Safety Data Sheet

1. IDENTIFICATION

Product Identifier	GL0201, GL1555, GL1641, GL1866 Glass
Other Means of Identification	
SDS Number	Silica Glass
Product Code	GL0201, GL1555, GL1641, GL1866 Glass
Recommended Use	Not available.
Recommended Restrictions	None known.
Manufacturer/Importers/Supplier/Distributor Information	
Manufacturer/Supplier	Mo-Sci Corporation, Mo-Sci Health Care, LLC, and Mo-Sci Specialty Products LLC
Address	4040 Hypoint North Rolla, MO, USA 65401
Telephone Number	573-364-2338
e-mail	mo-sci@mo-sci.com
Contact Person	Krista Grayson
Emergency Telephone Number	573-364-2338

2. HAZARD IDENTIFICATION

Physical hazards	Not classified
Health hazards	Not classified
OSHA defined hazards	This material is classified hazardous under OSHA regulations. * This product may contain < 0.1% quartz and/or Cristobalite. Overexposure to quartz and/or Cristobalite is not anticipated at the concentration present unless airborne fused silica concentrations greatly exceed acceptable exposure guidelines (See Section 8).
Label elements	None
Hazard symbols	None
Signal word	None
Hazard statement	None
Precautionary statement	May irritate skin, eyes, mucous membranes
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of in accordance with local regulations.

Hazard(s) not otherwise Classified (HNOC) None known

Glass is an amorphous fusion of materials whose constituents are tightly bound together and are in a specific chemical environment, totally different from the initial state (in raw materials) and from that occurring in simple compounds (metals or oxides). Under normal conditions, glass never gives metal or oxide as direct dissociation products. Under extreme conditions, only a tiny fraction of glass constituents could leach from the glass matrix into aqueous solutions.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Constituents

Chemical Name	CAS number	%
Silica (Amorphous)	7631-89-9	>99%
Cristobalite	14464-46-1	<0.7%

Composition comments: Concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. FIRST-AID MEASURES

Inhalation	If symptomatic, move to fresh air. Get medical attention if symptoms persist.
Skin Contact	Wash with soap and water. Get medical attention if symptoms occur.

Eye Contact Material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

Ingestion Seek medical advice.

Most Important Symptoms/Effects, Acute and Delayed

Direct contact with eyes may cause temporary irritation.

Indication of Immediate Medical Attention and Special Treatment Needed

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Water, Water fog, Foam, Dry chemical, and Carbon dioxide (CO_2)

Unsuitable Extinguishing Media None known

Specific Hazards Arising from the Chemical None known

Special Protective Equipment and Precautions for Firefighters

Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Fire-fighting Equipment/Instructions

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective clothing as described in Section 8 of this SDS

Methods and Materials for Containment and Cleaning Up

Sweep or scoop up and remove.

For waste disposal, see Section 13 of the SDS

Environmental Precautions Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE

Precautions for Safe Handling Wear appropriate personal protective equipment (See Section 8).
Wash thoroughly after handling.
Observe good industrial hygiene practices.
Dust or powder: Use only with adequate ventilation.
Avoid breathing dust.

Conditions for Safe Storage, including any Incompatibilities

Store in a cool dry environment.
Store away from incompatible materials (See Section 10).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

US OSHA Table z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Dust (CAS-)	PEL	5 mg/m^3	Respirable fraction.
		15 mg/m^3	Total dust.

US OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Dust (CAS-)	TWA	5 mg/m^3	Respirable fraction.
		15 mg/m^3	Total dust.
		50 millions of particles	Total dust.
		15 millions of particles	Respirable fraction.

US ACGIH Threshold Limit Values

Components	Type	Value	Form
Dust (CAS-)	TWA	3 mg/m^3	Respirable particles.
		10 mg/m^3	Total dust.
Fused Silica (Amphorphous) CAS No.: 60676-86-0	80mg/m$_3$/ %SiO_2 (amorphous SiO_2)	0.1 mg/m^3	Respirable Particles
Cristobalite(Resp.) CAS No.: 14464-46-1	1/2[10mg/m$_3$/(%SiO_2 +2) (resp.) 1/2[30mg/m$_3$/(%SiO_2 +2) (total)	0.05 mg/m^3	Total Dust

Biological Limit Values No biological exposure limits noted for the ingredient(s).

Appropriate Engineering Controls Ensure adequate ventilation, especially in confined areas.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection	Normal eye protection practices should be used. If dusty conditions exist, chemical goggles are recommended.
Skin Protection	
Hand Protection	Regular work gloves.
Other	Wear apron or protective clothing in case of contact. If contact with forearms is likely wear gauntlet style gloves.

