

Otto Chemie Pvt Ltd

An ISO 9001 : 2015 & GMP Certified Company
Office : No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road,
Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)
Tel : + 91 98200 41841 Email : info@ottokemi.com Web : www.ottokemi.com

Creation Date :18-04-2025

Revision Date:15-10-2030

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Product identifiers

Product Name : Vanadium powder, 45 to 106 µm, 99%+
Product Code : V 2241
CAS No: 7440-62-2

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification

OTTO CHEMIE PVT LTD

No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road,
Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

1.4. Emergency telephone number

Phone no. : + 91 98200 41841 (10 : 00 am – 06 : 00 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula : V
Molecular weight : 50.94 g/mol
CAS-No. : 7440-62-2
EC-No. : 231-171-1

No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures

4.1 Description of first-aid measures

If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

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The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Special powder against metal fire Cover with dry sand or cement.

Unsuitable extinguishing media

Foam Water

5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known.

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Handle and store under inert gas.

Storage class

Storage class (TRGS 510): 13: Non Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin 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.

The selected protective gloves have to satisfy the specifications of Regulation (EU)

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2016/425 and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail

sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P1

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|---|--|
| a) Physical state | powder |
| b) Color | gray |
| c) Odor | No data available |
| d) Melting point/freezing point | Melting point/ range: 1.890 °C - lit. |
| e) Initial boiling point and boiling range | 3.380 °C - lit. |
| f) Flammability (solid, gas) | The product is not flammable. - Flammability (solids) |
| g) Upper/lower flammability or explosive limits | No data available |
| h) Flash point | Not applicable |
| i) Autoignition temperature | No data available |
| j) Decomposition temperature | No data available |
| k) pH | No data available |
| l) Viscosity | Viscosity, kinematic: No data available Viscosity, dynamic: No data available |
| m) Water solubility | 0,1 g/l at 20 °C - OECD Test Guideline 105- slightly soluble |
| n) Partition coefficient: n-octanol/water | Not applicable for inorganic substances |
| o) Vapor pressure | 10,67 hPa at 20 °C |
| p) Density | 6,11 g/mL at 25 °C - lit. |
| Relative density | No data available |
| q) Relative vapour density | No data available |
| r) Particle characteristics | No data available |

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s) Explosive properties
t) Oxidizing properties
9.2 Other safety information
No data available

No data available
none

SECTION 10: Stability and reactivity

10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent reactions possible with:

halogen-halogen compounds

Chlorine

Alkali metals

Strong oxidizing agents

Water

Sulphuric acid

A risk of explosion and/or of toxic gas formation exists with the following substances:

Air

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg

Inhalation LC50 Rat: > 50mg/L.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity

to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 TOXICITY

TOXICITY TO FISH

SEMI-STATIC TEST LC50 - LEUCISCUS IDUS (GOLDEN ORFE) - 0,693 MG/L - 96 H

(OECD TEST GUIDELINE 203)

REMARKS: (IN ANALOGY TO SIMILAR PRODUCTS)

THE VALUE IS GIVEN IN ANALOGY TO THE FOLLOWING SUBSTANCES: VANADIUM PENTOXIDE

TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES

SEMI-STATIC TEST LC50 - AMERICAMYSIS BAHIA (MYSID) - 13,3 MG/L - 48 H

(US-EPA)

REMARKS: (IN ANALOGY TO SIMILAR PRODUCTS)

THE VALUE IS GIVEN IN ANALOGY TO THE FOLLOWING SUBSTANCES: SODIUM METAVANADATE (NAVO3)

TOXICITY TO ALGAE

STATIC TEST ERC50 - DESMODESMUS SUBSPICATUS (GREEN ALGAE) - 2,9 MG/L - 72 H

(OECD TEST GUIDELINE 201)

REMARKS: (IN ANALOGY TO SIMILAR PRODUCTS)

THE VALUE IS GIVEN IN ANALOGY TO THE FOLLOWING SUBSTANCES: VANADIUM PENTOXIDE

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TOXICITY TO BACTERIA STATIC TEST EC50 - ACTIVATED SLUDGE - > 100 MG/L - 3 H
(OECD TEST GUIDELINE 209)
TOXICITY TO FISH(CHRONIC TOXICITY) REMARKS: (IN ANALOGY TO SIMILAR PRODUCTS)
TOXICITY TO DAPHNIA LC50 - ONCORHYNCHUS MYKISS (RAINBOW TROUT) - 0,16 MG/L - 28 D
AND OTHER AQUATIC REMARKS: (ECOTOX DATABASE)
INVERTEBRATES(CHRONIC FLOW-THROUGH TEST NOEC - DAPHNIA MAGNA (WATER FLEA) - 1 MG/L - 14
TOXICITY) WEEKS
REMARKS: (IN ANALOGY TO SIMILAR PRODUCTS)
(ECHA)
THE VALUE IS GIVEN IN ANALOGY TO THE FOLLOWING SUBSTANCES: SODIUM
METAVANADATE (NAVO3)

12.2 PERSISTENCE AND DEGRADABILITY

THE METHODS FOR DETERMINING BIODEGRADABILITY ARE NOT APPLICABLE TO INORGANIC SUBSTANCES.

