

CANON OPTRON INC.

SDS Number: EC01C

Product Name: CaF₂ (Optical Crystal)

SAFETY DATA SHEET

rev. 7.2

Date of Issue

2014/9/1

Revised Date

2022/10/3

SECTION 1 Chemicals and company identification

Product name	CaF ₂ (Optical Crystal)
Product code	EC01C
Company name	CANON OPTRON INC.
Address	1744-1, Kanakubo, Yuki-shi, Ibaraki-ken, 307-0015 Japan
Section name	Sales Department
Telephone number	+81-296-21-3700
Fax number	+81-296-21-3770
Emergency telephone number	+81-296-21-3700
Use	Optical crystal material

SECTION 2 Hazards identification

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

No data available

Label element

hazard Pictograms	No data available
Signal word	No data available
Dangerous goods hazard information	No data available

Precautionary statement

【Safety measures】

Obtain special instructions before use.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Do not breathe dust/fume/gas/mist/vapours/spray.

【First-aid measures】

If swallowed:

Call a poison center or doctor/physician if you feel unwell.
Rinse mouth.

If in eyes:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call poison center or doctor/physician

【Storage】

Store in a well-ventilated place, keep container tightly closed.
Store locked up.

【Disposal】

Dispose of contents/container in accordance with national regulations.

【Other hazards】

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SECTION 3 Composition/information on ingredients

Substance/Mixture	Substance
Chemical name	Calcium fluoride
Chemical formula	CaF ₂
Concentration or concentration range	99.9%<
CAS No.	7789-75-5
TSCA Inventory	Calcium fluoride (CaF ₂)
EINECS number	232-188-7
Radioactive information	Radioactive substances are not used as the material. Therefore, there is no reason that ionizing radiation would be generated.

SECTION 4 First aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse affected areas with water/shower. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: : Get medical advice/attention.
Eye contact	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.
Ingestion	Rinse mouth. Get medical advice/attention.
Most important symptoms and effects, both acute and delayed	No data available
Protection of first aiders	Rescuers, wear suitable protective equipment as the situation demands.
Special precautions for physicians	No data available

SECTION 5 Firefighting measures

Suitable extinguishing media	This product itself is not flammable.
Unsuitable extinguishing media	No data available
Specific hazards	No data available
Specific extinguishing methods	In the case of a fire in the periphery, the portable container is quickly moved to a safe place.
Special protective equipment for firefighters	Wear suitable protective equipment (gloves, glasses and a mask) in fire-fighting.

SECTION 6 Accidental release measures

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Personal precautions, protective equipment, and emergency procedures	Protection equipment (specified as those in which the properties of the product are suitable) worn during operation so that airborne droplets, etc., do not adhere to the skin and dusts and gases are not absorbed.
Environmental precautions	The leakage may not directly flow into rivers or sewage.
Methods and material for containment and cleaning up	The leaked material is scooped up, or swept up and gathered to be recovered in a paper bag or a drum. After recovery, a small amount of the residue is absorbed in sediment, sawdust, etc.
Secondary disaster prevention measures	No data available

SECTION 7 Handling and storage

Precautions for safe handling

Technical measures	Take measures for equipment as described in “8. Exposure controls/personal protection” and wear protective equipment.
Safety handling precautions	Handling work must be practiced in a room where there is a local or total ventilation facility.
Avoidance of contact	Refer to “10. Stability and reactivity.”
Hygiene measures	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.
Conditions for safe storage, including any incompatibilities	
Safe storage conditions	Store in a well-ventilated place. Keep container tightly closed.
Safety packaging material	No data available

SECTION 8 Exposure controls/personal protection

CaF₂

Permissible concentration

ACGIH

No data available

Appropriate engineering controls

Use sealed devices, equipment, or a local exhaust ventilation as much as possible.

