

MATERIAL SAFETY DATA SHEET

VANADIUM PENTOXIDE

1. Identification of the substance/preparation and of the company/undertaking

Material Name: Vanadium Pentoxide

CCC

Name of Supplier: Ceramic Color & Chemical Mfg. Co.
 Address of Supplier: 13th Street & 11th Avenue
 New Brighton, PA 15066

Telephone: 724 846 4000
 Fax: 724 846 4000
 In case of emergency: 724 846 4000

2. Composition/information on ingredients

Chemical Name	Concentration	CAS Number	EC Number	R Phrases	Symbols
Vanadium Pentoxide	99.0	1314-62-1	215-239-8	R20	Xn

3. Hazards Identification

- Contact with eyes: May cause redness and irritation
- Contact with skin: May cause redness and irritation
- Inhalation: Harmful by inhalation (R20)
- Ingestion: May cause nausea/vomiting

4. First aid measures

Contact with skin

- Wash affected area with plenty of soap and water
- Seek medical attention if irritation persists

Contact with eyes

- If substance has got into eyes, immediately wash out with plenty of water for several minutes
- Seek immediate medical attention

Ingestion

- Induce vomiting (only if patient is conscious)
- Give plenty of water to drink
- Seek immediate medical attention

Inhalation

- Remove patient to fresh air
- Keep warm and at rest, in a half upright position. Loosen clothing
- Seek medical advice

General

- In cases of severe exposure, delayed pulmonary oedema may develop
- Immediate administration of an appropriate spray by a doctor or other authorized person should be considered

5. Fire-fighting measures

- May accelerate combustion
 - Smoke from fires is toxic. Take precautions to protect personnel from exposure
 - Wear Positive-Pressure Breathing Apparatus
 - Not flammable. In case of fire use extinguishing media appropriate to surrounding conditions
 - Prevent run off water from entering drains if possible
 - Keep container(s) exposed to fire cool, by spraying with water
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6. Accidental release measures

Clean Up Actions

- Use vacuum cleaner to collect spilled material
- Place in sealable container
- Remove contaminated material to safe location for subsequent disposal

Special Precaution(s)

- Avoid raising dust
 - Wear protective clothing as per section 8
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7. Handling and storage

Handling

- When using do not eat, drink or smoke (S20/21a)
- Wash hands thoroughly after using this substance
- Keep working clothes separate
- Do not breathe dust (S22)
- Ensure adequate ventilation
- Eyewash bottles should be available

Storage

- Keep in a cool, dry, well ventilated place
 - Keep container tightly closed (S7)
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8. Exposure controls/personal protection

Personal protection

- Wear suitable protective clothing, eye/face protection and gloves (S36/37/39)
- Wear approved respirator if exposure likely to exceed MEL/OES

Exposure Limits

Vanadium pentoxide

- OES/TEL #ppm (total inhalable dust) 0.5 mg/m³
 - OES/TEL #ppm (fume and respirable dust) 0.05 mg/m
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9. Physical and chemical properties

- Odor: Odorless
 - Appearance: Solid orange powder
 - Boiling point 1750° C
 - Vapor pressure ~0 at 20 deg C
 - Melting point 690° C
 - Water solubility 8 g/l
 - Specific gravity (water=1) 3.36
 - Product increases fire risk
 - Molecular Weight 181.9
 - Formula V₂O₅
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10. Stability and reactivity

- Stable
 - Avoid contact with combustible material
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11. Toxicological information

Toxicological information

- (Contact with skin and eyes)
- May cause redness and irritation
- (Inhalation)
- Vapors or aerosols may cause irritation of eyes, nose and respiratory tract
- In cases of severe exposure, delayed pulmonary oedema may develop
- (Ingestion)
- May cause greenish-black discoloration of the tongue
- The ingestion of significant quantities may cause nausea/vomiting
- In cases of severe exposure, systemic effects may develop
- LD50 (oral, rat) 10 mg/kg

12. Ecological information

Environmental Hazard Values

- LC50 (fish) 15 mg/l (96 hr)

13. Disposal considerations

Disposal considerations

- Do not discharge into drains or the environment, dispose to an authorized waste collection point
 - Disposal should be in accordance with local, state or national legislation
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14. Transport information

Proper shipping name: Vanadium pentoxide, non-fused form

Emergency Action Code			
EAC	:	ZZ	
UN			
UN No	:	2862	Hazard Class : 6.1
Packing Group	:	II	
Road/Rail (ADR/RID)			
ADR UN No.	:	2862	ADR Hazard Class : 6.1
ADR Item No.	:	58(b)	ADR/RID No. : 60
Trailercode	:	61G64b	
Sea (IMDG)			
IMDG UN No.	:	2862	IMDG Hazard Class. : 6.1
IMDG Page No.	:	6277	IMDG Pack Group. : II
IMDG EmS	:	6.1-04	IMDG MFAG : 135
Air (ICAO/IATA)			
ICAO Un No.	:	2862	ICAO Hazard Class : 6.1
ICAO Packing Group	:	II	

15. Regulatory information



Harmful

Risk Phrases

- Harmful by inhalation (R20)

Safety Phrases

- Keep out of reach of children (S2)
 - Do not breathe dust (S22)
-

16. Other Information

Other information

- The data given here is based on current knowledge and experience. This Safety Data Sheet describes the product in terms of safety requirements and does not signify any warranty with regard to the product's properties.
- This data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications - usage in such may cause risks not mentioned in this sheet.
- Do not use for other application(s) without seeking advice from manufacturer.

If any UK regulations are quoted, then for other nations the equivalent regulations should be identified.

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