

MATERIAL SAFETY DATA SHEET

24 HR. EMERGENCY PHONE # CHEM-TREC 1-800-424-9300

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SECTION 1 Product Identification

CHEMICAL NAME: Vanadium (V) oxide

CAS #: 1314-62-1

FORMULA: V₂O₅

SYNONYM: Divanandium pentoxide, vanadic anhydride, vanadium pentoxide

SECTION 2 Composition and Information on Ingredients

INGREDIENT:	CAS #	%	ACGIH (TWA)	OSHA (PEL)
Title Compound	1314-62-1	100	0.05mg/m ³ (as dust or fume)	0.5mg/m ³ (as dust -ceiling limit)

SECTION 3 Hazards Identification

EMERGENCY OVERVIEW: Harmful by inhalation and if swallowed. Irritating to skin, eyes and respiratory tract. Danger of serious damage to health by prolonged exposure by inhalation. Possible risk of harm to the unborn child.

PRIMARY ROUTES OF EXPOSURE: Inhalation, ingestion, skin and eyes.

EYE CONTACT: Causes irritation to eye tissue. May cause blindness.

SKIN CONTACT: Severe irritant. May cause dermatitis.

INHALATION: Harmful by inhalation. Danger of serious damage to health by prolonged exposure by inhalation.

INGESTION: Harmful if swallowed. Causes irritation of the mouth, throat, and gastrointestinal tract.

CHRONIC HEALTH EFFECTS: In animal studies mutagenic and reproductive effects were observed.

ACUTE HEALTH EFFECTS: Harmful by inhalation and if swallowed. Irritating to skin, eyes and respiratory tract. Inhalation of large amounts may cause cough, bronchitis, anemia, hematuria, and nervous complaints.

SECTION 4 First Aid Measures

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

SKIN EXPOSURE: Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

INHALATION: Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.

INGESTION: Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5 Firefighting Measures

FLASH POINT: not applicable

AUTO IGNITION TEMPERATURE: none

EXPLOSION LIMITS: none

EXTINGUISHING MEDIUM: material is non-flammable

SPECIAL FIREFIGHTING PROCEDURES: If involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: none

UNUSUAL FIRE OR EXPLOSION HAZARDS: The product can act as an oxidizer towards combustibles.

SECTION 6 Accidental Release Measures

SPILL AND LEAK PROCEDURES: Small spills can be mixed with vermiculite or sodium carbonate and swept up. Do not mix with combustibles.

SECTION 7 Handling and Storage

HANDLING AND STORAGE: Store material in a tightly sealed container in a cool dry place.

SECTION 8 Exposure Controls and Personal Protection

EYE PROTECTION: Always wear approved safety glasses w/side shields, or safety goggles, face shield when handling a chemicals substance in the laboratory.

SKIN PROTECTION: Chemical-resistant.

VENTILATION: If possible, handle the material in an efficient fume hood.

RESPIRATOR: If in form of fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 19-10.134.

SECTION 9 Physical and Chemical Properties

COLOR AND FORM: -60 mesh orange to brown pwdr

MOLECULAR WEIGHT: 181.88

MELTING POINT (DEG. C.): none

BOILING POINT: 1750^o dec.

VAPOR PRESSURE: not applicable

SPECIFIC GRAVITY: 3.357

SOLUBILITY IN WATER: insoluble

SECTION 10 Stability and Reactivity

STABILITY: air and moisture stable solid

HAZARDOUS POLYMERIZATION: no hazardous polymerization

CONDITIONS TO AVOID: Do not mix or heat with combustible materials.

INCOMPATIBILITY: None

DECOMPOSITION PRODUCTS: None

SECTION 11 Toxicological Information

RTECS DATA: Administration onto the eye (rabbit); Standard Draize test: 20 mg/24H. Inhalation (human); TCLo: 346 mg/m³. Inhalation (human); TCLo: 1 mg/m³/8H. Oral (rat); LD50: 10 mg/kg. Inhalation (rat); LC50: 126 mg/m³/6H. Intraperitoneal (rat); LD50: 12 mg/kg. Subcutaneous (rat); LD50: 14 mg/kg. Intratracheal (rat); LD50: 6 mg/kg. Oral (rat); TDLo: 91 mg/kg/26W-1. Inhalation (rat); TCLo: 100 ug/m³/24H/24D-C. Intraperitoneal (rat); TDLo: 56 mg/kg/14D-1. Oral (rat); TDLo: 90 mg/kg. Intraperitoneal (rat); TDLo: 10 mg/kg. Bacterial-Bacillus subtilis; DNA repair: 500 mmol/L. Human Leukocyte; DNA damage: 300 nmol/L. Human Lymphocyte; DNA damage: 30 umol/L.

MUTAGENIC EFFECTS: no data

TETRAUTOGENIC EFFECTS: no data

CARCINOGENIC EFFECTS: no data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 Ecological Information

ECOLOGICAL INFORMATION: No information available

SECTION 13 Disposal Considerations

DISPOSAL: Dispose of in according to local state and federal regulations.

SECTION 14 Transportation Information

Vanadium pentoxide, Class 6.1, UN 2862, PG III

SECTION 15 Regulatory Information

TSCA: Listed in the TSCA inventory

SARA (TITLE 313): Title compound not listed.

SECTION 16 Other Information

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, ProChem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

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