

TELEPHONE
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FUJI SILYSIA CHEMICAL LTD.

2-1846 KOZOJI-CHO, KASUGAI, AICHI, 487-0013 JAPAN

FAX NO.
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MATERIAL SAFETY DATA SHEET

NO. SG-008-200-E

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1. The Chemical Substance and Company Information

Names of chemical substance

Product name	Art Sorb
Company's name	Fuji Silysia Chemical Ltd.
Address	2-1846 Kozoji-cho, Kasugai, Aichi, 487-0013 Japan
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Contact Department	Quality Assurance Department
Contact	Masahiro Nakamura
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Recommended use and restriction of use

Recommended use Humidity regulating agents for artwork and cultural artifacts

Restriction of use

2. Hazards identification

GHS classification


Physicochemical hazards	Explosives	out of classification
	Flammable gases	out of classification
	Flammable aerosols	out of classification
	Oxidizing gases	out of classification
	Gases under pressure	out of classification
	Flammable liquids	out of classification
	Flammable solids	out of category
	Self-reactive substances and mixtures	out of classification
	Pyrophoric liquids	out of classification
	Pyrophoric solids	out of category
	Self-heating substances and mixtures	out of category
	Substances and mixtures which, in contact with water, emit flammable gases	out of category
	Oxidizing liquids	out of classification

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Health hazards	Oxidizing solids	cannot be
	Organic peroxides	out of
	Corrosive to metals	cannot be
	Acute toxicity -oral	category 5
	Acute toxicity -dermal	cannot be
	Acute toxicity -inhalation :gas	cannot be
	Acute toxicity -inhalation : vapor	cannot be
	Acute toxicity -inhalation :dust	cannot be
	Acute toxicity -inhalation : mist	cannot be
	Skin corrosive / irritation	category 2
	Eye damage / irritation	category 2B
	Sensitization-respiratory	cannot be
	Sensitization-skin	cannot be
	Germ cell mutagenicity	cannot be
	Carcinogenicity	out of category
	Toxic to reproduction	cannot be
	Environmental hazards	Specific target organ systemic toxicity (single exposure)
Specific target organ systemic toxicity (repeated exposure)		cannot be
Aspiration toxicity		cannot be
Hazardous to the aquatic environment-		acute hazard cannot be
	Hazardous to the aquatic environment-	chronic hazard2 cannot be
Label elements		
Pictogram or symbol		
Signal Word	Warning	
Hazard statement	Cause skin irritation Cause eye irritation May be harmful if swallowed	
Precautionary statement	【Precaution】 Do not breathe dust. Use personal protection and ventilation to avoid exposure Wash hands thoroughly after handling	

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【Correspondence】

Get medical attention/advice if you feel unwell

If in eyes : Rinse cautiously with water for several minutes.
Remove contact lenses ,if present, and
continue rinsing.

If eye irritation persists, get medical advice /attention.

【Disposal】

Dispose of contents / container has to be carried out in accordance
with local / regional/national/international regulation.

Country / area information

3. Composition / Information on Ingredients

Chemical name or generic name	Amorphous silicon dioxide	Lithium chloride
Alias	Silica Gel	
Chemical formula	SiO ₂	LiCl
CAS registered No.	7631-86-9	7447-41-8
Official gazette No.	(1)-548	(1)-231
Impurities contributing to a classification and stabilization additives	no information	no information
A purity or a range	90%	10%

4. First Aid Measure

IF INHALED	Remove to fresh air and keep at rest in a position comfortable for breathing.
IF ON SKIN	Get medical advice/attention if you feel unwell. Immediately wash skin with plenty of soap and water.
IF IN EYES	Get medical advice/attention if you feel unwell. Rinse cautiously with water for several minutes. Remove contact lenses,if present, and continue rinsing.
IF SWALLOWED	If eye irritation persists, get medical advice / attention. Rinse mouth well with clean water. Get medical advice/attention if you feel unwell.

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Expected acute symptoms
and late symptoms

IF INHALED : A cough

The most important sign and symptoms

5. Fire Fighting Measure

Extinguish media Use extinguishing agents appropriate for surrounding fire.

Special hazards

Special fire extinguishing method

Protection of a person
to extinguish a fire

Wear respiratory protection or chemical protective clothing
due to surrounding fires.

6. Accidental Release Measure

Instructions for the human
body, Protective equipment
and emergency step

Isolate appropriate distance promptly as a leak area in all
Prohibit an entrance except the person concerned.
Wear an appropriate protection and to avoid contact to eyes
and skin or inhalation.
(ref. " 8. Exposure Control/ Personal Protection ")

Instructions for the environment

Do not discharge it to environment.

Collection, neutralization

Collect spillage and into an empty container, and dispose
them later as an industrial waste.

Containment and
purification method
/machine

Stop leak if not dangerous.

Preventive measures
against second disaster

Residue on the floor may cause slip, clean up diligently.

