



**CE Elantech, Inc.**

## **SAFETY DATA SHEET**

According to Regulation (EC) No. 1907/2006

Version 1.0 Revision Date 25.04.2014

Print Date 25.04.2014

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

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

#### **1.1 Product identifiers**

Product name : Vanadium Pentoxide, 1g

Product number : 338-375-10

Index-No. : 023-001-00-8

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. : 1314-62-1

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

Identified uses : Laboratory chemicals, Manufacture of substances

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

Company : CE Elantech, Inc.  
170 Oberlin Avenue North  
Suite 5  
Lakewood, NJ 08701 USA

Telephone : 732-370-5559

Fax : 732-370-3888

E-mail : [sales@ceelantech.com](mailto:sales@ceelantech.com)

Internet : [www.ceelantech.com](http://www.ceelantech.com)

#### **1.4 Emergency telephone number**

Emergency Phone # : 911

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### **SECTION 2: Hazards identification**

#### **2.1 Classification of the substance or mixture**

##### **Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Serious eye damage (Category 1), H318

Germ cell mutagenicity (Category 2), H341

Reproductive toxicity (Category 2), H361d

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Specific target organ toxicity - repeated exposure (Category 1), H372

Chronic aquatic toxicity (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

##### **Classification according to EU Directives 67/548/EEC or 1999/45/EC**

R63

T	Toxic	R68
Xn	Harmful	R48/23
Xi	Irritant	R20/22
Xi	Irritant	R37
Xi	Irritant	R41
N	Dangerous for the environment	R51/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

## 2.2 Label elements

### Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Danger

Hazard statement(s)

H302 + H332	Harmful if swallowed or if inhaled
H318	Causes serious eye damage.
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.

Precautionary statement(s)

P261	Avoid breathing dust.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/ attention if you feel unwell.

Supplemental Hazard Statements none

## 2.3 Other hazards - none

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms	:	Vanadium(V) oxide
Formula	:	V <sub>2</sub> O <sub>5</sub>
	:	181,88 g/mol
Molecular Weight		
CAS-No.	:	1314-62-1
EC-No.	:	215-239-8
Index-No.	:	023-001-00-8

### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
<b>Vanadium pentoxide</b>		
CAS-No.	1314-62-1	<= 100 %
EC-No.	215-239-8	
Index-No.	023-001-00-8	
	Acute Tox. 4; Eye Dam. 1; Muta. 2; Repr. 2; STOT SE 3; STOT RE 1; Aquatic Chronic 2; H302 + H332, H318, H335, H341, H361d, H372, H411	

### Hazardous ingredients according to Directive 1999/45/EC

Component	Classification	Concentration
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<b>Vanadium pentoxide</b>			
CAS-No.	1314-62-1	T, N, Repr.Cat.3, Mut.Cat.3,	<= 100 %
EC-No.	215-239-8	R20/22 - R37 - R41 - R48/23 -	
Index-No.	023-001-00-8	R51/53 - R63 - R68	

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

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

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

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician. **In case of**

#### eye contact

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

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. **4.2**

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

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

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. **5.2**

#### Special hazards

#### arising from the substance or mixture

Vanadium/vanadium oxides

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary. **5.4**

#### Further information

no data available

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## SECTION 6: Accidental release measures

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

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

### 6.2 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.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 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. For precautions see section 2.2.

- 7.2 Conditions for safe storage, including any incompatibilities**  
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. **7.3 Specific end use(s)**  
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Components with workplace control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

##### Eye/face protection

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

##### 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 EU Directive 89/686/EEC and the standard EN 374 derived from it.

##### 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

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |  |                             |
|--|-----------------------------|
| a) Appearance                              | Form: solid                 |
| b) Odor                                    | no data available           |
| c) Odor Threshold                          | no data available           |
| d) pH                                      | no data available           |
| e) Melting point/freezing point            | Melting point/range: 690 °C |
| f) Initial boiling point and boiling range | no data available           |
| g) Flash point                             | not applicable              |
| h) Evaporation rate                        | no data available           |
| i) Flammability (solid, gas)               | no data available           |

j)	Upper/lower flammability or explosive limits	no data available
k)	Vapor pressure	no data available
l)	Vapor density	no data available
m)	Relative density	1,020 g/cm <sup>3</sup>
n)	Water solubility	no data available
o)	Partition coefficient: n-octanol/water	no data available
p)	Auto-ignition temperature	no data available
q)	Decomposition temperature	no data available
r)	Viscosity	no data available
s)	Explosive properties	no data available
t)	Oxidizing properties	no data available

## 9.2 Other safety information

Solubility in other solvents	Ethanol - insoluble
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Strong acids

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - rat - 10 mg/kg

Remarks: Behavioral: Coma.

LC50 Inhalation - rat - 6 h - 126 mg/m<sup>3</sup>

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Other. Behavioral: Ataxia. Lungs, Thorax, or Respiration: Dyspnea.

LC50 Dermal - rat - > 2.500 mg/kg  
(OECD Test Guideline 402)

#### Skin corrosion/irritation

no data available

**Serious eye damage/eye irritation**

Eyes - rabbit

Result: Risk of serious damage to eyes.  
(OECD Test Guideline 405)

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

Laboratory experiments have shown mutagenic effects.  
In vitro tests showed mutagenic effects

**Carcinogenicity**

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Vanadium pentoxide)

**Reproductive toxicity**

Possible risk of congenital malformation in the fetus.  
Suspected human reproductive toxicant

**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

**Additional Information**  
RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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**SECTION 12: Ecological information****12.1 Toxicity**

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 5,2 mg/l - 96,0 h  
Toxicity to daphnia and LC50 - Daphnia magna (Water flea) - 1,52 mg/l - 48 h  
other aquatic  
invertebrates

**12.2 Persistence and degradability**

no data available

**12.3 Bio accumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

Toxic to aquatic life with long lasting effects.

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**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

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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**SECTION 14: Transport information**

<b>14.1 UN number</b>			
ADR/RID: 2862	IMDG: 2862	IATA: 2862	
<b>14.2 UN proper shipping name</b>			
ADR/RID: VANADIUM PENTOXIDE			
IMDG: VANADIUM PENTOXIDE			
<b>14.3 Transport hazard class(es)</b>			
ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1	
<b>14.4 Packaging group</b>			
ADR/RID: III	IMDG: III	IATA: III	
<b>14.5 Environmental hazards</b>			
ADR/RID: yes	IMDG Marine pollutant: yes	IATA: no	
<b>14.6 Special precautions for user</b>			
no data available			

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**SECTION 15: Regulatory information**

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

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
no data available
- 15.2 Chemical Safety Assessment**  
For this product a chemical safety assessment was not carried out

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**SECTION 16: Other information****Full text of H-Statements referred to under sections 2 and 3.**

Acute Tox.	Acute toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Dam.	Serious eye damage
H302	Harmful if swallowed.
H302 + H332	Harmful if swallowed or if inhaled
H318	Causes serious eye damage.
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.
Muta.	Germ cell mutagenicity

**Full text of R-phrases referred to under sections 2 and 3**

N	Dangerous for the environment
T	Toxic
R20/22	Harmful by inhalation and if swallowed.
R37	Irritating to respiratory system.
R41	Risk of serious damage to eyes.
R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation.

R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63	Possible risk of harm to the unborn child.
R68	Possible risk of irreversible effects.
Repr.Cat.3	Toxic to Reproduction Category 3

#### **Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Säntis Analytical AG shall not be held liable for any damage resulting from handling or from contact with the above product. This document is protected by copyright. All duplication for commercial purposes requires approval by Säntis Analytical AG.

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