

MATERIAL SAFETY DATA SHEET (MSDS)

VANADYL SULPHATE LR (HYDRATE)

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

Product identifiers

Product name : Vanadium(IV) oxide sulfate hydrate CAS-No. : 123334-20-3

Product Coad: V0215700100

Synonyms : Vanadyl sulfate hydrate Formula : O5SV · xH2O Molecular Weight : 163,00 g/mol

2: Hazards identification

Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 Acute toxicity, Oral (Category 4), H302 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 Xn Harmful R22 For the full text of the R-phrases mentioned in this Section, see Section 16. Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram Signal word Warning Hazard statement(s) H302 Harmful if swallowed. Precautionary statement(s) none Supplemental Hazard none Statements

Other hazards - none

3: Composition/information on ingredients

Substances

CAS-No.	: 123334-20-3				
Hazardous ingredients according to Regulation (EC) No 1272/2008					
Component	Classification	Concent	ration		
Vanadium oxide sulphate hydrate					
CAS-No.	123334-20-3	Acute Tox. 4	l; H302	<= 100 %	
Hazardous ingredients according to Directive 1999/45/EC					
Component	Classification	Concent	ration		
Vanadium oxide sulphate hydrate					
CAS-No.	123334-20-3	Xn, R22	<= 100 %)	
For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16					

4: First aid measures

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. Consult a physician.

 In case of eye contact
 Flush eyes with water as a precaution.

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

 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

 Indication of any immediate medical attention and special treatment needed
 no data available

5: Firefighting measures

Extinguishing media

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Special hazards arising from the substance or mixture Sulphur oxides, Vanadium/vanadium oxides Advice for firefighters Wear self contained breathing apparatus for fire fighting if necessary. Further information no data available



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6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure

adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

Environmental precautions Do not let product enter drains.

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.

Reference to other sections For disposal see section 13.

7: Handling and storage

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. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Handle and store under inert gas. Hygroscopic.

Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8: Exposure controls/personal protection

Control parameters

Components with workplace control parameters Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 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.

Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Z677272, Size M) Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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 For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure Do not let product enter drains.

9: Physical and chemical properties



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a) Appearance Form: powder

Colour: blue b) Odour no data available c) Odour Threshold no data available no data available d) pH e) Melting point/freezing Melting point/range: 105 °C - lit. point f) Initial boiling point and no data available boiling range g) Flash point not applicable h) Evapouration rate no data available i) Flammability (solid, gas) no data available j) Upper/lower no data available flammability or explosive limits k) Vapour pressure no data available I) Vapour density no data available m) Relative density no data available n) Water solubility no data available o) Partition coefficient: n- no data available octanol/water p) Auto-ignition no data available temperature g) Decomposition no data available temperature r) Viscosity no data available s) Explosive properties no data available t) Oxidizing properties no data available Other safety information no data available

10: Stability and reactivity

 Reactivity
 no data available

 Chemical stability
 Stable under recommended storage conditions.

 Possibility of hazardous reactions
 no data available

 Conditions to avoid
 Avoid moisture.

 Incompatible materials
 Strong oxidizing agents

 Hazardous decomposition products
 Other decomposition products - no data available

 In the event of fire: see section 5

11: Toxicological information 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 IARC: 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 data available Specific target organ toxicity - single exposure no data available Specific target organ toxicity - repeated exposure no data available 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.

12: Ecological information

Toxicityno data availablePersistence and degradabilityno data availableBioaccumulative potentialno data availableMobility in soilno data availableResults of PBT and vPvB assessmentPBT/vPvB assessment not available as chemical safety assessment not required/not conductedOther adverse effectsno data available

13: Disposal considerations

AN ISO 9001: 2015 CERTIFIED



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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.

14: Transport information

UN number ADR/RID: 2931 IMDG: 2931 IATA: 2931 UN proper shipping name ADR/RID: VANADYL SULPHATE IMDG: VANADYL SULPHATE IATA: Vanadyl sulphate Transport hazard class(es) ADR/RID: 6.1 IATA: 6.1 IMDG: 6.1 Packaging group . IMDG: II ADR/RID: II IATA: II **Environmental hazards** ADR/RID: no IMDG Marine pollutant: no IATA: no Special precautions for user no data available

15 - REGULATORY INFORMATION

N/A

16. Other Information

Product Use: Laboratory Reagent.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

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- SUVCHEM Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
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