

Material Safety Data Sheet

*** Section 1 - Chemical Product and Company Identification ***

Chemical Name Fused silica glass

Product Use Manufacture of glass articles

Manufacturer Information

Zhejiang Zhengyu Glass Co., Ltd.

No.1 Dingxing West Road,

Changxin, Zhejiang, 313112, China

Phone: (86) 572-6087918

Emergency # 24 Hr CHEMTREC: (86) 572-6325333

General Information

NOTE: CHEMTREC telephone number is to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals.

*** Section 2 - Composition / Information on Ingredients ***

CAS#	Component	Percent
60676-86-0	Fused silica	99

Component Information/Information on Non-Hazardous Components

This glass is a solid material produced by melting silica oxide and cooling to a solid having its own unique properties.

Processing of this article may produce dusts or fumes which are considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

*** Section 3 - Hazards Identification ***

Emergency Overview

This is a non-combustible, non-reactive solid material. It is supplied as multiform glass. Exposure to glass powder or dusts may be irritating to eyes, nose, and throat. At high exposure levels the dust may have an effect on the lungs. Use methods suitable to fight surrounding fire.

Hazard Statements

Dust or powder may be irritating to the eyes, skin and respiratory system.

Potential Health Effects Eyes

Dust or powder may irritate eye tissue. Rubbing may cause abrasion of cornea. Symptoms can include irritation, redness, scratching of the cornea, and tearing.

Potential Health Effects Skin

Dust or powder may irritate the skin. Mechanical rubbing may increase skin irritation. No components in this product are known to be absorbed through the skin.

Potential Health Effects Ingestion

May cause temporary irritation of the throat, stomach, and gastrointestinal tract.

Potential Health Effects Inhalation

Dusts from this product may cause irritation of the nose, throat, and respiratory tract. When inhaled in very large amounts, damage to the lung can occur.

HMIS Ratings: Health: 2* Fire: 0 Reactivity: 0 Pers. Prot.: safety glasses/gloves

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 4 - First Aid Measures ***

First Aid: Eyes

Eye injuries from glass particles should be treated by a physician immediately.

First Aid: Skin

Cuts or abrasions should be treated promptly with thorough cleansing of the affected area.

First Aid: Ingestion

Seek medical attention if material is ingested.

First Aid: Inhalation

Move person to non-contaminated air. Call a physician if symptoms persist.

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First Aid: Notes to Physician

If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.

*** Section 5 - Fire Fighting Measures ***

Flash Point: Not applicable

Upper Flammable Limit (UFL): Not applicable

Auto Ignition: Not applicable

Rate of Burning: Not applicable

Method Used: Not applicable

Lower Flammable Limit (LFL): Not applicable

Flammability Classification: Will not burn

General Fire Hazards

This material will not burn.

Hazardous Combustion Products

Material will begin softening at about 1500 Deg C, will proceed to a liquid and will give off irritating and toxic gaseous oxides if heated to extreme temperatures.

Extinguishing Media

Use methods for the surrounding fire.

Fire Fighting Equipment/Instructions

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

NEPA Ratings: Health: 1 Fire: 0 Reactivity: 0 Other: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

*** Section 6 - Accidental Release Measures ***

Containment Procedures

Avoid creating dusts.

Clean-Up Procedures

Wear appropriate protective equipment and clothing during clean-up. Collect spill using a vacuum cleaner with a HEPA filter. Place in a closed container.

Evacuation Procedures

None necessary.

Special Procedures

Regulations vary. Consult local authorities before disposal. Glass products may be recycled.

*** Section 7 - Handling and Storage ***

Handling Procedures

Do not inhale dusts. Avoid contact with skin and eyes. Wash thoroughly after handling. Wear appropriate protective equipment during handling.

Storage Procedures

Store in a dry area.

*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines

A: General Product Information

The OSHA (Vacated) air contaminants exposure limits (PELs) are those provided in the 1989 update to 29 CFR 1910.1000. These limits were vacated by OSHA and may not be enforceable.

