

CANON OPTRON INC.

SDS Number: E001
 Product Name: OA-100

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	OA-100
SDS number	E001
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
Corrosive to metals		Classification not possible
Health hazard	Acute toxicity (oral)	Category 4
	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	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
	Effects on or via lactation	Classification not possible
	Specific target organ toxicity(single exposure)	Classification not possible
	Specific target organ toxicity(repeated exposure)	Classification not possible
	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)	Exclamation	
		
Signal word	Warning	
Hazard statement	Harmful if swallowed. Causes serious eye irritation.	
Precautionary statement		
【Safety measures】	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.	
【First-aid measures】	IF SWALLOWED: Immediately call poison center or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse mouth. If eye irritation persists: Get medical advice/attention.	
【Storage】	—	
【Disposal】	Dispose of contents/container in accordance with national regulations.	

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SECTION 3 Composition and information ingredients

Substance/Mixture	Mixture	
Chemical name or generic name	<i>Tantalum oxide</i>	<i>Tantalum</i>
Chemical formula	<i>Ta2O5</i>	<i>Ta</i>
CAS No.	<i>1314-61-0</i>	<i>7440-25-7</i>
Concentration or concentration range	Ta2O5 : 78- 88 Ta : 12- 22	
TSCA Inventory	<i>Tantalum oxide (Ta2O5)</i>	<i>Tantalum</i>
EINECS number	<i>215-238-2</i>	<i>231-135-5</i>
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 /. I 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 emergencyprocedures	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.

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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 saw-dust or sediment residue content of the small amount of recovery after.

Secondary disaster prevention measures

No data available

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

Ta205

Ta

Permissible concentration

ACGIH

*TWA 5 mg/m³ (as Ta)
(2004 edition)*

*TWA 5 mg/m³
(2006 edition)*

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

Pellets, granules

Colour

Gray

Odour

None

Ta205

Ta

pH

No data available

No data available

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Melting point/Freezing point	1862~1882°C	2996°C
Boiling point/Initial boiling point and boiling range	No data available	5425°C
Flash point	None	No data available
Evaporation rate	No data available	Not applicable
Flammability (solid, gas)	No data available	No data available
Explosive limits		
LEL	None	No data available
UEL	None	No data available
Vapour pressure	No data available	1Pa (3024 °C), 1kPa (4122 °C), 100kPa (5361 °C)
Vapour density (air = 1)	No data available	No data available
Specific gravity (Relative density)	8.2	14.5
(Density)	※ as OA-100, 6.0 ~ 7.0 (pellet)	
Solubility		
Water	Insoluble	Insoluble
Other solvents	No data available	No data available
n-octanol/Water partition coefficient	No data available	No data available
Auto-ignition temperature	No data available	> 250°C
Decomposition temperature	No data available	No data available
Viscosity (Coefficient of viscosity)	No data available	No data available
Other data	None	None

SECTION 10 Stability and reactivity

	<u>Ta₂O₅</u>	<u>Ta</u>
Reactivity	No data available	No data available
Chemical stability	It is stable in storage conditions and normal handling.	Heat resistance and acid resistance is very high. Corrosion resistance is significantly stronger in the chemical hydrofluoric acid, fluorine gas, sulfur trioxide other.
Hazardous reactions	Violently react with bromine trifluoride. It reacts violently with chlorine trifluoride, emit flames. This occurs at around 410 °C, reaction with lithium increases to 595 °C.	Become pentoxide Ta ₂ O ₅ and is oxidized when heated to a high temperature in the presence of oxygen. Reacts with hydrofluoric acid mixed solution of nitric acid, to produce a fluorine-containing complex. Reacts with hydrofluoric acid, fluorine gas, and sulfur trioxide. The affected gradually in molten alkali, to react with non-metal kind of variety at a high temperature.

