

CANON OPTRON INC.
 SDS Number: E018
 Product Name: OA-600

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	OA-600
Product code	E018
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

Substance/Mixture	Mixture		
Chemical name	<i>Tantalum oxide</i>	<i>Titanium oxide</i>	<i>Titanium oxide</i>
Chemical formula	<i>Ta2O5</i>	<i>TiO</i>	<i>Ti2O3</i>
Concentration or concentration range	Ta2O5 : 90< TiO : <10 Ti2O3 : <10		
CAS No.	1314-61-0	12137-20-1	1344-54-3
TSCA Inventory	<i>Tantalum oxide (Ta2O5)</i>	<i>Titanium oxide (TiO)</i>	<i>Titanium oxide (Ti2O3)</i>
EINECS number	<i>215-238-2</i>	<i>235-236-5</i>	<i>215-697-9</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.

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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.
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

	<u>Ta2O5</u>	<u>TiO</u>	<u>Ti2O3</u>
Permissible concentration			
ACGIH	<i>TWA 5 mg/m³ (as Ta) (2004 edition)</i>	<i>No data available</i>	<i>No data available</i>
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		

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SECTION 9 Physical and chemical properties

Appearance

Physical state	Solid
Form	Granular
Colour	Black
Odour	None

	<u>Ta₂O₅</u>	<u>TiO</u>	<u>Ti₂O₃</u>
Melting point/freezing point	1862~1882°C	1750°C	Decomposed at 2130 °C
Boiling point or initial boiling point and boiling range	No data available	3000°C	No data available
Flammability	No data available	No data available	No data available
Upper/lower flammability or explosive limits	No data available	No data available	No data available
Flash point	No data available	No data available	No data available
Auto-ignition temperature	No data available	No data available	No data available
Decomposition temperature	No data available	No data available	No data available
pH	No data available	No data available	No data available
Kinematic viscosity	No data available	No data available	No data available
Solubility			
Water	Insoluble	Insoluble	Insoluble
Other solvents	No data available	No data available	No data available
Partition coefficient: n-octanol/water	No data available	No data available	No data available
Vapour pressure	No data available	No data available	No data available
Density and/or relative density (Density)	8.2	4.88	2.8~3.2
Relative vapor density	No data available	No data available	No data available
Particle characteristics	No data available	No data available	No data available
Other information	No data available	No data available	No data available

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SECTION 10 Stability and reactivity

	<u>Ta2O5</u>	<u>TiO</u>	<u>Ti2O3</u>
Reactivity	No data available	No data available	No data available
Chemical stability	It is stable in storage conditions and normal handling.	It is stable in storage conditions and normal handling.	It is stable in storage conditions and normal handling. It is TiO2 by reacting with oxygen and heated to 300 °C than in air.
Possibility of 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.	Do not react in the storage conditions and normal handling.	Do not react in the storage conditions and normal handling.
Conditions to avoid	No data available	No data available	No data available
Incompatible materials	Bromine trifluoride, chlorine trifluoride, lithium	No data available	No data available
Hazardous decomposition products	No data available	No data available	No data available

SECTION 11 Toxicological information

	<u>Ta2O5</u>	<u>TiO</u>	<u>Ti2O3</u>
Acute toxicity(oral)	Oral – Rat LD50: 8g/kg, intraperitoneal – rat LD:> 5g/kg Oral – Mouse LD50:> 4g/kg	No data available	No data available
Acute toxicity(dermal)	No data available	No data available	No data available
Acute toxicity (Inhalation: Gases)	If inhaled, to stimulate the respiratory system and mucous membranes.	No data available	No data available
Acute toxicity (Inhalation: Vapours)	No data available	No data available	No data available
Acute toxicity (Inhalation: Dusts and mists)	No data available	No data available	No data available
Skin corrosion/irritation	No data available	No data available	No data available
Serious eye damage/irritation	No data available	No data available	There is a possibility that irritates the eyes, the skin and the respiratory tract.
Respiratory or skin sensitization	No data available	No data available	No data available

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Germ cell mutagenicity	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Carcinogenicity	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Reproductive toxicity	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Specific target organ toxicity(single exposure)	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Specific target organ toxicity(repeated exposure)	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Aspiration hazard	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Other information	No data available		

SECTION 12 Ecological information

	<u>Ta2O5</u>	<u>TiO</u>	<u>Ti2O3</u>
Toxicity			
Hazardous to the aquatic environment Short-term(acute)	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Hazardous to the aquatic environment Long-term(chronic)	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Persistence and degradability	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Bioaccumulative potential	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Mobility in soil	<i>No data available</i>	<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>	<i>No data available</i>
Other adverse effects	<i>No data available</i>	<i>No data available</i>	<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

	<u>Ta2O5</u>	<u>TiO</u>	<u>Ti2O3</u>
International regulation			
UN number	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>
UN proper shipping name	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>
UN classification	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>
Transport hazard class	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>
Packing group	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>

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Hazardous to the aquatic environment	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Maritime transport in bulk according to IMO instruments	<i>No data available</i>	<i>No data available</i>	<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>	<i>No data available</i>	<i>No data available</i>
Special precautions for users	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Special Provisions	-	-	-

SECTION 15 Regulatory information (Japan)

	<i>Ta2O5</i>	<i>TiO</i>	<i>Ti2O3</i>
Occupational Safety and Health Law	<i>There is it in the case of an application or an application</i>	<i>No data available</i>	<i>No data available</i>
PRTR Law	<i>Not applicable</i>	<i>No data available</i>	<i>No data available</i>
Poisonous and Deleterious Substances control Law	<i>Not applicable</i>	<i>No data available</i>	<i>No data available</i>
Labor Standards Act	<i>Not applicable</i>	<i>No data available</i>	<i>No data available</i>
Chemical substances control Law	<i>Not applicable</i>	<i>No data available</i>	<i>No data available</i>
Fire fighting Law	<i>Not applicable</i>	<i>No data available</i>	<i>No data available</i>
Air Pollution Control Act	<i>Not applicable</i>	<i>No data available</i>	<i>No data available</i>
Water Pollution Prevention Act	<i>Not applicable</i>	<i>No data available</i>	<i>No data available</i>
Water Supply Act	<i>Not applicable</i>	<i>No data available</i>	<i>No data available</i>
Sewerage Act	<i>Not applicable</i>	<i>No data available</i>	<i>No data available</i>
Marine Pollution Prevention Law	<i>Not applicable</i>	<i>No data available</i>	<i>No data available</i>
Waste Management and Public Cleansing Act	<i>Not applicable</i>	<i>No data available</i>	<i>No data available</i>
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.

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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)