12.3 BIOACCUMULATIVE POTENTIAL

NO DATA AVAILABLE

12.4 MOBILITY IN SOIL

NO DATA AVAILABLE

12.5 RESULTS OF PBT AND VPOB ASSESSMENT

THIS SUBSTANCE/MIXTURE CONTAINS NO COMPONENTS CONSIDERED TO BE EITHER PERSISTENT, BIOACCUMULATIVE AND TOXIC (PBT), OR VERY PERSISTENT AND VERY BIOACCUMULATIVE (VPOB) AT LEVELS OF 0.1% OR HIGHER.

12.6 ENDOCRINE DISRUPTING PROPERTIES

PRODUCT:

ASSESSMENT : THE SUBSTANCE/MIXTURE DOES NOT CONTAIN COMPONENTS
CONSIDERED TO HAVE ENDOCRINE DISRUPTING PROPERTIES
ACCORDING TO REACH ARTICLE 57(F) OR COMMISSION
DELEGATED REGULATION (EU) 2017/2100 OR COMMISSION
REGULATION (EU) 2018/605 AT LEVELS OF 0.1% OR HIGHER.

12.7 OTHER ADVERSE EFFECTS

NO DATA AVAILABLE

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

NO DATA AVAILABLE

SECTION 14: TRANSPORT INFORMATION

14.1 UN NUMBER

ADR/RID: -

IMDG: -

IATA: -

14.2 UN PROPER SHIPPING NAME

ADR/RID: NOT DANGEROUS GOODS

IMDG: NOT DANGEROUS GOODS

IATA: NOT DANGEROUS GOODS

14.3 TRANSPORT HAZARD CLASS(ES)

ADR/RID: -

IMDG: -

IATA: -

14.4 PACKAGING GROUP

ADR/RID: -

IMDG: -

IATA: -

14.5 ENVIRONMENTAL HAZARDS

ADR/RID: NO

IMDG MARINE POLLUTANT: NO

IATA: NO

14.6 SPECIAL PRECAUTIONS FOR USER

NO DATA AVAILABLE

FURTHER INFORMATION

NOT CLASSIFIED AS DANGEROUS IN THE MEANING OF TRANSPORT REGULATIONS.

SECTION 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE
SUBSTANCE OR MIXTURE

THIS MATERIAL SAFETY DATA SHEET COMPLIES WITH THE REQUIREMENTS OF REGULATION (EC) NO.
1907/2006.

15.2 CHEMICAL SAFETY ASSESSMENT

FOR THIS PRODUCT A CHEMICAL SAFETY ASSESSMENT WAS NOT CARRIED OUT

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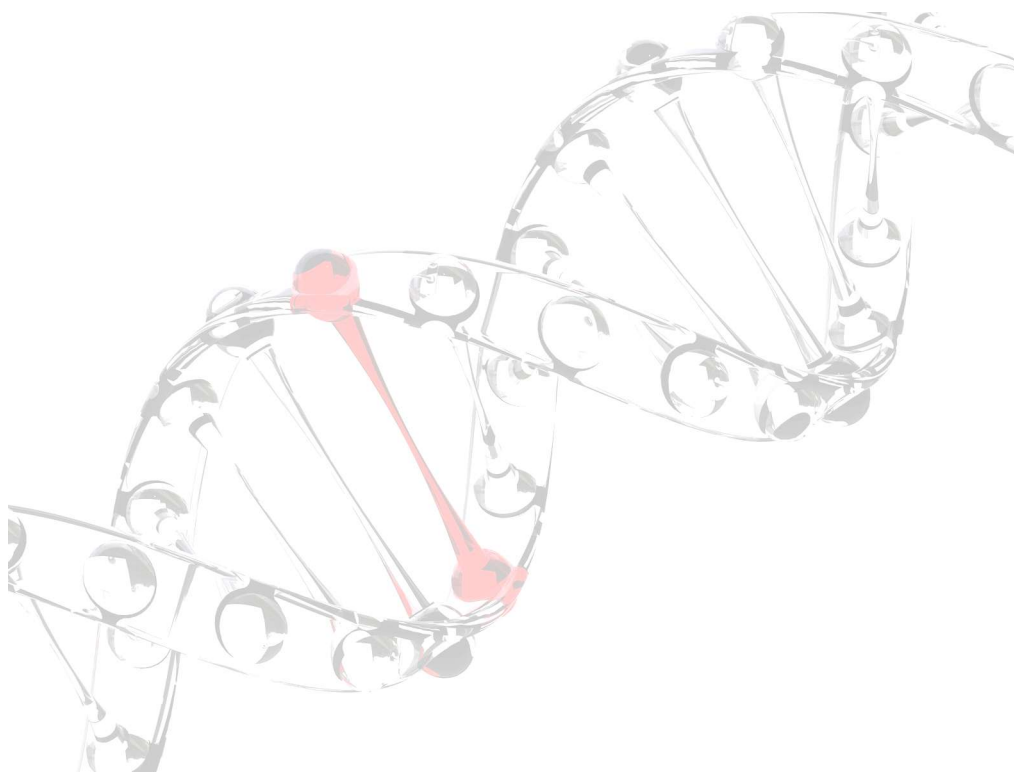
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SECTION 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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