

MATERIAL SAFETY DATA SHEET**Product Name:** Vanadium(V) oxide**CAS No.:** 1314-62-1**Version:** 0**1. Identification**

Product Code : 90686
Company Name : Advent Chembio Private Limited
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2. Hazards Identification**Hazard classification**

Acute toxicity, Oral : Category 4
Acute toxicity, Inhalation : Category 4
Serious eye damage : Category 1
Germ cell mutagenicity : Category 2
Reproductive toxicity : Category 2
Specific target organ toxicity - single exposure : Category 2
Specific target organ toxicity - repeated exposure : Category 1
Chronic aquatic toxicity : Category 1

Label elements**Hazard symbol**

Signal word : Danger

Hazard statement : Harmful if swallowed or if inhaled
Causes serious eye damage.
May cause respiratory irritation.
Suspected of causing genetic defects.
Suspected of damaging the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statement : Toxic to aquatic life with long lasting effects.
Obtain special instructions before use.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe dust/ fume/

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gas/ mist/ vapours/ spray.
Wear respiratory protection.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
IF ON SKIN (or hair): Take off immediately all contaminated clothing.
Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
Store in a well-ventilated place. Keep container tightly closed.

Supplemental Hazard Statements

: None.

3. Composition/information on ingredients

Ingredient	CAS No	PERCENT
Vanadium(V) oxide	1314-62-1	NLT 98.0%

4. First Aid Measures

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

Inhalation

: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin contact

: Wash off with soap and plenty of water. Consult a physician.

Eye contact

: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Swallowed

: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed
Indication of any immediate medical attention and special treatment needed
Treatment

: The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
: No data available

MATERIAL SAFETY DATA SHEET**Product Name:** Vanadium(V) oxide**CAS No.:** 1314-62-1**Version:** 0**5. Fire fighting measures****Extinguishing media****Suitable extinguishing media** : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.**Special hazards arising from the substance or mixture** : Vanadium/vanadium oxides**Advice for firefighters** : Wear self contained breathing apparatus for firefighting if necessary**Further information** : Use water spray to cool unopened containers.**6. Accidental Release Measures****Personal precautions, protective equipment and emergency procedures** : Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.**Environmental precautions** : Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.**Methods and materials for containment and cleaning up** : Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.**Reference to other sections** : For disposal see section 13.**7. Handling and Storage****Precautions for safe handling** : Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.**Conditions for safe storage, including any incompatibilities** : Store in cool place. Keep container tightly closed in a dry and well-ventilated place.**Specific end use(s)** : No data available**8. Exposure Controls Personal Protection****Control parameters****Components with workplace control parameters**

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: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment**Eye/face protection**

: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection Hand protection

: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace..

Respiratory protection

: Respiratory protection is required.

9. Physical and Chemical Properties**Appearance**

: Yellow to orange to orange-brown powder

Odor

: No data available

pH

: No data available

Melting point/freezing point

: 690 °C - lit.

Initial boiling point and boiling range

: No data available

Flash Point

: No data available

Vapor pressure

: No data available

Vapor density

: No data available

Relative density

: 3.35 g/mL at 25 °C

Solubility in water

: 904 g/l at 20 °C - OECD Test Guideline 105

Solubility (other)

: No data available

Formula

: O5V2

Molecular Weight

: 181.88 g/mol

10. Stability and Reactivity**Reactivity**

: No data available

Chemical stability

: Stable under recommended storage conditions.

Possibility of hazardous reactions

: No data available

Conditions to avoid

: No data available

Incompatible materials

: Strong acids

Hazardous decomposition products

: No data available

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- Acute toxicity** : LC50 Inhalation - Rat - female - 4 h - 2,21 mg/l
- Skin corrosion/irritation** : No data available
- Serious eye damage/eye irritation** : Risk of serious damage to eyes.
- Respiratory or skin sensitization** : No data available
- Germ cell mutagenicity** : Laboratory experiments have shown mutagenic effects.
In vitro tests showed mutagenic effects
- Carcinogenicity** : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- Reproductive toxicity** : Possible risk of congenital malformation in the fetus.
- Specific target organ toxicity - single exposure** : May cause respiratory irritation.
- Specific target organ toxicity - repeated exposure** : Causes damage to organs through prolonged or repeated exposure.
- Aspiration hazard** : No data available
- Signs and Symptoms of Exposure** : No data available

12. Ecological Information

- Toxicity** : Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 5,2 mg/l - 96,0 h
- Persistence and degradability** : No data available
- Bioaccumulative potential** : No data available
- Mobility in soil** : No data available.
- Other adverse effects** : Toxic to aquatic life with long lasting effects.

13. Disposal consideration

- Disposal instructions** : Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber..
- Contaminated packaging** : Dispose of as unused product.

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	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	2862	VANADIUM PENTOXIDE	6.1	III	YES
IMDG	2862	VANADIUM PENTOXIDE	6.1	III	YES
IATA	2862	VANADIUM PENTOXIDE	6.1	III	YES

15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

16. Other Information**Issue Date :01/08/2014****Version : 0**

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