Issue date: 12/3/2003
Revision date: 1/5/2026

Safety Data Sheet

1. Chemical product and company identification

Product name	:	Silicon, powder, 4N

Company information

Name of manufacturer	:	KANTO CHEMICAL CO., INC.
Address	:	2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, JP
Name of section	:	Business Administration Department, Reagent Division
Telephone number	:	+81-3-6214-1090
Facsimile number	:	+81-3-3241-1047
Mail address	:	BC32@kanto.co.jp
Reference No	:	38007
Recommended use	:	For research use only
Restrictions on use	:	Seek expert judgment when using the product for applications other than those recommended.

2. Hazards identification

GHS classification

Physical hazards	Flammable solids	Category 2
Health hazards	Serious eye damage/eye irritation	Category 2B

Hazard pictograms

Signal word	:	Warning
Hazard statements	:	Flammable solid Causes eye irritation

Precautionary statements

Prevention	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Wash hands, forearms and face thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response	:	IF IN 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.

3. Composition/information on ingredients

Distinction of substance or mixture	:	Substance

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Silicon	≥ 99.99	Si	Listed	231-130-8	7440-21-3

4. First aid measures

First aid measures

First-aid measures after inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.

First-aid measures after skin contact : Wash the affected areas under running water.

First-aid measures after eye contact : Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.

First-aid measures after ingestion : Rinse mouth with water. Give the victim one or two glasses of water or milk. Do not induce vomiting. Get medical treatment as soon as possible.

Self protection of the first-aider : Rescuers should wear proper protective equipment like rubber gloves, goggles.

5. Fire fighting measures

Suitable extinguishing media : Dry chemical powder, carbon dioxide, dry sand, foam

Unsuitable extinguishing media : Water spray

Firefighting instructions : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.

Fight fire from windward.

Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Foam extinguisher is effective for a large scale fire.

Personal protection (Emergency response) : Firefighters should wear protective equipment.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures : Wear proper protective equipment and avoid contact with skin and inhalation of dust. Conduct operations from upwind and evacuate people downwind.

Environmental precautions

Environmental precautions : Attention should be given to avoid damage to the environment by flowing of spillage to rivers.

Methods and Equipment for Containment and Cleaning up

For containment : Sweep up the chemical and place in a chemical waste container.

Prevention Measures for Secondary Accidents : Remove nearby sources of ignition and prepare extinguishing media.

7. Handling and storage

Handling

Technical measures : Wear appropriate protective equipment to avoid contact with skin

or inhalation of dust.

Precautions for safe handling : Avoid formation of dust and aerosols.
Do not allow contact with oxidizing substances.

Storage

Storage conditions : Store in a dark, cool place and tightly closed.

Material used in packaging/containers : Glass, polyethylene, polypropylene.

8. Exposure controls / Personal protection equipment

ACGIH TWA	Not established

Appropriate engineering controls : Install a local ventilation system in case of dusty condition.

Protective equipment

Respiratory protection : Dust mask

Hand protection : Impervious protective gloves

Eye protection : Safety goggles

Skin and body protection : Protective clothing, protective boots

9. Physical and chemical properties

Physical state : Solid

Color : Dark gray - brown

Odor : Odorless

pH : No data available

Melting point : 1410 ° C

Freezing point : No data available

Boiling point : 2355 ° C

Flash point : 33 - 44 ° C (22-134 kPa)

Auto-ignition temperature : 25 - 66 ° C (100-105 kPa)

Decomposition temperature : No data available

Flammability : Flammable solid

Vapor pressure : 1 Pa (1635℃)

Relative density : No data available

Density : 2.33 g/cm³ (25℃)

Relative gas density : No data available

Solubility : Water: Insoluble.

Partition coefficient n-octanol/water (log Pow) : No data available

Explosive limits (vol %) : No data available

Viscosity, kinematic : No data available

Particle characteristics : No data available

10. Stability and reactivity

Reactivity : May react with oxidizing substances.
At temperatures above 400° C, it reacts with oxygen; at temperatures above 1000° C, it reacts with nitrogen, producing

		silicon oxide and silicon nitride. It reacts with fluorine, chlorine, and bromine to produce silicon tetrafluoride, silicon tetrachloride, and silicon tetrabromide. In an alkaline hydroxide solution, it generates hydrogen and produces metasilicate ions.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Mixed with air may cause dust explosion.
Conditions to avoid	:	Light, heat.
Incompatible materials	:	Oxidizing substances.
Hazardous decomposition products	:	Fumes.

11. Toxicological information

Acute toxicity (oral)	:	No classification rat LD50=3160 mg/kg
Acute toxicity (dermal)	:	Classification not possible
Acute toxicity (inhalation)	:	No classification (gas) Classification not possible (vapor) Classification not possible (dust, mist)
Skin corrosion/irritation	:	Classification not possible
Serious eye damage/irritation	:	Causes eye irritation Based on a report of "Slightly irritating" in a rabbit test, the substance was classified into category 2B.
Respiratory sensitization	:	Classification not possible
Skin sensitization	:	Classification not possible
Germ cell mutagenicity	:	Classification not possible
Carcinogenicity	:	Classification not possible
Reproductive toxicity	:	Classification not possible
STOT-single exposure	:	Classification not possible Although there is a result that pulmonary epithelial lesions were found in rabbits after intratracheal instillation at 25 mg, classification was not possible due to lack of other sufficient data.
STOT-repeated exposure	:	Classification not possible Since no toxic signs or histopathological findings were observed after dietary administration for 1-month at 800 mg/kg to dogs or rats, the substance corresponds to "No classification" with oral exposure. However, classification was not possible due to lack of or insufficient data with other exposure routes.
Aspiration hazard	:	Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	:	Classification not possible
Aquatic chronic	:	Classification not possible

Persistence and degradability

No additional information available

Bioaccumulative potential

No additional information available

Mobility in soil

No additional information available

Hazardous to the ozone layer

Hazardous to the ozone layer : Classification not possible

13. Disposal considerations

Ecological waste information : Bury in a landfill site approved for the disposal of chemical and hazardous wastes. Or entrust approved waste disposal companies with the disposal.

Contaminated container and packaging : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

International Regulations

Transport by sea(IMDG)

UN-No. (IMDG) : 1346
Proper Shipping Name (IMDG) : SILICON POWDER, AMORPHOUS
Packing group (IMDG) : III
Transport hazard class(es) (IMDG) : 4.1

Air transport(IATA)

UN-No. (IATA) : 1346
Proper Shipping Name (IATA) : Silicon powder, amorphous
Packing group (IATA) : III
Transport hazard class(es) (IATA) : 4.1

Marine pollutant : Not applicable
MFAG-No : 170

15. Regulatory information

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

16. Other information

Data sources : NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.
Encyclopaedia Chimica, Kyoritsu Shuppan Co, Ltd. (1963) .
ECHA (European Chemicals Agency).

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully.The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements.The information herein is only provision of information, and it does not represent a guarantee the properties of the product.The Safety Data Sheet(SDS) is prepared based on JIS Z7253.