B: Component Exposure Limits

Fused silica (60676-86-0)

ACGIH: 0.1 mg/m3 TWA (respirable fraction)

OSHA 0.1 mg/m3 TWA (respirable dust)

(Vacated):

Engineering Controls

If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

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PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear safety glasses with side shields.

Personal Protective Equipment: Skin

Wear leather or other appropriate work gloves, if necessary for type of operation. The use of coveralls is recommended.

Personal Protective Equipment: Respiratory

Not normally needed. If permissible levels are exceeded, use NIOSH approved dust respirator.

Personal Protective Equipment: General

Use good hygiene practices when handling this material including changing and laundering work clothing after use.

*** Section 9 - Physical & Chemical Properties ***

Appearance: Clear
Physical State: Multiform solid glass
Vapor Pressure: Not applicable
Boiling Point: Not applicable
Solubility (H₂O): Not applicable
Freezing Point: Not applicable
Softening Point: >1585° C
Molecular Weight: Not applicable

Odor: Odorless
pH: Not applicable
Vapor Density: Not applicable
Melting Point: Not applicable
Specific Gravity: 2.20 gm/cm³
Particle Size: Not applicable
Bulk Density: Not applicable

Physical Properties: Additional Information

No information available.

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

Stable under normal conditions.

Chemical Stability: Conditions to Avoid

None known.

Incompatibility

None known.

Hazardous Decomposition

None known.

Hazardous Polymerization

Will not occur.

*** Section 11 - Toxicological Information ***

Acute Toxicity

A: General Product Information

Dusts may cause mechanical irritation to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. Higher exposures may cause difficulty breathing, congestion, and chest tightness.

B: Component Analysis - LD₅₀/LC₅₀

No LD₅₀/LC₅₀'s are available for this product's components.

Carcinogenicity

A: General Product Information

No information available for product. Fused silica has been found to be fibrogenic in lungs of experimental animals, however, fused silica has not been established as a carcinogen in animals or humans.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Epidemiology

No information available for product.

Neurotoxicity

No information available for product.

Mutagenicity

No information available for product.

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Teratogenicity

No information available for product.

Other Toxicological Information

Under normal conditions of use for glass products, the likelihood of inhaling or ingesting amounts necessary for these effects to occur is very small.

*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

No information available.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No ecotoxicity data are available for this product's components.

Environmental Fate

No information available.

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions

A: General Product Information

You must test your waste using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Waste must be handled in accordance with all applicable regulations. Glass products may be recycled.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Non-regulated

UN/NA #: Not classified **Hazard Class:** Not classified **Packing Group:** Not classified

Required Label(s): None

Additional Info.: None

International Transportation Regulations

This product is not regulated as a hazardous material by the United States (DOT) or Canadian (TDG) transportation regulations.

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

No additional information.

B: Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations

A: General Product Information

Other state regulations may apply. Check individual state requirements.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	FL	MA	MN	NJ	PA
Fused silica	60676-86-0	No	Yes	Yes	Yes	Yes	No

Other Regulations

A: General Product Information

All components are on the U.S. EPA TSCA Inventory List.

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B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Fused silica	60676-86-0	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Fused silica	60676-86-0	1%; English Item 1404; French Item 1487

*** Section 16 - Other Information ***

Other Information

Reasonable care has been taken in the preparation of this information, but Corning makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. Corning makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

Revision information:

Revised 10/25/02. Changes: glass code 7990 added.

Revised 05/31/02. Changes: Regulatory update.

Revised 11/15/2000. Changes: Regulatory and literature review.

Initial issue: 04/07/97.

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. CFR = Code of Federal Regulations. DSL = Canadian Domestic Substance List. EINECS = European Inventory of New and Existing Chemical Substances. EPA = Environmental Protection Agency. HEPA = High Efficiency Particulate Air. HMIS = Hazardous Material Identification System. IARC = International Agency for Research on Cancer. NFPA = National Fire Protection Association. NIOSH = National Institute of Occupational Safety and Health. NJTSR = New Jersey Trade Secret Registry. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. NA = Not available or Not Applicable. SARA = Superfund Amendments and Reauthorization Act. TLV = Threshold Limit Value. TSCA = Toxic Substance Control Act. WHMIS = Workplace Hazardous Materials Information System.