

Chemical Safety Data Sheet

Section 1 IDENTIFICATION

GHS Product identifier: Vanadium Pentoxide Fused Flakes.

Other means of identification: /

Recommended use of the chemical and restrictions on use:

Supplier's details: HBIS Chengde Vanadium & Titanium New Material Co., Ltd.

Emergency phone number:

Section 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Acute toxicity, oral Category 4

Acute toxicity, inhalation Category 4

Germ cell mutagenicity Category 2

Reproductive toxicity Category 2

Specific target organ toxicity, single exposure Category 3 (respiratory tract irritation)

Specific target organ toxicity, repeated exposure Category 1

Hazardous to the aquatic environment, long-term hazard Category 2

GHS Label elements, including precautionary statements:

Symbol:



Signal word: Danger

Hazard statement(s): Harmful if swallowed. Harmful if inhaled. Suspected of causing genetic defects. Suspected of damaging fertility or the unborn child. May cause respiratory irritation. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

Precautionary statement(s):

Prevention:

Wash hands [and...] thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Obtain, read and follow all safety instructions before use. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. Avoid release to the environment.

Response:

If swallowed: Get medical help. Rinse mouth. If inhaled: Remove person to fresh air and keep comfortable for breathing. Get medical help. If exposed or concerned, Get medical advice. Get medical help if you feel unwell. Collect spillage.

Storage:

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

Disposal:

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

Other hazards which do not result in classification: /

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
Vanadium Pentoxide	1314-62-1	98.53%

Section 4 FIRST AID MEASURES

Description of necessary first aid measures

If inhaled: Quickly leave and move to a place with fresh air. Keep the airway unobstructed. If breathing is difficult, give oxygen. If breathing stops, give artificial respiration immediately. Consult a physician.

In case of skin contact: Remove contaminated clothing and rinse with plenty of running water.

In case of eye contact: Rinse thoroughly with plenty of running water for at least 15 minutes and consult a physician.

If ingestion: Rinse mouth with water. Consult a physician.

Most important symptoms/effects, acute and delayed: /

Indication of immediate medical attention and special treatment needed, if necessary: /

Section 5 FIREFIGHTING MEASURES

Suitable extinguishing media: Use water spray, dry powder, foam, etc.

Special hazards arising from the chemical: This substance may decompose and releases toxic fumes in fire and high temperature.

Special protective actions for fire-fighters: Firefighters must wear air breathing apparatus, fire-fighting suits and protective gloves to extinguish in the upwind direction. Whenever possible, remove the container from the fire to open space and use spray water to cool unopened containers.

Section 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: It is recommended that emergency personnel wear protective masks and fire protective overalls. Do not touch the spill directly.

Environmental precautions: Isolate contaminated areas and restrict access.

Methods and materials for containment and cleaning up: Small amount of leakage: Avoid dusting, use a clean shovel to collect in a dry, clean, covered container and transfer to a safe place. Do not allow products to enter restricted areas such as sewers. A large amount of leakage: Cover with plastic sheeting and canvas. Use a non-sparking tool to collect the waste or transport it to a waste disposal site for disposal.

Section 7 HANDLING AND STORAGE

Precautions for safe handling: There should be sufficient local exhaust in workplace. Operators should be trained and strictly follow the operating procedures. Operators are advised to wear protective masks, normal protective clothing and rubber gloves. Operators should load and unload lightly during handling to prevent damage to the package. There should be leakage treatment equipment in workplace. There may be harmful residues in empty containers.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well-ventilated warehouse. Keep away from fire and heat. Protect from direct sunlight. The package should be sealed and not exposed to moisture. It should be stored separately from oxidants, flammable materials, etc., and should not be mixed. The storage area should be provided with suitable materials to contain spills.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Source	Material name	TWA	STEL
China Occupational Exposure Limits for Hazardous Agents in the Workplace	Vanadium pentoxide	0.05 mg/m ³	/

Appropriate engineering controls: Close strictly and provide sufficient local exhaust.