Respiratory Protection

- If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
- In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134.
- Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Thermal Hazard	Wear appropriate thermal protective clothing, when necessary.
General Hygiene	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, or/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid.
Physical State	Solid.
Form	Solid. Glass.
Color	Clear. Pale green. Blue. Gray. White.
Odor	Not available.
Odor Threshold	Not available.
pH (in water @25C)	Not available.
Melting Point/Freezing Point	Not available.
Softening Temperature	Not measured.
Initial Boiling Point and Boiling Range	Not applicable.
Flash Point	Not applicable.
Evaporation Rate	Not available.
Flammability (solid, gas)	Not applicable**.**
Upper/Lower Flammability or Explosive Limits	
Flammability Limit-Lower (%)	Not applicable.
Flammability Limit-Upper (%)	Not applicable.
Vapor Pressure	Not available.
Vapor Density	Not applicable.
Relative Density	Not available.
Solubility	
Solubility (water)	Not measured.
Partition Coefficient	No data available.
Auto-ignition Temperature	Not applicable.
Decomposition Temperature	Not applicable.
Viscosity	Not applicable.
Specific Gravity	Not measured.
Refractive Index	Not measured.

10. STABILITY AND REACTIVITY

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transportation.
Chemical Stability	Stable under the prescribed storage conditions.
Possibility of Hazardous Reactions	Hazardous polymerization will not occur.
Conditions to Avoid	Contact with incompatible materials.
Incompatible Materials	Strong acids. Strong bases.
Hazardous Decomposition Products	Metal oxides.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Ingestion	No harmful effects expected in amounts likely to be ingested by accident.

Inhalation No inhalation hazard under normal conditions.
Contact with dust: May cause irritation to the respiratory system.
Skin contact May cause skin sensitization in hypersensitive individuals.
Eye contact Direct contact with eyes may cause temporary irritation.

Symptoms Related to the Physical, Chemical and Toxicological Characteristics
Direct contact with eyes may cause temporary irritation.

Information on Toxicological Effects
Acute Toxicity May cause discomfort if swallowed.
Skin Corrosion/Irritation Dust may irritate skin.
Serious Eye Damage/Eye Irritation Direct contact with eyes may cause temporary irritation.
Respiratory or Skin Sensitization
Respiratory Sensitization No data available.
Skin Sensitization Prolonged skin contact may cause dermatitis
Germ Cell Mutagenicity No data available.
Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Mongraphs. Overall Evaluation of Carcinogenicity
Glass, oxide, chemicals (CAS 65997-17-3)
3 not classifiable as to carcinogenicity to humans
NTP Report on Carcinogens Glass, oxide, chemicals (CAS 65997-17-3)
Reasonably anticipated to be a Human Carcinogen.
Reproductive Toxicity No data available.
Specific Target Organ Toxicity - Single Exposure No data available.
Specific Target Organ Toxicity - Repeated Exposure No data available.
Aspiration Hazard Not applicable

12. ECOLOGICAL INFORMATION
Ecotoxicity Not expected to be harmful to aquatic organisms.
Persistence and Degradability No data available.
Bioaccumulative Potential No data available.
Mobility in Soil The product is not mobile in soil.
Other Adverse Effects None known.

13. DISPOSAL CONSIDERATIONS
Disposal Instructions Do not discharge into drains, water courses or onto the ground.
Local Disposal Regulations Dispose in accordance with all applicable regulations.
Hazardous Waste Code Not regulated. The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from Residues/Unused Products
Recover and recycle, if practical.
Contaminated packaging Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION
DOT Not regulated as dangerous goods.
IATA Not regulated as dangerous goods.
IMDG Not regulated as dangerous goods.
Transport in Bulk According to Annex II of MARPOL 73-78 and IBC Code
Not applicable.

15. REGULATORY INFORMATION
US Federal Regulations This product is not hazardous according to OSHA 29CFR 1910-1200.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated.
US OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed.
CERCLA Hazardous Substance List (40CFR 302.4) Not listed.
Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazardous Categories

Immediate Hazard	No
Delayed Hazard	No
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

SARA 302 Extremely Hazardous Substance Not listed.
SARA 311/312 Hazardous Chemical No
SARA 313 (TRI reporting) No

Other Federal Regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.
Safe Drinking Water Act (SDWA) Not Regulated.

US State Regulations

US Massachusetts RTK – Substance List
Quartz (CAS 14808-60-7)

US New Jersey Worker and community Right-to-Know Act
Quartz (CAS 14808-60-7)

US Pennsylvania worker and Community Right-to-Know Law
Quartz (CAS 14808-60-7)

US- California Proposition 65-Carcinogens & Reproductive Toxicity (CTR): Listed substance
Quartz (CAS 14808-60-7)

Warning: This product contains chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

Internal Inventories

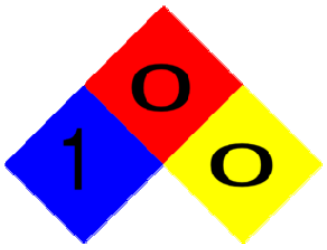
Countries or Region	Inventory Name	On Inventory *
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substance control Act (TSCA) Inventory	Yes

*A “yes” indicates this product complies with the inventory requirements administered by the governing country(s). A “no” indicates that one or more components of the products are not listed or except from listing on the inventory administered by the governing country(s).

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Issue Date 21-March-2018
Revision Date 09-Sept-2019
Version 02
Further Information The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

NFPA Ratings



Disclaimer The information in the sheet was written based on the best knowledge and experience currently available.