

CANON OPTRON INC.

SDS Number: E018
 Product Name: OA-600

SAFETY DATA SHEET

rev. 8.0 Date of Issue 2013/10/16
 Revised Date 2024/3/15

SECTION 3 Composition/information on ingredients

Substance/Mixture	Mixture		
Chemical name	Tantalum oxide	Titanium oxide	Titanium oxide
Chemical formula	Ta ₂ O ₅	TiO	Ti ₂ O ₃
Concentration or concentration range	Ta ₂ O ₅ : 92-98% TiO : 1-4% Ti ₂ O ₃ : 1-4% Total = 100%		
CAS No.	1314-61-0	12137-20-1	1344-54-3
TSCA Inventory	Tantalum oxide (Ta ₂ O ₅)	Titanium oxide (TiO)	Titanium oxide (Ti ₂ O ₃)
EINECS number	215-238-2	235-236-5	215-697-9
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	TWA 5 mg/m ³ (as Ta) (2004 edition)	No data available	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		
Skin protection	Protective clothing		

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SECTION 9 Physical and chemical properties

Appearance

Physical state	Solid
Form	Granular
Colour	Black
Odour	None

	Ta₂O₅	TiO	Ti₂O₃
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 TiO ₂ 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	No data available	No data available	No data available
Carcinogenicity	No data available	No data available	No data available
Reproductive toxicity	No data available	No data available	No data available
Specific target organ toxicity(single exposure)	No data available	No data available	No data available
Specific target organ toxicity(repeated exposure)	No data available	No data available	No data available
Aspiration hazard	No data available	No data available	No data available
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)	No data available	No data available	No data available
Hazardous to the aquatic environment Long-term(chronic)	No data available	No data available	No data available
Persistence and degradability	No data available	No data available	No data available
Bioaccumulative potential	No data available	No data available	No data available
Mobility in soil	No data available	No data available	No data available
Hazard to the ozone layer	No data available	No data available	No data available
Other adverse effects	No data available	No data available	No data available

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	Not applicable	Not applicable	Not applicable
UN proper shipping name	Not applicable	Not applicable	Not applicable
UN classification	Not applicable	Not applicable	Not applicable
Transport hazard class	Not applicable	Not applicable	Not applicable
Packing group	Not applicable	Not applicable	Not applicable

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Hazardous to the aquatic environment	No data available	No data available	No data available
Maritime transport in bulk according to IMO instruments	No data available	No data available	No data available
Japanese laws and regulations	Land regulation information Not applicable Maritime regulatory information non-hazardous materials Aviation regulatory information non-hazardous materials	No data available	No data available
Special precautions for users	No data available	No data available	No data available
Special Provisions	-	-	-

SECTION 15 Regulatory information (Japan)

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

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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)