Individual protection measures

Eye/face protection: Wear a protective mask.

Skin protection: Wear normal protective clothing.

Respiratory protection: A dust mask (full face mask) must be worn when exposed to dust. Air respirators should be worn during emergency rescue or evacuation.

Thermal hazards: /

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Flake solid.
Colour	Brown gray.
Odour	/
Melting point/freezing point	690 °C.
Boiling point or initial boiling point and boiling range	/
Flammability	/
Lower and upper explosion limit/flammability limit	/
Flash point	/
Auto-ignition temperature	/
Decomposition temperature	1750 °C.
pH	/
Kinematic viscosity	/
Solubility	0.8g/100ml.
Partition coefficient: n-octanol/water (log value)	/
Vapour pressure	/
Density and/or relative density	3.4.
Relative vapour density	/
Particle characteristics	/

Section 10 STABILITY AND REACTIVITY

Reactivity: /

Chemical stability: This substance is stable in normal temperature.

Possibility of hazardous reactions: Upon heating, toxic fumes are formed. Decomposes on heating. This produces toxic fumes. Reacts with combustible substances.

Conditions to avoid: Spark, static electricity and high temperature.

Incompatible materials: Oxidizers and flammable materials.

Hazardous decomposition products: /

Section 11 TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure: Ingestion (swallowing), skin/eye exposure and inhalation.

Symptoms related to the physical, chemical and toxicological characteristics:

Acute health effects:

Ingestion can cause symptoms such as nausea, vomiting and abdominal pain.

Skin contact can cause redness and irritation.

Inhalation can cause cough, throat irritation.

Eyes contact can cause redness and irritation.

Chronic health effects: Repeated or prolonged inhalation of high concentrations of dust or fumes may cause effects on the lungs. The substance may cause a greenish-black discolouration of the tongue.

Numerical measures of toxicity (such as acute toxicity estimates):

LD50(dermal, rat): >2500 mg/kg

LD50(inhalation, rat): 4.29 mg/l 4h

Section 12 ECOLOGICAL INFORMATION

Ecotoxicity (aquatic and terrestrial, where available):

Endpoint	Test Duration (hr)	Species	Value
EC50	72h	Algae or other aquatic plants	1.08mg/l
BCF	672h	Fish	3.4-14mg/l
LC50	96h	Fish	1.21-2.73mg/l
EC50	48h	Crustacea	1.4mg/l
EC10(ECx)	504h	Crustacea	0.05mg/l

Persistence and degradability: /

Bioaccumulative potential: Low (BCF=14).

Mobility in soil: /

Other adverse effects: /

Section 13 DISPOSAL CONSIDERATIONS

Disposal methods: Dispose this product by safe burial. Damaged containers are prohibited from being reused and should be buried in the prescribed place.

Section 14 TRANSPORT INFORMATION

UN number: 3077.

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Transport hazard class(es): 9.

Packing group, if applicable: III.

Environmental hazards: Marine pollutant.

Special precautions for user: /

Transport in bulk according to IMO instruments: /

Section 15 REGULATORY INFORMATION

Regulations: This safety data sheet is in compliance with the following national standards: GB/T 16483-2008, GB 13690-2009, GB 18218-2018, GB 15258-2009, GB 6944-2012, GB 190-2009, GB/T 191-2008, GB 12268-2012, GB/T 15098-2008, GBZ 2.1-2019, GBZ 2.2-2007 as well as the following regulations: Railway Dangerous Goods Transport Administrative Regulation, Dangerous Chemicals Safety Administrative Regulation.

Section 16 OTHER INFORMATION

References	UN Recommendations on the Transport of Dangerous Goods Model Regulations UN Globally Harmonized System of Classification and Labelling of Chemicals
Form Date	16-June-2022

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer/supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information or no data available (such as boiling point does not exist for the solid) in the table with "/" logo.