

CANON OPTRON INC.

SDS Number: ES17
 Product Name: SiO2 (Quartz)

SAFETY DATA SHEET

rev. 6.5 Date of Issue 2014/9/1
 Revised Date 2018/6/6

SECTION 1 Chemicals and company identification

Chemical identifier	SiO2 (Quartz)
SDS number	ES17
Company name	CANON OPTRON INC.
Address	1744-1, Kanakubo, Yuki-shi, Ibaraki-ken, 307-0015 Japan
Section name	Internal Control Promotion Div.
Telephone number	+81-296-21-3700 (Sales Dept.)
Fax number	+81-296-21-3770
Emergency telephone number	+81-296-21-3700 (Sales Dept.)
Recommended uses and restrictions on use	Vacuum deposition material

SECTION 2 Hazards identification


GHS Classification (A classification by JIS Z 7252 "classification methods such as chemical substances based on GHS")

Physicochemical hazard	Explosives	Classification not possible
	Flammable gases (including chemically unstable gases)	Not applicable
	Aerosols	Not applicable
	Oxidizing gases	Not applicable
	Gases under pressure	Not applicable
	Flammable liquids	Not applicable
	Flammable solids	Classification not possible
	Self-reactive substances and mixtures	Classification not possible
	Pyrophoric liquids	Not applicable
	Pyrophoric solids	Classification not possible
	Self-heating substances and mixtures	Classification not possible
	Substances and mixtures which, in contact with water, emit flammable gases	Classification not possible
	Oxidizing liquids	Not applicable
	Oxidizing solids	Classification not possible
	Organic peroxides	Classification not possible
Health hazard	Corrosive to metals	Classification not possible
	Acute toxicity (oral)	Classification not possible
	Acute toxicity (dermal)	Classification not possible
	Acute toxicity (inhalation)	Classification not possible
	Skin corrosion/irritation	Classification not possible

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	Eye damage/eye irritation	Classification not possible
	Respiratory sensitization	Classification not possible
	Skin sensitization	Classification not possible
	Germ cell mutagenicity	Not classified
	Carcinogenicity	Category 1A
	Reproductive toxicity	Classification not possible
	Effects on or via lactation	Classification not possible
	Specific target organ toxicity(single exposure)	Category 1
	Specific target organ toxicity(repeated exposure)	Category 1
	Aspiration hazard	Classification not possible
Environmental hazard	Hazard to the aquatic environment(acute hazard)	Classification not possible
	Hazard to the aquatic environment(long-term hazard)	Classification not possible
	Hazard to the ozone layer	Classification not possible
Label element		
Pictogram (Symbol)	Health Hazard	
		
Signal word	Danger	
Hazard statement	May cause cancer. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.	
Precautionary statement		
【Safety measures】	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.	
【First-aid measures】	If exposed or concerned: Call a poison center or doctor/physician. If exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell. Specific treatment	
【Storage】	Store locked up.	

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【Disposal】

Dispose of contents/container in accordance with national regulations.

SECTION 3 Composition and information ingredients

Substance/Mixture	Substance
Chemical name or generic name	Quartz
Chemical formula	SiO ₂ (Quartz)
CAS No.	14808-60-7
Concentration or concentration range	99.9<
TSCA Inventory	Quartz (SiO ₂)
EINECS number	238-878-4
Radioactive information	It does not use a radioactive substance as a material. Thus, evidence of ionizing radiation occurs is not present.

