SAFETY DATA SHEET

SECTION 1  Chemicals and company identification

Chemical identifier YF3
SDS number EY02
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”)

No data available

Label element
Pictogram (Symbol) No data available
Signal word No data available
Hazard statement 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.

SECTION 3  Composition and information ingredients

Substance/Mixture Substance
SAFETY DATA SHEET

CANON OPTRON INC.

SDS Number: EY02
Product Name: YF3

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

Chemical name or generic name: Yttrium fluoride
Chemical formula: YF3
CAS No.: 13709-49-4
Concentration or concentration range: 99.9%
TSCA Inventory: Yttrium fluoride (YF3)
EINECS number: 237-257-5
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 victim immediately and keep at rest in a position comfortable for breathing. If you feel bad, you should contact your doctor.

Skin: Take off all contaminated clothing immediately. Remove / flush for 15 minutes or more with soap and plenty of water. If symptoms blisters and pain comes, get medical attention if necessary.

Eye: Be flush eyes for at least 15 minutes with clean water immediately. If you are using the contact lenses, as long as it is not fixed, it can be washed and removed. Be subject to medical attention without fail.

Ingestion: Rinse mouth immediately. Be subject to medical attention without fail.

Protection of first aiders: Rescuers Wear protective equipment protective eyewear, such as protective gloves.

SECTION 5 Fire-fighting measures

Extinguishing media: The product itself does not burn.
Extinguishing media are unsuitable: No data available
Specific hazards: No data available
Specific extinguishing methods: The movable container, and transferred to a safe place as soon as possible in case of surrounding fire.
Protection of fire-fighters: In fire fighting, I want to wear (gloves, glasses, mask) the appropriate protective equipment.

SECTION 6 Accidental release measures

Personal precautions, protective equipment, and emergency procedures: Wear it (which specify what suited the nature of the product) protective equipment, such as spray or on skin, we do not want to dust inhalation, the gas at the time of work.

Environmental precautions: Do not flowing in rivers and sewage directly spillage.
Methods and materials for containment and methods and materials for cleaning up: And collected in drums or paper bags are collected to wear or have rake those leaked.
I to absorb in sawdust or sediment residue content of the small amount of recovery after.
SECTION 7  Handling and storage precautions

Handling
Technical measures I wear the appropriate protective equipment safety glasses, protective gloves, etc.. After handling Wash hands, face, etc., and gargle.
Safety handling precautions When handling, to handle in place with equipment for general ventilation or local exhaust under.

Storage
Safe storage conditions Store tightly closed container in a well-ventilated place.
Safety packaging material No data available

SECTION 8  Exposure controls and personal protection

Permissible concentration
ACGIH No data available

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
Physical state Solid
Form Granular
Colour White
Odour None

pH No data available
Melting point/Freezing point 1387℃
Boiling point/Initial boiling point and boiling range No data available
Flash point None
### SAFETY DATA SHEET

**YF3**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td></td>
</tr>
<tr>
<td>LEL</td>
<td>None</td>
</tr>
<tr>
<td>UEL</td>
<td>None</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density (air = 1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity (Relative density)</td>
<td>4.01</td>
</tr>
<tr>
<td>Solubility</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Other solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>n-octanol/Water partition</td>
<td>No data available</td>
</tr>
<tr>
<td>coefficient</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Noncombustibility</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity (Coefficient of viscosity)</td>
<td>No data available</td>
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<tr>
<td>Other data</td>
<td>None</td>
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</table>

#### SECTION 10  Stability and reactivity

**YF3**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>Reactivity</td>
<td>No data available</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>It is stable in storage conditions and normal handling.</td>
</tr>
<tr>
<td>Hazardous reactions</td>
<td>To generate toxic hydrogen fluoride gas and fluorine gas decomposes on heating.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>High-temperature and humidity</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>No data available</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>To generate toxic hydrogen fluoride gas and fluorine gas decomposes on heating.</td>
</tr>
</tbody>
</table>

#### SECTION 11  Hazard information

**YF3**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>No data available</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>No data available</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Nose, throat, trachea is stimulated by inhalation of dust.</td>
</tr>
<tr>
<td>Eye damage/eye irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory sensitization/Skin sensitization</td>
<td>No data available</td>
</tr>
</tbody>
</table>
SECTION 12  Ecological information

YF3

Ecotoxicity

Fish  
No data available

Crustaceantoxicity(single exposure)  
No data available

Algae  
No data available

Other organisms  
No data available

Persistence and degradability  
No data available

Bioaccumulative potential  
No data available

Mobility in soil  
No data available

Hazard to the ozone layer  
No data available

Others  
No data available

SECTION 13  Notes on disposal

YF3

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

YF3

International regulation

UN classification  
Not applicable

UN number  
None

UN proper shipping name  
None

Packing group  
Not applicable

Japanese lows and regulations  
None
SAFETY DATA SHEET

Conditions and specific safety measures of transport

No data available

SECTION 15  Regulatoly information (Japan)

<table>
<thead>
<tr>
<th>Regulation</th>
<th>YF3</th>
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<tbody>
<tr>
<td>PRTR Law</td>
<td>None</td>
</tr>
<tr>
<td>Occupational Safety and Health Law</td>
<td>There is it in the case of an application or an application</td>
</tr>
<tr>
<td>Poisonous and Deleterious Substances control Law</td>
<td>None</td>
</tr>
<tr>
<td>Explosives control Law</td>
<td>None</td>
</tr>
<tr>
<td>High-pressure gas security Law</td>
<td>None</td>
</tr>
<tr>
<td>Fire fighting Law</td>
<td>None</td>
</tr>
<tr>
<td>Chemical substances control Law</td>
<td>None</td>
</tr>
<tr>
<td>Ship safety Law</td>
<td>None</td>
</tr>
<tr>
<td>Aviation Law</td>
<td>None</td>
</tr>
<tr>
<td>Prevention of marine pollution Law</td>
<td>None</td>
</tr>
<tr>
<td>Pneumoconiosis Law</td>
<td>None</td>
</tr>
</tbody>
</table>

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.

Literature Reference

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Japan Advanced Information Center of Safety and Health Homepage
Ministry of Health, Labour and Welfare Homepage
[Regulatory review Tools]
ezCRI (Japan Chemical Database Ltd)