

## GHS Safety Data Sheet

SDS No. : VVO04PAEG

Date Issued: 2015/03/20

### Section 1. Identification of the substance or mixture and of the supplier

#### 1.1 Product Information

Product name: V<sub>2</sub>O<sub>3</sub> Vanadium(III) oxide

Product number:	Purity	Form	Size or Shape
VVO10PB	99.9 % (3N)	powder	— 180 μ m
VVO01GB	99.9 % (3N)	grains	2~5mm
—	—	rod/tablet	various sizes
—	—	target	various sizes

#### 1.2 Company Information:

Manufacturer : Kojundo Chemical Laboratory Co., Ltd

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### Section 2. Hazards identification

#### GHS Classification

Health Hazards	Environmental Hazards	Physical Hazards
Acute toxicity (oral, dermal) : Not classified Acute toxicity (Inhalation-vapors, mist) : Category 4 Specific target organ toxicity, single exposure: Category 3 repeated exposure : Category 1	No data available	Flammable solids : Not classified Pyrophoric solids : Not classified Self-heating substances and mixtures : Not classified Substances and mixtures which, in contact with water, emit flammable gases : Not classified Oxidizing liquids : Not classified

GHS Label: C W



Pictograms or

Warning word: DANGER

#### Hazard information

Harmful if inhaled (dust, mist)  
May cause respiratory irritation  
Causes damage to organs through  
prolonged or repeated exposure  
(respiratory organ)

#### Description of precaution

Avoid breathing dust/mist/gas/fume/vapors/spray. Do not eat, drink or smoke when using this product, and wash hands thoroughly after handling.  
Use only outdoors or in well-ventilated area.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Call a POISON CENTER or doctor/physician if you feel unwell.  
Protect from sunlight. Store in a cool, dry and well-ventilated place. Keep container tightly closed.  
Store locked up.  
Dispose of contents/ container in accordance with local/national regulations.

#### Additional hazard information :

With respect to additional hazard information, see Section 11.

**Section 3. Composition / information on ingredients**

Chemical or common name:	Vanadium(III) oxide
Chemical formula:	V <sub>2</sub> O <sub>3</sub>
Single Substance or Compound:	Single substance
Composition:	100%
CAS #:	1314-34-7
RTECS#:	YW30500000
TSCA inventory:	listed
EINECS:	2152309

**Section 4. First aid measures**

Eye contact:	Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.
Skin contact:	Promptly flush contaminated skin with soap or mild detergent and water. Contact physician if irritation continues.
Inhalation:	Remove the exposed person immediately and provide fresh air. Get medical attention.
Ingestion:	Rinse mouth and throat with water. Get medical attention immediately.

**Section 5. Fire fighting measures**

Extinguishing media:	This product cannot catch fire. Use media appropriate for surrounding fire.
Fire fighting:	The product is nonflammable. But in case of fire, may liberate toxic gases/ fume. Self-contained breathing apparatus and full protective clothing should be used, if the material is involved in fire.
Specific hazards arising from the chemical:	In case of fire, may liberate toxic gases/ fume.

**Section 6. Accidental release measures**

Personal Precautions:	Workers should use protective wears to prevent contact with the spilt adhesive and inhalation of its dusts.
Environmental hazard precautions:	Shut off leak if without risk. Prevent flow out to river, etc. so as not to badly affect.
Method for containment and cleaning up:	Indoor leakage: Ventilate as much as possible until the cleaning is completed. Outdoor leakage: Work from the windward and evacuate the leeward crowd. Gather up, pack in closed container as much as possible. Carefully collect remnant and move to a safe place.

**Section 7. Handling and storage****Precautions to be taken in handling:**

Safe handling:	Use protective wears and local ventilation equipment, if inhalation or skin contact is foreseen.
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**Precautions to be taken in storage:**

General precautions:	Store in a cool, dry place away from incompatible materials. Keep container or bottle tightly closed.
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### Section 8. Exposure controls / personal protection

Exposure guideline:	ACGIH (2013) : No data available OSHA (2006) : No data available
Facility measures:	Local ventilation of closed work room or total proper ventilation to prevent inhalation.
Protective ware:	Wear appropriate NIOSH/MSHA-approved respirator, safety goggles, face shields, protective gloves.

### Section 9. Physical and chemical properties

Color and Form:	Black solid
Chemical formula:	V <sub>2</sub> O <sub>3</sub>
Atomic weight:	149.9
Melting point:	1970 °C
Boiling point:	No data available
Density:	4.87 g/cm <sup>3</sup>
Solubility	Water: Insoluble
Flammable:	non-flammable substance
Oxidation:	None

### Section 10. Stability and reactivity

Stability:	Stable in closed container.
Reactivity	
Incompatibility:	No data available
Hazardous decomposition products:	Vanadium oxides

### Section 11. Toxicological information

Acute toxicity (oral, dermal) :	GHS : Not classified ; Falls below the lowest level. oral rat LD <sub>50</sub> = 5639 mg/kg bw (IUCLID (2000)) dermal rat LD <sub>50</sub> > 2500 mg/kg bw (IUCLID (2000))
Acute toxicity (inhalation vapors, mist) :	GHS : Category 4 ; Harmful if inhaled (dust, mist) inhalation rat LC50 = 4 mg/L/4hr (IUCLID (2000))
Skin corrosive / irritation:	GHS : No data available
Serious eyes damage / eye irritation:	GHS : No data available
Respiratory sensitization:	GHS : No data available
Skin sensitization:	GHS : No data available
Germ cell mutagenicity:	GHS : No data available
Carcinogenicity:	GHS : No data available
Reproductive toxicity:	GHS : No data available
Specific target organ toxicity — single exposure:	GHS : Category 3 ; May cause respiratory irritation
Specific target organ toxicity — repeated exposure:	GHS : Category 1 ; Causes damage to organs through prolonged or repeated exposure (respiratory organ)
Aspiration hazard:	GHS : No data available

**Section 12. Ecological information**

Ecotoxicity:

Hazards to the aquatic environment

- acute toxicity: GHS : No data available
- chronic toxicity: GHS : No data available

Hazardous the ozone layer: GHS : No data available  
No Freon or Halon

Fish toxicity: No data available

Degradability: No data available

Bioaccumulative potential: V : Biological half-life 42 day,  
Rate of absorption oral= 0.02 , Respiratory tract= 0.26

Mobility in soil: No data available

**Section 13. Disposal considerations**

Disposal method: User of the product should contract with the local government or licensed  
'Industrial Waste Haulers' for disposal of waste.

**Section 14. Transport information**

UN number: 3285  
IATA shipping name: Vanadium compound, N.O.S.  
IATA classification: Hazardous Class 6.1 (Toxic substances)  
IATA packing group: III  
HS code: 2825.30  
Marine pollution: None

**Section 15. Regulatory information**

TSCA inventory : listed.

Please refer to any other local / national measures that may be relevant.

**Section 16. Other information**

The information described above is believed to be correct. However, Kojundo Chemical Lab. makes no representation, warranty nor guarantee of any kind with respect to the information on this data sheet or any use of the product based upon this information.