SECTION 4 First-aid measures

Inhalation	It is possible to move to fresh air victims and keep at rest in a position comfortable for breathing. Able to receive medical attention, diagnosis. If you feel bad, get medical attention, diagnosis.
Skin	It is possible to move to fresh air victims and keep at rest in a position comfortable for breathing. Able to receive medical attention, diagnosis. If you feel bad, get medical attention, diagnosis.
Eye	Rinse cautiously with water for several minutes. If eye irritation persists, get medical attention, attention. Able to receive medical attention, diagnosis. If you feel bad, get medical attention, diagnosis.
Ingestion	Rinse the mouth. Able to receive medical attention, diagnosis. If you feel bad, get medical attention, diagnosis.
Protection of first aiders	No data available

SECTION 5 Fire-fighting measures

Extinguishing media	The product itself does not burn. The use of appropriate fire extinguishing agent according to the surrounding fire.
Extinguishing media are unsuitable	No data available
Specific hazards	There is a fear that the vessel will explode when heated.
Specific extinguishing methods	The Move containers from fire area if this can be done without risk.
Protection of fire-fighters	When fire fighting, wear appropriate air respirator, chemical protective clothing depending on the surrounding fire.

SECTION 6 Accidental release measures

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Personal precautions, protective equipment, and emergency procedures	Immediately, I isolate leakage area as the appropriate distance in all directions.
Environmental precautions	The Note is discharged into rivers or the like, so as not to cause damage to the environment. It should not be released to the environment.
Methods and materials for containment and methods and materials for cleaning up	Stop leak if it can be done without risk.
Secondary disaster prevention measures	(Smoking in the vicinity, the prohibition of flame or spark) to remove promptly all sources of ignition. Because of the risk of slippery when left on the floor, to handle frequently.

SECTION 7 Handling and storage precautions

Handling

Technical measures	And made capital measures described in "SECTION 8 Exposure controls and personal protection", to wear protective equipment.
Safety handling precautions	Be sure to get the instruction manual before use. Do not handle until you read and understand all safety precautions. Do not swallow contact, or inhalation. Making a ventilation exhaust in order to keep the exposure limits or less concentration in the air. Wash hands thoroughly after handling. When you use this product, you should not eat, drink or smoke.

Storage

Safe storage conditions	To keep it under lock and key.
Safety packaging material	No packaging, regulation of the container, but put to those that do not damage sealable.

SECTION 8 Exposure controls and personal protection

SiO₂ (Quartz)

Permissible concentration

ACGIH

TWA 0.025 mg/m³
(2008)

Engineering controls

To use devices that are sealed as much as possible, local exhaust ventilation or equipment.

Personal protective equipment

Respiratory protection	Dust mask
Hand protection	Protective glove
Eye protection	Dust-proof glasses
Skin and body protection	Protective clothing

SECTION 9 Physical and chemical properties

Appearance

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Physical state	Solid
Form	Pellets, granules
Colour	Transparent or white
Odour	None

SiO₂ (Quartz)

pH	<i>No data available</i>
Melting point/Freezing point	1610°C
Boiling point/Initial boiling point and boiling range	2230°C
Flash point	<i>Noncombustibility</i>
Evaporation rate	<i>No data available</i>
Flammability (solid, gas)	<i>No data available</i>
Explosive limits	
LEL	<i>No data available</i>
UEL	<i>No data available</i>
Vapour pressure	10mmHg (1732 °C) [conversion value 1333Pa (1732 °C)]
Vapour density (air = 1)	<i>No data available</i>
Specific gravity (Relative density) (Density)	2.5
Solubility	
Water	<i>Insoluble</i>
Other solvents	<i>No data available</i>
n-octanol/Water partition coefficient	<i>No data available</i>
Auto-ignition temperature	<i>Noncombustibility</i>
Decomposition temperature	<i>No data available</i>
Viscosity (Coefficient of viscosity)	<i>No data available</i>
Other data	<i>None</i>

SECTION 10 Stability and reactivity

SiO₂ (Quartz)

Reactivity	<i>No data available</i>
Chemical stability	<i>Stable at (room temperature) under normal handling conditions.</i>
Hazardous reactions	<i>Reacts with strong oxidants causing fire and explosion hazard. I react with hydrogen fluoride.</i>
Conditions to avoid	<i>Diffusion of dust</i>

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Incompatible materials	<i>Strong oxidizing agent, hydrogen fluoride</i>
Hazardous decomposition products	<i>None</i>

SECTION 11 Hazard information

SiO₂ (Quartz)

