

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (2N) 99% Vanadium(V) Oxychloride

**Product Code:** V-OCLI-02

**CAS Number:** 7727-18-6

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Skin Corrosion/irritation: Category 1 B

Serious Eye Damage/Eye Irritation: Category 1

Specific target organ toxicity (single exposure): Category 3

Target Organs: Respiratory system

Label Elements



Signal Word:

Danger

Hazard Statements:

Causes severe skin burns and eye damage

May cause respiratory irritation

Precautionary Statements

Prevention:

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Use only outdoors or in a well-ventilated area

Response:

Immediately call a POISON CENTER or doctor/physician

Inhalation:

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin:

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

Eyes:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion:

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Storage:

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Disposal:

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Harmful to aquatic life with long lasting effects

Reacts violently with water

Contact with water liberates toxic gas

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component:

Vanadium oxytrichloride

CAS-No:

7727-18-6

Weight:

< 100%

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### **SECTION 4. FIRST AID MEASURES**

General Advice:

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact:

Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Call a physician immediately.

Inhalation:

If not breathing, give artificial respiration. Remove from exposure, lie down. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately.

Ingestion:

Do not induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.

Most important symptoms and effects:

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion

causes severe swelling, severe damage to the delicate tissue and danger of perforation

Notes to Physician:

Treat symptomatically

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## **SECTION 5. FIREFIGHTING MEASURES**

Suitable Extinguishing Media:

Dry sand. Carbon dioxide (CO<sub>2</sub>). Dry powder. Do not use water or foam. CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable Extinguishing Media: No information available

Flash Point: No information available

Method - No information available

Autoignition Temperature: No information available

Explosion Limits

Upper: No data available

Lower: No data available

Sensitivity to Mechanical Impact: No information available

Sensitivity to Static Discharge: No information available

Specific Hazards Arising from the Chemical:

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Contact with water liberates toxic gas. Reacts violently with water.

Hazardous Combustion Products:

Hydrogen chloride Vanadium oxides

Protective Equipment and Precautions for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health: 3

Flammability: 0

Instability: 2

Physical hazards: W

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal Precautions:

Ensure adequate ventilation. Use personal protective equipment. Evacuate personnel to safe areas.

Keep people away from and upwind of spill/leak.

Environmental Precautions: Should not be released into the environment. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

Methods for Containment and Clean Up:

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Do not expose spill to water.

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## **SECTION 7. HANDLING AND STORAGE**

Handling:

Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Use only under a

chemical fume hood. Do not breathe vapors or spray mist. Do not ingest. Do not allow contact with water.

Storage:

Corrosives area. Keep away from water. Keep containers tightly closed in a dry, cool and well-ventilated place.

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure Guidelines

Component: Vanadium oxytrichloride

ACGIH TLV: -

OSHA PEL: -

NIOSH: -

IDLH: Ceiling: 0.05 mg/m<sup>3</sup>

Mexico OEL (TWA): -

Engineering Measures: None under normal use conditions. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection:

Long sleeved clothing.

Respiratory Protection:

No protective equipment is needed under normal use conditions.

Hygiene Measures:

Handle in accordance with good industrial hygiene and safety practice.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical State: Liquid

Appearance: No information available

Odor: Chlorine

Odor Threshold: No information available

pH: No information available

Melting Point/Range: -77 °C / -106.6 °F

Boiling Point/Range: 126 - 127 °C / 258.8 - 260.6 °F

Flash Point: No information available

Evaporation Rate: No information available

Flammability (solid,gas): Not applicable

Flammability or explosive limits

Upper: No data available

Lower: No data available

Vapor Pressure: 21 hPa @ 25 °C

Vapor Density: No information available

Specific Gravity: 1.829 g/cm<sup>3</sup>

Solubility: No information available

Partition coefficient; n-octanol/water: No data available

Autoignition Temperature: No information available

Decomposition Temperature: No information available

Viscosity: No information available

Molecular Formula: VOCl3  
Molecular Weight: 173.30

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## SECTION 10. STABILITY AND REACTIVITY

Reactive Hazard: Yes  
Stability: Moisture sensitive  
Conditions to Avoid: Exposure to moist air or water. Exposure to moisture.  
Incompatible Materials: Oxidizing agents  
Hazardous Decomposition Products: Hydrogen chloride, Vanadium oxides  
Hazardous Polymerization: Hazardous polymerization does not occur.  
Hazardous Reactions: None under normal processing. Reacts violently with water

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## SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity  
Product Information  
Component: Vanadium oxytrichloride  
LD50 Oral: LD50 = 140 mg/kg ( Rat )  
LD50 Dermal: Not listed  
LC50 Inhalation: Not listed  
Toxicologically Synergistic Product:  
No information available  
Delayed and immediate effects as well as chronic effects from short and long-term exposure  
Irritation: No information available  
Sensitization: No information available  
Carcinogenicity  
Component: Vanadium oxytrichloride  
CAS-No: 7727-18-6  
IARC: Not listed  
NTP: Not listed  
ACGIH: Not listed  
OSHA: Not listed  
Mexico: Not listed  
Mutagenic Effects: No information available  
Reproductive Effects: No information available.  
Developmental Effects: No information available.  
Teratogenicity: No information available.  
STOT - single exposure: Respiratory system  
STOT - repeated exposure: None known  
Aspiration hazard: No information available  
Symptoms / effects, both acute and delayed:  
Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.  
Endocrine Disruptor Information: No information available  
Other Adverse Effects: The toxicological properties have not been fully investigated.

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Persistence and Degradability: May persist

Bioaccumulation/ Accumulation: No information available.

Mobility: No information available.

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Waste Disposal Methods:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

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## SECTION 14. TRANSPORT INFORMATION

### DOT

UN-No: UN2443

Proper Shipping Name: VANADIUM OXYTRICHLORIDE

Hazard Class: 8

Packing Group: II

### TDG

UN-No: UN2443

Proper Shipping Name: VANADIUM OXYTRICHLORIDE

Hazard Class: 8

Packing Group: II

### IATA

UN-No: UN2443

Proper Shipping Name: VANADIUM OXYTRICHLORIDE

Hazard Class: 8

Packing Group: II

### IMDG/IMO

UN-No: UN2443

Proper Shipping Name: VANADIUM OXYTRICHLORIDE

Hazard Class: 8

Packing Group: II

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## SECTION 15. REGULATORY INFORMATION

### International Inventories

Component: Vanadium oxytrichloride

TSCA: X

DSL: X

NDSL: -

EINECS: 231-780-2

ELINCS: -

NLP: X

PICCS: X  
ENCS: X  
AICS: X  
IECSC: X  
KECL: X  
U.S. Federal Regulations  
TSCA 12(b): Not applicable  
SARA 313  
Component: Vanadium oxytrichloride  
CAS-No: 7727-18-6  
Weight: < 100%  
SARA 313 - Threshold Values: 1.0%  
CWA (Clean Water Act): Not applicable  
Clean Air Act: Not applicable  
OSHA: Not applicable  
CERCLA: Not applicable  
California Proposition 65: This product does not contain any Proposition 65 chemicals  
U.S. State Right-to-Know Regulations  
Component: Vanadium oxytrichloride  
Massachusetts: -  
New Jersey: X  
Pennsylvania: -  
Illinois: -  
Rhode Island: -  
U.S. Department of Transportation  
Reportable Quantity (RQ): N  
DOT Marine Pollutant: N  
DOT Severe Marine Pollutant: N  
U.S. Department of Homeland Security  
This product does not contain any DHS chemicals.  
Other International Regulations  
Mexico - Grade No information available

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.