

## Section 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Product name:** VANADIUM (V) OXIDE

**CAS number:** 1314-62-1

**EINECS number:** 215-239-8

**Index number:** 023-001-00-8

**Synonyms:** VANADIUM PENTOXIDE

DIVANADIUM PENTOXIDE

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Use of substance / mixture:** PC21: Laboratory chemicals. PROC15: Use as laboratory reagent

### 1.3. Details of the supplier of the safety data sheet

**Company name:** Elemental Microanalysis Ltd  
1 Hameldown Road Okehampton  
Okehampton  
Devon  
EX20 1UB  
United Kingdom

**Tel:** 44(0)183754446

**Fax:** 44(0)183754544

**Email:** [info@microanalysis.co.uk](mailto:info@microanalysis.co.uk)

### 1.4. Emergency telephone number

**Emergency tel:** +44 (0) 7990 767375

(office hours only)

## Section 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification under CLP:** Muta. 2: H341; Acute Tox. 4: H332; Acute Tox. 4: H302; STOT SE 3: H335; Aquatic Chronic 2: H411; Repr. 2: H361d; STOT RE 1: H372

**Most important adverse effects:** Suspected of causing genetic defects. Causes damage to organs through prolonged or repeated exposure. Suspected of damaging the unborn child. Harmful if inhaled. Harmful if swallowed. May cause respiratory irritation. Toxic to aquatic life with long lasting effects.

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## 2.2. Label elements

**Label elements:**

**Hazard statements:** H341: Suspected of causing genetic defects.  
H372: Causes damage to organs through prolonged or repeated exposure.  
H361d: Suspected of damaging the unborn child.  
H332: Harmful if inhaled.  
H302: Harmful if swallowed.  
H335: May cause respiratory irritation.  
H411: Toxic to aquatic life with long lasting effects.

**Hazard pictograms:** GHS08: Health hazard  
GHS07: Exclamation mark  
GHS09: Environmental



**Signal words:** Danger

**Precautionary statements:** \* P260: Do not breathe dust.  
P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.  
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P308+P313: IF exposed or concerned: Get medical advice/attention.

## 2.3. Other hazards

**Other hazards:** Danger of serious damage to health by prolonged exposure.

**PBT:** This product is not identified as a PBT/vPvB substance.

## Section 3: Composition/information on ingredients

### 3.1. Substances

**Chemical identity:** VANADIUM (V) OXIDE

**CAS number:** 1314-62-1

**EINECS number:** 215-239-8

## Section 4: First aid measures

### 4.1. Description of first aid measures

**Skin contact:** Wash immediately with plenty of soap and water.

**Eye contact:** \* Bathe the eye with running water for 15 minutes. Consult a doctor.

**Ingestion:** \* Wash out mouth with water. Consult a doctor.

**Inhalation:** \* Remove casualty from exposure ensuring one's own safety whilst doing so. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Consult a doctor.

[cont...]

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## 4.2. Most important symptoms and effects, both acute and delayed

**Skin contact:** There may be mild irritation at the site of contact.

**Eye contact:** There may be irritation and redness.

**Ingestion:** There may be soreness and redness of the mouth and throat.

**Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest. Drowsiness or mental confusion may occur.

**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

## 4.3. Indication of any immediate medical attention and special treatment needed

**Immediate / special treatment:** Not applicable.

## Section 5: Fire-fighting measures

### 5.1. Extinguishing media

**Extinguishing media:** Suitable extinguishing media for the surrounding fire should be used.

### 5.2. Special hazards arising from the substance or mixture

**Exposure hazards:** In combustion emits toxic fumes.

### 5.3. Advice for fire-fighters

**Advice for fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

## Section 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions:** Refer to section 8 of SDS for personal protection details. If outside do not approach from downwind. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not create dust. If outside keep bystanders upwind and away from danger point.

### 6.2. Environmental precautions

**Environmental precautions:** Do not discharge into drains or rivers.

### 6.3. Methods and material for containment and cleaning up

**Clean-up procedures:** \* Use industrial vacuum cleaner to remove material. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

### 6.4. Reference to other sections

**Reference to other sections:** Refer to section 8 of SDS.

## Section 7: Handling and storage

### 7.1. Precautions for safe handling

**Handling requirements:** Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of dust in the air. Avoid direct contact with the substance.

