

Printing date 07/16/2021

Reviewed on 07/16/2021

1 Identification

- **Product name**
- **Trade name:** Vanadium(III) acetylacetonate, 98%
- **Item number:** 23-2250
- **CAS Number:**
13476-99-8
- **EC number:**
235-150-8
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Strem Chemicals, Inc.
7 Mulliken Way
NEWBURYPORT, MA 01950
USA
info@strem.com
- **Information department:** Technical Department
- **Emergency telephone number:**
EMERGENCY: CHEMTREC: + 1 (800) 424-9300
During normal opening times: +1 (978) 499-1600

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

- **Label elements**
- **GHS label elements**
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS06

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Vanadium(III) acetylacetonate, 98%
- **Hazard statements**
H301 Toxic if swallowed.
- **Precautionary statements**

P231	Handle under inert gas.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P422	Store contents under inert gas.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)

Printing date 07/16/2021

Reviewed on 07/16/2021

Trade name: Vanadium(III) acetylacetonate, 98%

(Contd. of page 1)

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 0
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 2
Fire = 0
Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
13476-99-8 Vanadium(III) acetylacetonate, 98%
- **Identification number(s)**
- **EC number:** 235-150-8

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

US

(Contd. on page 3)

Safety Data Sheet
according to OSHA HCS

Printing date 07/16/2021

Reviewed on 07/16/2021

Trade name: Vanadium(III) acetylacetonate, 98%

(Contd. of page 2)

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

Substance is not listed.

· **PAC-2:**

Substance is not listed.

· **PAC-3:**

Substance is not listed.

7 Handling and storage

- **Handling:** Handle under inert gas.
- **Precautions for safe handling**
Thorough dedusting.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** Store contents under inert gas.
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.

(Contd. on page 4)

Safety Data Sheet
according to OSHA HCS

Printing date 07/16/2021

Reviewed on 07/16/2021

Trade name: Vanadium(III) acetylacetonate, 98%

(Contd. of page 3)

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Safety glasses

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:** Crystalline

· **Color:** Brown

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

· **Melting point/Melting range:** 178 °C (352 °F)

· **Boiling point/Boiling range:** 170 °C (338 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:**

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

· **Lower:** Not determined.

· **Upper:** Not determined.

· **Vapor pressure:** Not applicable.

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

(Contd. on page 5)

Safety Data Sheet
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Reviewed on 07/16/2021

Trade name: Vanadium(III) acetylacetonate, 98%

(Contd. of page 4)

- **Solubility in / Miscibility with Water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **Solvent content:**
 - Organic solvents:** 0.0 %
 - VOC content:** 0.0 g/l / 0.00 lb/gl
- **Solids content:** 100.0 %
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
 - on the skin:** No irritant effect.
 - on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.

(Contd. on page 6)

Printing date 07/16/2021

Reviewed on 07/16/2021

Trade name: Vanadium(III) acetylacetonate, 98%



(Contd. of page 5)

- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not known to be hazardous to water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|---|
| · UN-Number | |
| · DOT, IMDG, IATA | UN2811 |
| · UN proper shipping name | |
| · DOT | Toxic solids, organic, n.o.s. |
| · IMDG, IATA | TOXIC SOLID, ORGANIC, N.O.S. |
| · Transport hazard class(es) | |
| · DOT | |
| |  |
| · Class | 6.1 Toxic substances |
| · Label | 6.1 |
| <hr style="border-top: 1px dashed black;"/> | |
| · IMDG, IATA | |
| |  |
| · Class | 6.1 Toxic substances |
| · Label | 6.1 |
| · Packing group | |
| · DOT, IMDG, IATA | III |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · EMS Number: | F-A,S-A |
| · Stowage Category | A |

(Contd. on page 7)

Safety Data Sheet
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Reviewed on 07/16/2021

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(Contd. of page 6)

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** *Not applicable.*
- **Transport/Additional information:**
 - **DOT**
 - **Quantity limitations** *On passenger aircraft/rail: 100 kg
On cargo aircraft only: 200 kg*
- **IMDG**
 - **Limited quantities (LQ)** *5 kg*
 - **Excepted quantities (EQ)** *Code: E1
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 1000 g*
- **UN "Model Regulation":** *UN 2811 TOXIC SOLIDS, ORGANIC, N.O.S., 6.1, III*

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act):**

Substance is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 8)

Printing date 07/16/2021

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Trade name: Vanadium(III) acetylacetonate, 98%

(Contd. of page 7)

· **Hazard pictograms**



GHS06

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

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· **Hazard statements**

H301 Toxic if swallowed.

· **Precautionary statements**

P231 Handle under inert gas.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P422 Store contents under inert gas.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** *Technical Department.*

· **Contact:** *Technical Director*

· **Date of preparation / last revision** *07/16/2021 / -*

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 3: Acute toxicity – Category 3