further processed and ground to a suitable fineness.

Date Sheet

Physical properties		
Items	**BSEN15167-1: 2006 Specification**	Typical Results
Penetration (mm)	**Penetration to a point between 5 mm & 7 mm from the bottom of the mould**	Between 5 mm & 4mm
Initial Setting Time	**Not more than twice of OPC**	1.5 times of OPC
Fineness (m^2/Kg)	**Not less than 275 m^2/Kg**	422 m^2 /Kg
Moisture Content (%)	**Less than 1.0%**	0.04%
Strength factor (%)	**7days not less than 45% of OPC**	78%
	28days not less than 70% of OPC	99%
Chemical composition		
Insoluble Residue	**1.5 % Max**	0.10 %
Magnesia (MgO)	**18 % Max**	9.28%
Sulphate (as SO_3)	**2.5% Max**	0.04%
Loss on ignition	**3.0% Max**	0.58%
Sulfur as Sulphide (S)	**2.0% Max**	0.62%
Chloride (Cl^+)	**0.1% Max**	0.01%
Chemical Moduli	**($CaO+MgO+SiO_2$) -**	79.5%
	($CaO+MgO$) /$SiO_2 \geq 1.0$	1.4 %
	(CaO) /$SiO_2 \leq 1.4$	1.25%

Application

- To be used as a partial replacement or an addition to the Portland cement binder component in concrete.
- Used for low heat concrete production used in mass concrete structure.
- As a low cost extender/filler /binder in concrete masonry, concrete pavers, concrete roofing tiles and other concrete products, mortars grouts, cementitious (cement-based) paints etc.

Quality control

① The chemical composition and physical properties are regularly tested.
② Inspection before delivery.
③ Provide SGS inspection certificate as per customer's requirements.

Transport and Storage

① Store in a cool and dry place.
② Transport in a closed environment.
③ Moisture-proof during transportation

Packaging & Shipping

① In 1.5 tons jumbo bags and stuff into 20ft containers without pallets.
② In 1.5 / 2 tons jumbo bags and load into break bulk vessel.
③ In bulk and load into vessel by tank trucks.

Microsilica

Micro silica

Micro Silica , also called Silica Fume, it is byproduct of production silicon metal or ferrosilicon. It consists primarily of amorphous(non-crystalline) silicon dioxide(SiO_2), its average granule diameter is 0.10~0.20μm (micron), specific surface area is 15000~27000m^2/kg, and it has extremely strong surface active.

Standards

① ASTMC 1240
② AS/NZS 3582.3:2016
③ BSEN13263:2005
④ JIS A 6207:2006

Package

① Jumbo bag with PE liner with uv-proof and anti-aging which conforms to GB/T10454 and EN ISO 21898.
② 20kg/25kg/50kg plastic woven bag with PE liner;
③ 10kg/20kg water-soluble paper bag;
④ Special packaging can be supplied on request.

Quality control

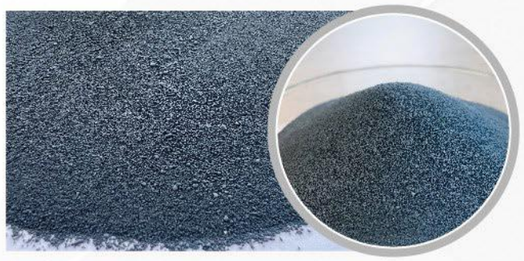
① The chemical composition and physical properties are regularly tested.
② Inspection before delivery.
③ Provide SGS inspection certificate as per customer's requirements.

Storage and Transportation

- Store in a cool and dry place.
- Transport in a closed environment.
- Moisture-proof during transportation.

Densified Micro Silica

Good cost performance, commonly used in concrete applications.



SiO_2 content: **85% - 94%**

Bulk Density: **500 - 700 kg/m³**

Grade	SiO_2 Content
DSF 850	> 85%
DSF 900	> 90%
DSF 920	> 92%
DSF 940	> 94%

Application

- Concrete i.e UHPC, HPC, PRC, Shotcrete, Impact and abrasion resistant concrete, Prestressed Concrete etc.
- Mixing cement. I.e Oil Well Grouting.
- Wall exterior insulation material.
- Mortar, grouting agent, grouting material, etc.
- Ceramics material.
- Others, such as waterglass industry, thermal insulation materials etc.

Undensified Micro Silica

Good dispersion efficiency, for refractory, fertilizer etc.

SiO_2 content: **85% - 96%**

Bulk Density: **150 - 450 kg/m³**

Grade	SiO_2 Content
USF 850	> 85%
USF 920	> 92%
USF 940	> 94%
USF 960	> 96%

Application

- Construction
- Refractory
- Fertilizer
- Pesticide
- Extinguishant
- Pellet binder
- Insulating material, waterproof material, paint, coating, printing industry, etc.

White Micro Silica

White Micro Silica (ZSF) is white micro silica with SiO_2 up to 92%-96%; as a by-product of zirconia, it has excellent features both in silica and zirconia, such as high SiO_2 content, fine granularity, large surface area and good fluidity to enhance the wear resistance, durability and reinforcement performance in the fields of injection materials, cement and concrete, refractory, ceramics and electronic materials.