7. Handling and Storage

Handling

Technical measures

Do the equipment measures in the " 8. Exposure Control/
Personal Protection ", and wear the protection.

Local / general ventilation

Do the local and general ventilation in the
" 8. Exposure Control/Personal Protection ".

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Safe handling instructions	Take precautionary measures against static discharge. Do not inhale or swallow. Perform ventilation for exhaust to keep the atmospheric concentration lower than exposure limit. Wash hands thoroughly after handling. Do not eat, drink and smoke when using this product.
Contact evasion	Refer to the "10. Stability and reactivity".

Storage

Technical Measures Composite hazard substance	Install lighting and ventilation to store and handle.
Storage condition	Refer to the "10. Stability and reactivity". Store in a cool / well-ventilated place to protect from sunlight and rainwater.
Container and packaging materials	Store locked up.

8. Exposure Control/ Personal Protection

Standard control concentration	Amorphous silicon dioxide	Lithium chloride
Permissible concentration (an exposure limit value/ a biological exposure index) •Japan industrial hygiene society (2005)	No setting	No setting
Inhalation-related dust : •ACGIH (2005)	Total dust : 8 mg/m ³ 2 mg/m ³	No setting No setting
TLV-TWA :	10 mg/m ³	No setting

Equipment measure	Facilities storing or handling this material would be better equipped with an eyewash facility. Use adequate general or local ventilation to keep airborne concentrations below the permissible exposure limits.
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Protective equipment

Protection for respiratory	Wear appropriate respiratory protection.
Protection for hands	Wear appropriate protective gloves if necessary.
Protection for eyes	Use personal eye protection .
Protection for skin and body	Use the appropriate protection suit/mask if necessary.
Hygiene measure	Wash hands thoroughly after handling.

9. Physical and Chemical Properties

Physical State/Shape/Color	Bead, white
Odor :	Odorless
pH :	3.0 ~ 8.0 (5% slurry)
Melting Point :	1610 °C (Silicon dioxide)
Boiling Point :	2230°C (Silicon dioxide)
Ignition point :	No data
Explosion range :	No data
Vapor Pressure :	No data
Vapor Density (Air =1) :	No data
Specific Gravity :	0.5~0.9 (depending on moisture)
Solubility :	No data
Octanol/water distributed coefficient	No data
Pyrophoric temperature :	No data
Decomposition temperature :	No data
Stinky threshold :	No data
Evaporation Rate (BuAc=1) :	No data
Combustion characteristics (solid/gas) :	No data
Viscosity :	No data

10. Stability and Reactivity

Stability	Stable under ordinary conditions of use (ambient temperature).
Hazard reaction possibility	Silicon dioxide reacts with hydrogen fluoride.
Condition to avoid	Contact to composite hazard substance.
Composite hazard substance	Hydrogen fluoride
Hazard resolution substance	Non

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11. Toxicological Information

Acute Toxicity

Oral

LD50 value of silicon dioxide is >5000mg/kg at ingestion administration test with IUCLID rat.

LD50 value of lithium chloride is 526mg/kg at ingestion administration test with IUCLID rat.

Dermal

LD50 value of silicon dioxide is >5000mg/kg at skin administration test with IUCLID rabbit.

It is no data of lithium chloride.

Skin corrosion / irritation

Silicon dioxide does not cause irritation as a result of the IUCLID rabbit test. Lithium chloride causes irritation as a result of the IUCLID rabbit test.

Eye damage / irritation

Silicon dioxide causes slight irritation as a result of the IUCLID human test.

Lithium chloride causes slight irritation as a result of the IUCLID rabbit test.

Sensitization

respiratory/skin

No data

Germ cell mutagenicity

For silicon dioxide ,both results of the mice marrow micronucleus test of in vivo mutagenicity test and the ames test of in vitro experiment are negative .

It is no data of lithium chloride.

Carcinogenivity

Silicon dioxide is IARC·group 3.

Lithium chloride is out of category.

Toxic to reproduction toxicity

No data

Specific target organ systemic toxicity (single exposure)

No data

Specific target organ systemic toxicity (single exposure)

No data

12. Environmental influence information

Hazardous to the aquatic environment-acute hazard

No data

Hazardous to the aquatic environment- chronic hazard2

No data

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13. Disposal Considerations

Leftover waste :	The disposal of the leftover waste has to be carried out in accordance with the legal requirements.
A pollution container and packing :	Clean a container and recycle it. Or the appropriately disposal must be made according to official When an empty container is disposed, remove contents

14. Transportation Information

International regulation	
Marine regulation information	Not-hazardous material
Air regulation information	Not-hazardous material

Special safety measure

15. Regulatory Information

16. Other Information

References

- IUCLID (2000)
- IARC (1997)
- Industrial hygiene society advice (2005)
- ACGIH-TLV (2005)

A disaster example

- No information

Fuji Silysia Chemical Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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