

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

### 1.1 Product identifiers

**Product name:** Silver Vanadate Reagent, granular, 0.85 to 1.7mm, OEA  
**Catalogue no:** R16100  
**SDS reference no:** R16100  
**Brand:** OEA Labs  
**EC index no(s):** 236-820-2  
**REACH no:** The annual tonnage does not require registration.  
**CAS no(s):** AgVO3[13497-94-4] ZrO2[1314-23-4]

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

**Identified uses:** Elemental analysis scientific instrumentation. Not for pharmaceutical, domestic or other uses.

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

**Company name:** OEA Laboratories Limited  
 Unit C2 Florence Road Business Park  
 Kelly Bray, Callington, Cornwall  
 PL17 8EX, United Kingdom

**Telephone:** +44 (0)1579 384174

**Fax:** +44 (0)1579 384174

**Email:** [sales@oealabs.com](mailto:sales@oealabs.com)

### 1.4 Emergency telephone number

**Telephone:** +44 (0)1579 384174, +44 (0) 1579 350212, +44 (0) 7811 102906

## SECTION 2. Hazards identification

### 2.1 Classification of the substance or mixture according to Regulation (EC) No 1272/2008

Accute toxicity, oral, dermal & inhalation (Category 3), H301+H311+H331  
 Skin corrosion/irritation (Category 2), H315  
 Serious eye damage/eye irritation (Category 2A), H319  
 Specific organ toxicity, single exposure; Respiratory tract irritation (Category 3), H335

### 2.2 Labelling elements according to Regulation (EC) No 1272/2008

**Pictogram(s):**



GHS06

GHS07

GHS07

**Signal word:** Danger

**Hazard statement(s):**

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H335 May cause respiratory irritation.

**Precautionary statement(s):**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P301+P310 If swallowed: Immediately call a poison centre or doctor/physician.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P311 Call a poison centre or doctor/physician.  
 Restricted to professional users.

### 2.2 Other hazards

None

## SECTION 3. Composition/information of ingredients

### 3.1 Substances

**Synonyms:**

**Formula:** AgVO3 & ZrO2

**Molecular weight:** 206.81 & 123.22 g/mol

**Components:**

Silver Vanadate Concentration: 15 to 25%

CAS No 13497-94-4, EC No 236-820-2, H301+H311+H331, Accute toxicity, oral, dermal & inhalation, Category 3; H315, Skin corrosion/irritation, Category 2; H319, Serious eye damage/eye irritation, Category 2A;

Zirconium (IV) Oxide Concentration: 75 to 85%

CAS No 1314-23-4, EC No 215-227-2, -, Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008, ;

## 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

Nausea, Vomiting, Diarrhoea, Dizziness, Weakness, Cough, chest pain, Difficulty in breathing, May cause argyria (a slate-gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver). To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### 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:**

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

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

Silver/silver oxides, Vanadium/vanadium oxides.

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

No data available.

## 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.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 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.

## 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. Normal measures for preventive fire protection.

### 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 uses

No data available.

## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

**Components with workplace control parameters:**

Silver Vanadate

CAS No 13497-94-4, STEL, 0.03mg/m<sup>3</sup> (silver compounds as Ag), UK, EH40 WEL; TWA, 0.01mg/m<sup>3</sup> (silver compounds as Ag), UK, EH40 WEL

Zirconium (IV) Oxide

CAS No 1314-23-4, Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008;

### 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).

**Environmental protection:**

No data available.

## SECTION 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Form:</b>	Granules
<b>Colour:</b>	
<b>Odour:</b>	No data available.
<b>Odour threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point:</b>	No data available.
<b>Boiling point:</b>	No data available.
<b>Flash point:</b>	No data available.
<b>Flammability solid/gas:</b>	No data available.
<b>Upper/lower flammability or explosive limits:</b>	No data available.
<b>Water solubility:</b>	No data available.
<b>Autoignition temp:</b>	No data available.
<b>Decomp temperature:</b>	No data available.
<b>Explosive properties:</b>	No data available.
<b>Oxidising properties:</b>	No data available.

### 9.2 Other safety information

No data available.

## SECTION 10. Stability and reactivity

### 10.1 Reactivity

No data available.

### 10.2 Chemical stability

No data available.

### 10.3 Possibility of hazardous reactions

No data available.

### 10.4 Conditions to avoid

No data available.

### 10.5 Incompatible materials

Strong oxidising agents.

### 10.6 Hazardous decomposition products

No data available.

## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity:**

No data available.

**Skin corrosion/irritation:**

No data available.

**Serious eye damage/eye irritation:**

No data available.

**Respiratory or skin sensitisation:**

No data available.

**Germ cell mutagenicity:**

No data available.

**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:**

No component of this product present at levels greater than or equal to 0.1% is identified as

**Specific target organ toxicity - single exposure:**

No data available.

**Specific target organ toxicity - repeated exposure:**

No data available.

**Aspiration hazard:**

No data available.

**Potential health effects - inhalation:**

Toxic if inhaled. Causes respiratory tract irritation.

**Potential health effects - ingestion:**

Toxic if swallowed.

**Potential health effects - skin:**

Toxic if absorbed through skin. Causes skin irritation.

**Potential health effects - eyes:**

Causes serious eye irritation.

**Signs and symptoms of exposure:**

Nausea, Vomiting, Diarrhoea, Dizziness, Weakness, Cough, chest pain, Difficulty in breathing, May cause argyria (a slate-gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver). To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Additional information:**

RTECS: Not available

## SECTION 12. Ecological information

### 12.1 Toxicity

**Toxicity to fish:** No data available.

**Toxicity to daphnia and other aquatic invertebrates:** No data available.

**Toxicity to algae:** No data available.

**Toxicity to bacteria:** No data available.

### 12.2 Persistence and degradability

No data available.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

No data available.

### 12.6 Other adverse effects

No data available.

## SECTION 13. Disposal considerations

### 13.1 Waste treatment methods

**Product:**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. 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.

## SECTION 14. Transport information

**14.1 UN number**

ADR/RID/IATA/IMDG: UN3285



**14.2 UN proper shipping name**

ADR/RID/IATA/IMDG: VANADIUM COMPOUND, N.O.S. (Silver metavanadate)

**14.3 Transport hazard class(es)**

ADR/RID/IATA/IMDG: 6.1

**14.4 Packaging group**

ADR/RID/IATA/IMDG: III

**14.5 Environmental hazards**

ADR/RID/IATA/IMDG: Marine pollutant

**14.6 Special precautions for user**

**14.7 Shipping quantities**

ADR LQ maximum:

ADR EQ code:

ADR EQ IP/pkg:

IATA LQ PInstruction:

IATA LQ IP/pkg:

IATA EQ code:

IATA EQ IP/pkg:

De minimus:

## SECTION 15. Regulatory information

This safety data sheet 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**

No data available.

## SECTION 16 Other information

The above information is believed to be correct but does not purport to be all inclusive and shall be used 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. OEA Laboratories Limited shall not be held liable for any damage resulting from the handling or contact with the above product. See [www.oelabs.com](http://www.oelabs.com) for terms and conditions of sale.