Grade	SiO_2 Content	ZrO_2 Content
ZSF 940	> 92%	< 2 %
ZSF 950	> 93%	< 2 %
ZSF 960	> 94%	< 2 %
ZSF 970	> 95%	< 2%

SiO_2+ZrO_2 content: **92% - 97%**

Bulk Density: **150 - 350 kg/m³**

Application

- In refractory materials.
- In mortar and concrete Industry (white cement/concrete).
- In ceramics industries.
- Pigments and other chemical industrial, etc.

Features

① Used in the construction of cement concrete: which can reduce the dosage of cement concrete, eliminating material segregation and improve the concrete strength, enhance the wear resistance and durability, improve corrosion of steel, etc.

② Used in monolithic refractories: which can effectively reduce the water addition, good thixotropy, and low temperature combination effect, is the ideal combination of agent, binder, additives and performance improvement of blending.

③ Used in the unsteady casting of ladle: which can be used for high temperature and steel water insulation.

④ Used in high alumina brick, magnesia brick, sliding water mouth brick, kiln and other high temperature equipment and other refractory materials: which can improve the products quality grade, acting as other ordinary refractory materials.

Concrete Fibers

Macro Synthetic Fiber

Macro synthetic fiber is made of Polypropylene. It is used as an alternate to steel fibers and welded wire mesh for precast concrete and shotcrete reinforcement applications. Specification for Fiber Reinforced Concrete and Shotcrete, and are specifically used to improve impact, shatter and abrasion resistance, to increase fatigue resistance, to increase toughness of concrete and of provide long term durability of concrete and cement based building products.

Technical Information

Minimum Tensile Strength	> 650 MPa
Modulus	> 10 GPa
Melt Point	170℃
Density	0.91 g/cm³
Melt flow	3.5
Acid & Alkali Resistance	Excellent
Moisture Content	≦ 0%
Appearance	White, Transparent, Black, Embossed

Application

- Shotcrete
- Mining
- Structural rehabilitation
- Channel and tunnel lining
- Precast concrete

Benefits

① Provides three-dimensional reinforcement against micro and macro-cracking.

② Provides good impact, fatigue, shrinkage control and ductility in all grade concretes.
Cost saving, is easier to use, to disperse and safe to handle, reduce equipment wear, fiber rebound and increases

③ build-up thickness compared with steel fibers for shotcrete applications.
Can be used in highly corrosive circumstance.

④ The surface has been embossed, which greatly improves the cohesive force between fibers and concrete, and also boosts shrinkage resistance and crack resistance.

Packaging

① 5kg per carton, 1200kg per pallet.

② Special packaging can be supplied on request.

Micro Synthetic PP Fiber

Micro - reinforcement system for concrete---100% virgin polypropylene monofilament fibers containing no reprocessed olefin materials. Micro pp fiber is designed to control plastic shinkage and settlement cracking in concrete.

Technical Information

Minimum Tensile Strength	> 450 MPa
Modulus	> 4300 MPa
Monofilament pull-out force	> 11.0 CN
Ignition	580 ℃
Melt Point	150 ℃--170℃
Density	0.91 g/cm³
Acid & Alkali Resistance	Excellent
Moisture Content	≦ 0.41 %
Appearance	White, Bundled monofilament
Safety	Non-toxic, non-irritating, neutral

Application

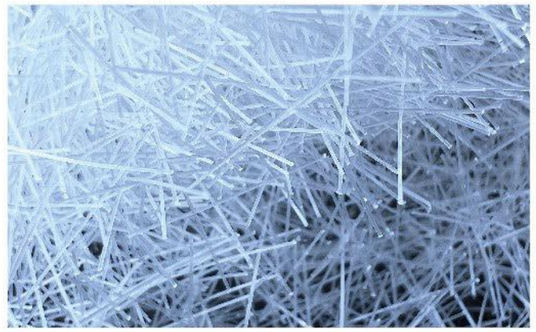
- Slabs on ground
- Side-walks, driveways, decks, curbs
- Precast elements
- Overlays / toppings
- Tunnel shotcrete
- Roads / Pavements
- Bridge Decks

Packaging

① 20kg per plastic bag

② Special packaging can be supplied on request.

UHPC Special Synthetic Fiber



UHPC special synthetic fiber uses hydrophilic modification technology for its surface treatment. It has excellent dispersibility in UHPC, and has good bonding performance with cement matrix materials, which can effectively reduce and inhibit UHPC plastic shrinkage, drying shrinkage, Micro-cracks caused by temperature changes and other factors significantly improve crack resistance, toughening, impact resistance, fire and explosion resistance of UHPC.

Application

- Building decoration exterior wall
- UHPC carved artwork
- Cement flower pot products
- Municipal road bricks etc.

Benefits

① No rusty ② Excellent dispersity ③ Self compact ④ Light and Artistic ⑤ Colourfull

Technical Information

Minimum Tensile Strength	> 950 MPa
Modulus	> 12 GPa
Elongation at break	≦ 30 %
Resistance to alkali	≧ 98%
Density	1.4 g/cm³
Acid & Alkali Resistance	Excellent
Moisture Content	≦ 0.1 %
Appearance	Transparent monofilament
Safety	Non-toxic, non-irritating, neutral

Packaging

① 1kg per biodegradable paper bag ② 10kg per plastic bag or carton

③ Special packaging can be supplied on request.