SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	:	SILICAGEL-100
NAME OF SUPPLIER	:	GL Sciences Inc.
ADDRESS	:	22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan
CHARGE SECTION	:	International Sales Section
TELEPHONE No.	:	+81-3-5323-6620
FACSIMILE No.	:	+81-3-5323-6621
PRODUCT No.	:	1050-22132、1050-
SDS No.	:	1050-22132

Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Eye damage/irritation : Category 2B
Specific target organ toxicity (Single exposure) : Category 3(Airway irritation)

HAZARDS SYMBOL :

SIGNAL WORD : Warning

HAZARD STATEMENTS :

H320	Causes eye irritation
H335	May cause respiratory irritation

PRECAUTIONARY STATEMENTS :

P261	Avoid breathing dust/fume/gas/mist/vapour/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breat hing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove co ntact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor if you feel unwell.
P337+P313	If eye irritation persists: Get medical attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with all applicable regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE / MIXTURE	:	SUBSTANCE
COMMON CHEMICAL NAME	:	SILICAGEL-100
SYNONYMS	:	Silicon dioxide
CHEMICAL FOMULA	:	SiO_2
MOLECULAR WEIGHT	:	- - -
CONTENT	:	100%
CAS RN.	:	112926-00-8
TSCA INVENTRY	:	Not Listed
EINECS No.	:	Not Listed
EC INDEX No.	:	Not established

4. FIRST AID MEASURES

GENERAL ADVICE : If fragments/respirable dust contacts with eyes or skin, wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment. If irritation persists, consult a physician.

INHALATION : Move victim to fresh air and gargle. If breathing is difficult, give oxygen. If irritation persists, consult a physician.

SKIN CONTACT : Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. If irritation persists, consult a physician.

EYE CONTACT : Remove any contact lenses at once. Flush eyes well with flooding large amounts of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. If irritation persists, consult a physician.

INGESTION : Rinse mouth, give plenty of water to vomit. Never give anything by mouth to an unconscious person. Consult a physician.

MOST IMPORTANT SYMPTOMS AND EFFECTS

: Shreds and dusts may cause irritation of mucous membranes, respiratory tract, skin and eyes.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA : Carbon dioxide, dry chemical powder, foam, water spray

FIRE & EXPLOSION HAZARDS : Toxic and irritating dust, fumes or smoke may be emitted.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS

: Fireman should wear normal protective equipment (full bunker gear) and positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS : Remove ignition sources and ventilate the area.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid raising dust and avoid contact with skin and eyes.

ENVIRONMENTAL PRECAUTIONS : Prevent spills from entering sewers, watercourses or low areas.

METHODS FOR CLEANING UP : Do not touch spilled material without suitable protection. After material is completely picked up, wash the spill site with soap and water and ventilate the area. Pull all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose contaminated clothing.

7. HANDLING AND STORAGE

HANDLING : Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Handle material with suitable protection.
After using this product, dispose of contents/container in accordance with all applicable regulations and appropriate ways.

STORAGE : Store away from moisture and water in well-ventilated dry place.
Keep container tightly closed.

INCOMPATIBLE PRODUCTS : Do not store near strong oxidizers, strong bases, strong acids, or sources of fire.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING MEASURES : Use exhaust ventilation to keep airborne concentrations below exposure limits. Use adequate ventilation.

VENTILATION : Local Exhaust ; Necessary, Mechanical(General) ; Recommended

CONTROL PARAMETERS

ACGIH : Not established

OSHA PEL : Not established

NIOSH REL : Not established

PERSONAL PROTECTION

RESPRATORY PROTECTION : Half or full face piece respirator, self-contained breathing apparatus, supplied air respirator, etc. Use respirators approved under appropriate government standards and follow all regulations.

HAND PROTECTION : Chemical resistant gloves

EYE PROTECTION : Safety glasses(goggles)

SKIN PROTECTION : Protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE : Solid

COLOUR : White

ODOR : Contain

MELTING POINT / FREEZING POINT

: No data available

BOILING POINT OR INITIAL BOILING POINT AND BOILING RANGE

: No data available

FLAMMABILITY : Combustible, but not easy to ignite

LOWER AND UPPER EXPLOSION LIMIT / FLAMMABILITY LIMIT
: No data available
FLASH POINT : No data available
AUTO-IGNITION TEMPERATURE : No data available
DECOMPOSITION TEMPERATURE
: No data available
pH : No data available
KINEMATIC VISCOSITY : Not applicable
SOLUBILITY : Insoluble
PARTITION COEFFICIENT
n-octanol/water (log value) : No data available
VAPOUR PRESSURE : No data available
DENSITY AND/OR RELATIVE DENSITY
: No data available
RELATIVE VAPOUR DENSITY : Not applicable
PARTICLE CHARACTERISTICS : Not applicable

