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MATERAL SAFETY DATA SHEET

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1. The Chemical Substance and Company information

Name of Chemical substance	: Silica gel A-type , B-type
Company's name	: SHIN-ETSU KASEI KOGYO CO., LTD.
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Recommended use and restriction of use

2. Hazards identification

GHS classification

Physicochemical hazards	
Flammable solids	not classified
Pyrophoric solids	not classified
Self-heating substance and mixtures	not classified
Substance and mixtures which, in contact with water, emits flammable gases.	not classified
Oxidizing solid	not classified
Health hazards	
Acute toxicity(oral)	not classified
Acute toxicity(dermal)	not classified
Skin corrosive / irritation	not classified
Germ cell mutagenicity	not classified
Carcinogencity	not classified
Environmental hazards	

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3. Composition / Information on Ingredients

Chemical substance

Chemical characterization	Single substance
Chemical name or generic name	Amorphous silicon dioxide
Alias	:Silica Gel
Chemical formula	:SiO2
CAS registered No.	:7631-86-9
Official gazette No.	:(1)-548
A purity or a range	:100% (dry base)

4. First Aid Measure

IF Inhalation	Not specific first-aid is necessary.
	Get medical advice/attention if you feel unwell.
IF On Skin	Not specific first-aid is necessary.
	If skin irritation or rash occurs, get medical advice/attention.
IF In Eyes	Do not rub eyes.
	Rinse cautiously with water for several minutes.
	Remove contact lenses, if present and easy to do.
	Continue rinsing.
	If eye irritation persists, get medical advice/attention.
IF Swallowed	Vomit up and lines mouth with clean water well.
	Get medical advice/attention if you feel unwell.

5. Fire Fighting Measure

Extinguish	This material is not combustible.
	Use extinguish 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 for surrounding fire.

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6. Accidental Release Measure

Instructions for the human body,

Protective equipment and emergency step

Large spill :

Isolate hazard area and dry entry to unnecessary personal.

Wear appropriate protection to avoid contact/inhalation to eyes and skin.

(ref. "8. Exposure Control / Personal Protection")

Instructions for the environment

Do not discharge it to environment.

Collection, neutralization

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

Containment and purification method / machine

:Stop a 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 production " and wear the protection.

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

Safe handling instructions
:Take precautions a static electric spark
Do not contact inhalation and swallow.
Perform ventilation for exhaust to keep the atmospheric concentration lower than exposure limit.
Wash a hand well after handling.

Contact evasion :Refer to the "10. Stability and reactivity".

Storage

Technical Measures :Keep in a tightly closed container, stored in a cool and dry ventilated area. Protect against physical damage.

Composite hazard substance : Refer to the "10. Stability and reactivity.

Storage condition :Store it up in a cool and good place of ventilation to avoid

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direct rays of the sun and rainwater.

Container and packaging materials
:Store it in tightly closed container which is not breakable.

8. Exposure Control / Personal Protection

Standard control concentration
Permissible concentration
(an exposure limit value / a biological exposure index)
: Japan industrial hygiene society(2005)
Total dust 8mg/m^3
Inhalation-related dust 2mg/m^3
ACGIH(2009) TLA-TWA Not listed

Equipment measure :It would be better install washing eyes device and a safety shower in a workplace to store this material or handle it. install a ventilating device to keep an air pollutant less than permissible concentration when dust occurs by a process.

Protective equipment
Protection for respiratory : Wear the appropriate respiratory protection.
Protective for hands :use the appropriate protection gloves if necessary.
Protection for eyes :use the personal protection for eyes if necessary. Protection for skin and body: use the appropriate protection suit, mask if necessary.
Hygiene measure :Wash a hand well after handling.

9. Physical and Chemical Properties

Physical State/Shape/Color...	: Solid, spherical, White.
Odor	: Odorless
pH	: 3.0～8.0(5% slurry)
Melting Point	: 1610 ℃
Boiling Point	: 2230 ℃
Flash Point	: Non-inflammable
Pyrophoric temperature	: Non-inflammable
Explosion range	: None
Vapor Pressure	: 10mmHg(1732 ℃) conversion value1333Pa(1732 ℃)
Vapor Density(Air=1)	: Not available
Specific Gravity	: True specific gravity 2.2
Solubility	: Insoluble in water
Octanol /water distributed coefficient	: Not available
Decomposition temperature	: Not available

10. Stability and reactivity

Stability	: Stable under ordinary of use (ambient temperature)
Hazard reaction possibility	: React with hydrogen fluoride
Condition to avoid	: Contact to composite hazard substance
Composite hazard substance	: Hydrogen fluoride

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Hazard resolution substance : None

11. Toxicological information

Acute Toxicity

Acute Toxicity:	
Oral	Silicon dioxide :Rat LD50>5000mg/kg IUCLID(2000)
Dermal	Silicon dioxide :Rabbit LD50>5000mg/kg IUCLID(2000)
Skin corrosion / irritation	Silicon dioxide :Rabbit not irritating IUCLID(2000)
Serious eye damage / irritation	Silicon dioxide :Human slightly irritating IUCLID(2000)
Respiratory / skin sensitizer	Not available
Germ cell mutagenicity	Silicon dioxide :Negative in vivo micronucleus test using bone marrow of mice(JJFC2003)
Carcinogenivity	Silicon dioxide :Group 3 IARC(2009)
Toxic to reproduction toxicity	Not available
Specific target organ systemic toxicity (single exposure)	Not available
Specific target organ systemic toxicity (repeated exposure)	Not available

12. Environmental influence information

Hazardous to the aquatic environment acute toxicity
Not available

Hazardous to the aquatic environment chronic toxicity
Not available

13. Dispodal Considerations

Leftovor w
aste

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.
Processing use or contamination of this product may change the waste management options. state and local disposal regulations may differ from federal disposal regulations. Disposal of container and unused contents in accordance with federal, sate and local requirements.

A pollution container and packing

Clean a container and recycle it or do appropriate disposal according to the law concerned and a standard of a local government.
When an empty container is disposed, completely remove contents.

14. Transportation Information

International regulation

Marine regulation information	Non-hazardous materials
Air regulation information	Non-hazardous materials

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Domestic regulation

Land regulation information	Non-pertinence
Marine regulation information	Non-hazardous materials
Air regulation information	Non-hazardous materials

15. Regulatory Information

The Occupational Safety and Health Act
The hazardous materials which should be notified of names.
(Law 2 of article 57, the enforcement law 2 separate table article 9 of article 18)
(A government ordinance number article 312: Silica)

16. Other Information

References

IUCLID(2000)
IARC(2009)
Industrial hygiene society advice(2009)
ACGIH-TLV(2009)
NITE CHRIP data base
GHS Classification Guidance of Enterprises(March, 2009)
Ministry of Economy, Trade and Industry
JJFC Vol.10(3) 2003

A disaster example No information available

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