Individual protection measures, such as personal protective equipment

Respiratory protection	Dustproof mask
Hand protection	Protective gloves
Eye/face protection	Dust-proof glasses

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Skin protection

Protective clothing

SECTION 9 Physical and chemical properties

Appearance

Physical state	Solid
Form	Plate, lens, disk
Colour	White
Odour	None

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Melting point/freezing point	1360°C
Boiling point or initial boiling point and boiling range	2451°C
Flammability	No data available
Upper/lower flammability or explosive limits	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	No data available
Solubility	
Water	0.0016g/100g (18°C)
Other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Vapour pressure	No data available
Density and/or relative density	3.18
(Density)	
Relative vapor density	No data available
Particle characteristics	No data available
Other information	No data available

SECTION 10 Stability and reactivity

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Reactivity	No data available
Chemical stability	It is stable in storage conditions and normal handling.

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Possibility of hazardous reactions	<i>Do not react in the storage conditions and normal handling.</i>
Conditions to avoid	<i>No data available</i>
Incompatible materials	<i>Acid</i>
Hazardous decomposition products	<i>By crossed with acid and generate hydrogen fluoride gas.</i>

SECTION 11 Toxicological information

CaF₂

Acute toxicity(oral)	<i>Oral – Rat LD50: 4250mg/kg Oral – guinea pig LDLo:> 5000mg/kg Intraperitoneal – Mouse LD50: 2638mg/kg Oral – guinea pig LDLo:> 5000mg/kg</i>
Acute toxicity(dermal)	<i>No data available</i>
Acute toxicity (Inhalation: Gases)	<i>No data available</i>
Acute toxicity (Inhalation: Vapours)	<i>No data available</i>
Acute toxicity (Inhalation: Dusts and mists)	<i>No data available</i>
Skin corrosion/irritation	<i>Which can stimulate the skin and eyes, causing inflammation.</i>
Serious eye damage/irritation	<i>No data available</i>
Respiratory or skin sensitization	<i>No data available</i>
Germ cell mutagenicity	<i>No data available</i>
Carcinogenicity	<i>ACGIH: A4 Substance that can not be classified as a carcinogen to humans. IARC: Group 3 Can not be classified for carcinogenicity to humans.</i>
Reproductive toxicity	<i>No data available</i>
Specific target organ toxicity(single exposure)	<i>No data available</i>
Specific target organ toxicity(repeated exposure)	<i>(Mottled teeth, fluorine bone deposition) fluorine chronic toxicity</i>
Aspiration hazard	<i>No data available</i>
Other information	<i>No data available</i>

SECTION 12 Ecological information

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Toxicity Hazardous to the aquatic environment Short-term(acute)	<i>No data available</i>
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Hazardous to the aquatic environment Long-term(chronic)	<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>
Other adverse effects	<i>No data available</i>

SECTION 13 Disposal considerations

Waste treatment methods	Process is contracted to industrial waste disposers who received approval of a prefectural governor.
Contaminated container and contaminated packaging	The container is recycled after being cleaned, or is appropriately processed according to the standards of related laws and regulations. When disposing of empty containers, the contents should be completely removed.

SECTION 14 Transport information

CaF₂

International regulation

UN number	<i>Not applicable</i>
UN proper shipping name	<i>Not applicable</i>
UN classification	<i>Not applicable</i>
Transport hazard class	<i>Not applicable</i>
Packing group	<i>Not applicable</i>
Hazardous to the aquatic environment	<i>No data available</i>
Maritime transport in bulk according to IMO instruments	<i>No data available</i>
Japanese laws and regulations	<i>No data available</i>
Special precautions for users	<i>No data available</i>
Special Provisions	—

SECTION 15 Regulatory information (Japan)

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Occupational Safety and Health Law	<i>No data available</i>
PRTR Law	<i>No data available</i>
Poisonous and Deleterious Substances control Law	<i>No data available</i>

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Labor Standards Act	No data available
Chemical substances control Law	No data available
Fire fighting Law	No data available
Air Pollution Control Act	No data available
Water Pollution Prevention Act	No data available
Water Supply Act	No data available
Sewerage Act	No data available
Marine Pollution Prevention Law	No data available
Waste Management and Public Cleansing Act	No data available
Note	Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

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.

The SDS prepared by our company includes all findings from our investigation for reference. Not applicable to all items listed.

Literature Reference

[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)