10. STABILITY AND REACTIVITY

REACTIVITY : Stable under recommended using and storage conditions.
CHEMICAL STABILITY : Stable under recommended storage and using conditions.
CONDITION TO AVOID : Sunlight, heat, moisture, Contact with open flames, high temperatures, sparks, static electricity, other sources of ignition, and dangerous materials for contact.
INCOMPATIBILE MATERIALS : Strong oxidizer, acidic compound.
HAZARDOUS DECOMPOSITION PRODUCTS
: Harmful fume etc.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY (Oral) : Rat LD50 = 5,110 mg/kg (SIDS (2006), ECETOC JACC (2006)
ACUTE TOXICITY (Transdermal) : Rabbit LD50 = 5,000 mg/kg (silica gel (ZEO 49, ZEOSYL 113, ZEOSYL 200 and ZEOFREE 153))
ACUTE TOXICITY (Inhalation: dust, mist)
: Rat LC50 = 2.08 mg/L (amorphous silica (CAB-O-SIL M5)) (SIDS (2006))
SKIN CORROSION/IRRITATION : Rabbit for 24 hours to rabbits did not cause irritation (SIDS (2006), ECETOC JACC (2006)).
EYE DAMAGE/EYE IRRITATION : Rabbit resulted in mild conjunctival redness, but recovery was observed (SIDS (2006), ECETOC JACC (2006)).
RESPIRATORY OR SKIN SENSITIZATION
: No data available
GERM CELL MUTAGENICITY : In vivo, dominant lethal test, gene mutation test, and chromosomal aberration test in rats by oral or inhalation exposure were all negative (SIDS (2006)), and in vitro, bacterial reverse mutation test, gene mutation test in cultured mammalian cells, and chromosomal aberration test were negative, and micronucleus test in cultured mammalian cells was ambiguous (SIDS (2006)). cells, and ambiguous results in the micronucleus test in mammalian cultured cells (SIDS (2006)).
CARCINOGENICITY : This material is classified as synthetic amorphous silica (IARC 68 (1997)). There is no carcinogenic information on human exposure to synthetic amorphous silica. However, IARC has assigned a carcinogenicity classification of "Group 3" to amorphous silica as a whole (including diatomaceous earth and biogenic silica fibers in addition to this material) because of insufficient evidence for carcinogenicity in humans and insufficient evidence for synthetic amorphous silica in experimental animals (see below) (IARC 68 (1997)).
REPRODUCTIVE TOXICITY : There is no information on human reproductive effects. In teratogenicity studies in experimental animals, synthetic amorphous silica gel (Syloid 244) was administered orally to pregnant female rats, mice, hamsters, and rabbits during the period of organogenesis. (ECETOC JACC (2006)).
SPECIFIC TARGET ORGAN TOXICITY - single exposure -
: Silica gel (Syloid 244) is reported to be an airway irritant (SIDS (2006), ECETOC JACC (2006))

SPECIFIC TARGET ORGAN TOXICITY - repeated exposure -
: In humans, it has been reported that no adverse effects were found in lung function and chest X-ray examinations of workers exposed to dust of this substance for an average of 8.5 years (ACGIH (7th, 2001), ECETOC JACC (2006), SIDS (2006), DFGOT vol. 2 (1991)).

ASPIRATION HAZARD : Classification not possible, No data available

12. ECOLOGICAL INFORMATION

Hazardous to the aquatic environment - Acute hazard –
: Crustacean (Daphnia magna) 24 h EC50 > 10000 mg/L, fish (zebrafish) 96 h LC50 = 10000 mg/L (both SIDS, 2006)

Hazardous to the aquatic environment - Chronic hazard –
: Reliable chronic toxicity data are not available

BIODEGRADABILITY : No data available

BIOACCUMULATION POTENTIAL : No data available

MOBILITY IN SOIL : No data available

HAZARDOUS TO THE OZONE LAYER
: Not listed in Montreal Protocol list.

13. DISPOSAL INFORMATION

Dispose in a hazardous-waste site in accordance with all applicable regulations. Any disposal practice must be in compliance with country, local, state, and federal laws and regulations (contact country, local or state environment agency for specific rules).

14. TRANSPORT INFORMATION

IATA : Not dangerous goods

ADR/RID : Not dangerous goods

DOT(Department of Transportation) : Not dangerous goods

MARINE POLLUTANT : Not classified

15. REGULATORY INFORMATION

For classification and labeling of chemicals in accordance with the applicable rules and regulations in the EU or each country, refer to GHS classification of this product (See Section 2).

US REGULATION : OSHA HCS 2012/29 CFR 1910.1200

EU REGULATION : CLP Regulation ((EC) No. 1272/2008)

16. OTHER INFORMATION

NOTICE:

The information contained in the SDS description is applicable exclusively to the chemical substance identified herein and for its intended use as an analytical reference standard or reagent and to the unit quantity intended for that purpose. The information does not relate to, and may not be appropriate for, any application or larger quantity of the substance described. Our products are intended for the use by individuals possessing sufficient technical skill and qualification on use the material potential hazardous chemical. Accordingly, no representation or warranty, express or implied, with respect to merchantability and fitness for a particular purpose is made with respect to the information contained herein.

Attention:

This product in terms of chemical identity and the unit amount provide is intended for use in chemical analysis and not for human consumption, nor any other purpose.