



# CLAYMAN

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## SAFETY DATA SHEET

5580	VANADIUM PENTOXIDE
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1. Identification of substance/preparation and of the company undertaking	
Trade Name:	Vanadium Pentoxide
Chemical Name:	Vanadium V Oxide
Synonyms:	Divanadium Pentoxide

2. Composition /information on ingredients			
Component	CAS	EINECS	% of composition
Vanadium Pentoxide V <sub>2</sub> O <sub>5</sub>	1314-62-1	2152398	>99%

3. Hazards Identification	
Inhalation	Excessive exposure may cause irritation of the respiratory tracts and pneumonia
Ingestion	May cause irritation of digestive system, vomiting, diarrhoea, poisoning may affect nervous system, liver, kidney, lungs.
For Ingestion and Inhalation	Symptoms include dry cough, sneezing, headaches, metallic taste, green/ black tongue, chest pains, bronchitis, pale complexion, abdominal pain, insomnia, anorexia, nervousness, dizziness, anaemia, tinnitus. <u>For severe acute exposure:</u> If the victim survives, then full recovery follows.
Eyes	May cause physical irritation and inflammation, and conjunctivitis in severe cases.
Environment	Toxic to aquatic organisms.

4. First Aid Measures	
Inhalation	Remove patient to fresh air, loosen tight clothing and seek medical attention.
Ingestion	Do not induce vomiting, seek medical advice. Rinse mouth with water. If conscious get the victim to drink plenty of water. Seek medical attention.
Eyes	Wash immediately with copious amounts of water. If irritation persists, seek medical attention.
Skin	Wash affected areas with plenty of water. Remove contaminated clothing, seek medical advice.



5. Fire Fighting Hazards	
Extinguishing media	Suitable for surrounding fire conditions. If water is used do not allow to run off to contaminate water courses.
Special Exposure Hazard	In the even of a fire the product may emit harmful or toxic fumes.
Personal protective equipment	Self contained breathing apparatus.

6. Accidental Release Measure	
Leaks and spills	Use suitable vacuum equipment where reasonably practicable, otherwise damp down and scoop into a receptacle. If it enters water courses, then notify authorities and neutralise with lime, slacked lime, crushed limestone or sodium bicarbonate.
Personal Protective equipment	Respiratory protective equipment, overalls.

7. Handling & Storage	
Handling	Do not eat, drink or smoke in areas where the material is used. Wash thoroughly after handling the material.
Storage	Store in a secure container in a dry area.

8. Exposure Control/Personal Protection	
Engineering controls	Adequate ventilation should be provided so that Occupational Exposure Limits are not exceeded. Local exhaust Ventilation is normally recommended.
Personal protective equipment	Where LEV is not practicable and exposure is likely to be excessive, approves respiratory protection to CEN standards prEN 140, 141, 143 or 149 should be worn. Protective gloves and overalls are recommended for prolonged contact.

9. Physical & Chemical Properties	
Appearance and Odour	Orange- yellow powder, odourless
Flash point (°C)	Not applicable
Flammability	Not applicable
Explosive properties	Non-explosive
Oxidising properties	None
Specific gravity	3.5g/cm <sup>3</sup>
pH Value	7 (solubility 0.8% in water)
Melting Point (°C)	690°C

10. Stability & Reactivity	
Chemical stability	The material is stable
Conditions / materials to avoid	Lithium metal and halogen compounds (e.g. C <sub>1</sub> F <sub>3</sub> )
Hazardous decomposition products	None known other than V <sub>2</sub> O <sub>5</sub> fumes
Hazardous polymerization products	None



11. Toxicological Information			
Acute toxicology	LD50	Oral	10mg/kg (Low, therefore serious)
	LD50	Dermal	Not Known
	LD50	Inhalation	Not known
Health Effects	Prolonged or repeated exposure above Occupational Exposure Standards may affect the nervous system, liver, kidney, lungs. Vanadium Pentoxide is classified at Mutagenic Category 3 and Toxic for reproduction Category 3.		

12. Ecological Information	
Ecotoxicity	Toxic to aquatic organisms
Persistence	The product is chemically stable and may cause long term adverse effects in the aquatic environment.

13. Disposal Considerations	
Dispose in accordance with current waste Disposal regulations (for UK – Control of Pollution {Special Waste} Regulations 1980). Landfill is the most appropriate method.	

14. Transport Information		
UN/SI No.	2862 Vanadium Pentoxide	
UN Class	6.1	
Packing group	III	
Road	UK	Item code 58 ( c )
	ADR	As above
Sea	IMO	As above
Air	ICAO	As above



15. Regulatory Information				
EC Supply Labelling		Toxic T and Dangerous for the environment N		
R phrases	R20/22	Harmful by inhalation and if swallowed		
	R37	Irritating to respiratory system.		
	R48/23	Toxic: Danger of serious damage to health by prolonged exposure through inhalation.		
	R51/53	Toxic to aquatic organism		
	R63	Possible risk of harm to the unborn child.		
	R68	Possible risk of irreversible effects		
S phrases	S36/37	Wear suitable protective clothing and gloves.		
	S38	In case of insufficient ventilation wear suitable respiratory equipment.		
	S45	In case of accident or if you feel unwell seek medical advice immediately (show label where possible)		
	S61	Avoid release to the environment; refer to special instructions/ safety data sheet.		
UK Occupational exposures limits (Refer to HSE Guidance note EH40)		Mg/m <sup>3</sup>	8 hr TWA	% in product
Divanadium Pentoxide (as V) Total Inhalable dust			0.05	>99%
<p>In accordance with HSE Approved Code of Practice for CHIP, the recipient is reminded of their obligation under both the Health and Safety at Work Act (HSWA) and the Control of Substances Hazardous to Health Regulations (COSHH), and that the information in any safety data sheet does not constitute the user's assessment of workplace risk.</p>				

16. Other Information	
References	
COSHH ACOP	HSC approved Code of Practice for the Control of Substances Hazardous to Health Regulations 1994
CHIP 96	Chemicals (Hazardous Information and Packaging for Supply) Regulations 1996
CHIP SDS ACOPS	HSC Approved Code of Practice for Safety data Sheets in accordance with Regulation 6 of the CHIP regulations.
HSE EH40	HSE Guidance note EH40 on Occupational Exposure Limits to be used in conjunction with the COSHH regulations.