

CANON OPTRON INC.  
 SDS Number: EY02  
 Product Name: YF3

# 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	YF3
Product code	EY02
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	Vacuum deposition 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

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Substance/Mixture	Substance
Chemical name	<i>Yttrium fluoride</i>
Chemical formula	<i>YF3</i>
Concentration or concentration range	99.9%
CAS No.	13709-49-4
TSCA Inventory	<i>Yttrium fluoride (YF3)</i>
EINECS number	<i>237-257-5</i>
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

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.

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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

**YF3**

Permissible concentration

ACGIH

*TLV-TWA: 1 mg/m<sup>3</sup>  
(as yttrium and compound, yttrium)  
(2015 version)*

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

Skin protection

Protective clothing

## SECTION 9 Physical and chemical properties

Appearance

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Physical state	Solid
Form	Granular
Colour	White
Odour	None

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Melting point/freezing point	1387°C
Boiling point or initial boiling point and boiling range	No data available
Flammability	No data available
Upper/lower flammability or explosive limits	No data available
Flash point	No data available
Auto-ignition temperature	Noncombustibility
Decomposition temperature	No data available
pH	No data available
Kinematic viscosity	No data available
Solubility	
Water	Insoluble
Other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Vapour pressure	No data available
Density and/or relative density (Density)	4.01
Relative vapor density	No data available
Particle characteristics	No data available
Other information	No data available

## SECTION 10 Stability and reactivity

**YF3**

Reactivity	No data available
Chemical stability	It is stable in storage conditions and normal handling.
Possibility of hazardous reactions	To generate toxic hydrogen fluoride gas and fluorine gas decomposes on heating.
Conditions to avoid	High-temperature and humidity
Incompatible materials	No data available

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Hazardous decomposition products	<i>To generate toxic hydrogen fluoride gas and fluorine gas decomposes on heating.</i>
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## SECTION 11 Toxicological information

**YF3**

Acute toxicity(oral)	<i>No data available</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>Nose, throat, trachea is stimulated by inhalation of dust.</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>No data available</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>No data available</i>
Aspiration hazard	<i>No data available</i>
Other information	<i>No data available</i>

## SECTION 12 Ecological information

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

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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

**YF3**

## 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>Land regulation information Not applicable Maritime regulatory information non-hazardous materials Aviation regulatory information non-hazardous materials</i>
Special precautions for users	<i>No data available</i>
Special Provisions	-

## SECTION 15 Regulatory information (Japan)

**YF3**

Occupational Safety and Health Law	<i>There is it in the case of an application or an application</i>
PRTR Law	<i>Not applicable</i>
Poisonous and Deleterious Substances control Law	<i>Not applicable</i>
Labor Standards Act	<i>There is it in the case of an application or an application</i>
Chemical substances control Law	<i>Not applicable</i>
Fire fighting Law	<i>Not applicable</i>
Air Pollution Control Act	<i>Not applicable</i>
Water Pollution Prevention Act	<i>There is it in the case of an application or an application</i>
Water Supply Act	<i>There is it in the case of an application or an application</i>
Sewerage Act	<i>There is it in the case of an application or an application</i>
Marine Pollution Prevention Law	<i>Not applicable</i>

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Waste Management and Public  
Cleansing Act

*Not applicable*

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)