Acute toxicity(oral)	<i>No data available</i>
Acute toxicity(dermal)	<i>No data available</i>
Acute toxicity(inhalation)	<i>No data available</i>
Skin corrosion/irritation	<i>No data available</i>
Eye damage/eye irritation	<i>No data available</i>
Respiratory sensitization/Skin sensitization	<i>No data available</i>
Germ cell mutagenicity	<i>There is a finding of positive-negative, in the micronucleus test in the chromosome aberration test.</i>
Carcinogenicity	<i>IARC: 1 Is carcinogenic to humans. NTP: K Substance that is carcinogenic to humans is known</i>
Reproductive toxicity	<i>No data available</i>
Specific target organ toxicity(single exposure)	<i>Data is significantly less compared to the repeated exposure, there is a description of the effect on the respiratory system when inhaled concentration is higher in the short-term exposure in humans.</i>
Specific target organ toxicity(repeated exposure)	<i>In one document Priority, there is a description of the affect the respiratory system and kidneys in humans.</i>
Aspiration hazard	<i>No data available</i>
Others	<i>None</i>

SECTION 12 Ecological information

SiO₂ (Quartz)

Ecotoxicity	
Fish	<i>No data available</i>
Crustaceantoxicity(single exposure)	<i>No data available</i>
Algae	<i>No data available</i>
Other organisms	<i>No data available</i>
Persistence and degradability	<i>No data available</i>
Bioaccumulative potential	<i>No data available</i>
Mobility in soil	<i>No data available</i>
Hazard to the ozone layer	<i>No data available</i>

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Others

No data available

SECTION 13 Notes on disposal

Waste from residues

Entrust the process to industrial waste disposal contractor has received a license from the governor.

Contaminated container and contaminated packaging

Recycle or in the clean container and take appropriate disposal in accordance with the criteria of the relevant legislation sequence municipality.

SECTION 14 Transport information

SiO₂ (Quartz)

International regulation

UN classification

No data available

UN number

Not applicable

UN proper shipping name

None

Packing group

No data available

Japanese laws and regulations

Land regulation information Not applicable Maritime regulatory information non-hazardous materials Aviation regulatory information non-hazardous materials
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Conditions and specific safety measures of transport

During transport, I avoid direct rays of the sun, the loading of container damage, corrosion, so that there is no leakage, it is surely the prevention of collapse of cargo. Do not top up heavy objects.
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SECTION 15 Regulatory information (Japan)

SiO₂ (Quartz)

PRTR Law

None

Occupational Safety and Health Law

There is it in the case of an application or an application

Poisonous and Deleterious Substances control Law

None

Explosives control Law

None

High-pressure gas security Law

None

Fire fighting Law

None

Chemical substances control Law

None

Ship safety Law

None

Aviation Law

None

Prevention of marine pollution Law

None

Pneumoconiosis Law

There is it in the case of an application or an application

Note

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.
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SECTION 16 Other information

The Safety Data Sheet (SDS) has been prepared based on currently available materials, information and data, and may be revised based on new information. Further, the important points in the SDS are made for the purpose of normal handling.

When handling the user product in a specialized manner, take the appropriate safety measures for the application or method.

Further, Canon Optron Inc. has paid sufficient attention to the described contents of the SDS, but does not guarantee the accuracy of its contents.

Literature Reference

[References]

Industrial Safety and Health Act All Data of MSDS Target Substances: The Chemical Daily Co., Ltd (2003)

Poisonous and Deleterious Substances Control Act All Data of MSDS Target Substances: The Chemical Daily Co., Ltd (2003)

Pollutant Release and Transfer Register All Data of MSDS Target Substances: The Chemical Daily Co., Ltd (2003)

Recommendations for Allowable Concentrations (Fiscal 2017): Japan Society for Occupational Health Journal of Occupational Health, Vol. 59 2017

[WEB site]

National Institute of Technology and Evaluation Homepage

Japan Advanced Information Center of Safety and Health Homepage

Ministry of Health, Labour and Welfare Homepage

[Regulatory review Tools]

ezCRIC (Japan Chemical Database Ltd)