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## 7.2. Conditions for safe storage, including any incompatibilities

**Storage conditions:** Store in a cool, well ventilated area. Keep container tightly closed.

## 7.3. Specific end use(s)

**Specific end use(s):** No data available.

## Section 8: Exposure controls/personal protection

### 8.1. Control parameters

**Workplace exposure limits:** No data available.

### DNEL/PNEC Values

**DNEL / PNEC** No data available.

### 8.2. Exposure controls

**Engineering measures:** Ensure there is sufficient ventilation of the area.

**Respiratory protection:** Self-contained breathing apparatus must be available in case of emergency. Respiratory protective device with particle filter.

**Hand protection:** Protective gloves.

**Eye protection:** \* Safety glasses with side-shields. Ensure eye bath is to hand.

**Skin protection:** Protective clothing.

## Section 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**State:** Powder

**Colour:** Orange

**Odour:** Odourless

**Evaporation rate:** No data available.

**Oxidising:** No data available.

**Solubility in water:** Soluble

**Viscosity:** No data available.

**Boiling point/range°C:** 1750

**Melting point/range°C:** 690

**Flammability limits %: lower:** No data available.

**upper:** No data available.

**Flash point°C:** No data available.

**Part.coeff. n-octanol/water:** No data available.

**Autoflammability°C:** No data available.

**Vapour pressure:** No data available.

**Relative density:** No data available.

**pH:** 4

**VOC g/l:** No data available.

### 9.2. Other information

**Other information:** No data available.

## Section 10: Stability and reactivity

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## 10.1. Reactivity

**Reactivity:** Stable under recommended transport or storage conditions.

## 10.2. Chemical stability

**Chemical stability:** Stable under normal conditions.

## 10.3. Possibility of hazardous reactions

**Hazardous reactions:** Hazardous reactions will not occur under normal transport or storage conditions.  
Decomposition may occur on exposure to conditions or materials listed below.

## 10.4. Conditions to avoid

**Conditions to avoid:** Heat.

## 10.5. Incompatible materials

**Materials to avoid:** Strong oxidising agents. Strong acids.

## 10.6. Hazardous decomposition products

**Haz. decomp. products:** In combustion emits toxic fumes.

## Section 11: Toxicological information

### 11.1. Information on toxicological effects

#### \* Toxicity values:

Route	Species	Test	Value	Units
IPR	RAT	LD50	12	mg/kg
ORL	MUS	LD50	5	mg/kg
ORL	RAT	LD50	10	mg/kg

#### Relevant hazards for product:

Hazard	Route	Basis
Acute toxicity (ac. tox. 4)	INH ING	Hazardous: calculated
Germ cell mutagenicity	--	Hazardous: calculated
Reproductive toxicity	--	Hazardous: calculated
STOT-single exposure	INH	Hazardous: calculated
STOT-repeated exposure	-	Hazardous: calculated

### Symptoms / routes of exposure

**Skin contact:** There may be mild irritation at the site of contact.

**Eye contact:** There may be irritation and redness.

**Ingestion:** There may be soreness and redness of the mouth and throat.

**Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest. Drowsiness or mental confusion may occur.

**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

[cont...]

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## Section 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity values:** No data available.

### 12.2. Persistence and degradability

**Persistence and degradability:** \* No data available.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential:** \* No data available.

### 12.4. Mobility in soil

**Mobility:** No data available.

### 12.5. Results of PBT and vPvB assessment

**PBT identification:** This product is not identified as a PBT/vPvB substance.

### 12.6. Other adverse effects

**Other adverse effects:** No data available.

## Section 13: Disposal considerations

### 13.1. Waste treatment methods

**Disposal operations:** Transfer to a suitable container and arrange for collection by specialised disposal company.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

## Section 14: Transport information

### 14.1. UN number

**UN number:** UN2862

### 14.2. UN proper shipping name

**Shipping name:** VANADIUM PENTOXIDE

### 14.3. Transport hazard class(es)

**Transport class:** 6.1

### 14.4. Packing group

**Packing group:** III

### 14.5. Environmental hazards

**Environmentally hazardous:** Yes

**Marine pollutant:** No

### 14.6. Special precautions for user

**Special precautions:** No special precautions.

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Tunnel code: E

Transport category: 2

## Section 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

**Specific regulations:** Not applicable.

### 15.2. Chemical Safety Assessment

**Chemical safety assessment:** A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

## Section 16: Other information

### Other information

**Other information:** This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

\* indicates text in the SDS which has changed since the last revision.

**Phrases used in s.2 and s.3:** H302: Harmful if swallowed.

H332: Harmful if inhaled.

H335: May cause respiratory irritation.

H341: Suspected of causing genetic defects.

H361d: Suspected of damaging the unborn child.

H372: Causes damage to organs through prolonged or repeated exposure.

H411: Toxic to aquatic life with long lasting effects.

**Legal disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.