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Conditions to avoid	<i>No data available</i>	<i>Generation of dust</i>
Incompatible materials	<i>Bromine trifluoride, chlorine trifluoride, lithium</i>	<i>Contact oxygen, halogens, strong bases, and hydrogen fluoride.</i>
Hazardous decomposition products	<i>No data available</i>	<i>Not applicable</i>

SECTION 11 Hazard information

	<u>Ta2O5</u>	<u>Ta</u>
Acute toxicity(oral)	<i>Oral - Rat LD50: 8g/kg, intraperitoneal - rat LD:> 5g/kg Oral - Mouse LD50:> 4g/kg</i>	<i>Oral - Mouse LD50: 595mg/kg If swallowed, is harmful.</i>
Acute toxicity(dermal)	<i>No data available</i>	<i>No data available</i>
Acute toxicity(inhalation)	<i>If inhaled, to stimulate the respiratory system and mucous membranes.</i>	<i>No data available</i>
Skin corrosion/irritation	<i>No data available</i>	<i>No data available</i>
Eye damage/eye irritation	<i>No data available</i>	<i>Eye irritation</i>
Respiratory sensitization/Skin sensitization	<i>No data available</i>	<i>No data available</i>
Germ cell mutagenicity	<i>No data available</i>	<i>No data available</i>
Carcinogenicity	<i>No data available</i>	<i>No data available</i>
Reproductive toxicity	<i>No data available</i>	<i>No data available</i>
Specific target organ toxicity(single exposure)	<i>No data available</i>	<i>Description to show irritation by inhalation</i>
Specific target organ toxicity(repeated exposure)	<i>No data available</i>	<i>No data available</i>
Aspiration hazard	<i>No data available</i>	<i>No data available</i>
Others	None	

SECTION 12 Ecological information

	<u>Ta2O5</u>	<u>Ta</u>
Ecotoxicity		
Fish	<i>No data available</i>	<i>No data available</i>
Crustaceantoxicity(single exposure)	<i>No data available</i>	<i>No data available</i>
Algae	<i>No data available</i>	<i>No data available</i>
Other organisms	<i>No data available</i>	<i>No data available</i>
Persistence and degradability	<i>No data available</i>	<i>No data available</i>
Bioaccumulative potential	<i>No data available</i>	<i>No data available</i>
Mobility in soil	<i>No data available</i>	<i>No data available</i>
Hazard to the ozone layer	<i>No data available</i>	<i>No data available</i>

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Others	<i>No data available</i>	<i>No data available</i>
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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

	<u>Ta205</u>	<u>Ta</u>
International regulation		
UN classification	<i>Not applicable</i>	<i>Class 4.1</i>
UN number	<i>None</i>	<i>3089</i>
UN proper shipping name	<i>None</i>	<i>METAL POWDER, FLAMMABLE, N.O.S.</i>
Packing group	<i>Not applicable</i>	<i>II</i>
Japanese laws and regulations	<i>None</i>	<i>Fire Service Act, Ship Safety Act, Aviation Law</i>
Conditions and specific safety measures of transport	<i>No data available</i>	<i>Hazardous materials that the transport container in which the hazardous materials fell off, or was contained dangerous goods to fall, be stacked so as not to break or fall. Be transported so as not to cause upset container containing dangerous goods or hazardous materials or friction significantly. If there is a possibility that the equal disasters hazardous materials during transportation of hazardous materials leak significantly occurs, and that she shall take emergency measures to prevent the disaster, and to report to the relevant authorities of the fire service and other nearest. Requires retention of yellow card when transporting.</i>

SECTION 15 Regulatory information (Japan)

	<u>Ta205</u>	<u>Ta</u>
PRTR Law	<i>None</i>	<i>None</i>
Occupational Safety and Health Law	<i>There is it in the case of an application or an application</i>	<i>There is it in the case of an application or an application</i>
Poisonous and Deleterious Substances control Law	<i>None</i>	<i>None</i>
Explosives control Law	<i>None</i>	<i>None</i>
High-pressure gas security Law	<i>None</i>	<i>None</i>
Fire fighting Law	<i>None</i>	<i>There is it in the case of an application or an application</i>

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Chemical substances control Law	None	None
Ship safety Law	None	There is it in the case of an application or an application
Aviation Law	None	There is it in the case of an application or an application
Prevention of marine pollution Law	None	None
Pneumoconiosis Law	None	None
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

[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]

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