

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Ammonium metavanadate

Product Number : 10028

Brand : Sigma-Aldrich

Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Irritant

##### Target Organs

Central nervous system

##### GHS Classification

Acute toxicity, Oral (Category 3)

Acute toxicity, Inhalation (Category 1)

Acute toxicity, Dermal (Category 5)

Skin irritation (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity - single exposure (Category 3)

##### GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H301

Toxic if swallowed.

H313

May be harmful in contact with skin.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H330

Fatal if inhaled.

H335

May cause respiratory irritation.

Precautionary statement(s)

P260

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P284

Wear respiratory protection.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310

Immediately call a POISON CENTER or doctor/ physician.

**HMIS Classification**

**Health hazard:** 4  
**Chronic Health Hazard:** \*  
**Flammability:** 0  
**Physical hazards:** 0

**NFPA Rating**

**Health hazard:** 4  
**Fire:** 0  
**Reactivity Hazard:** 0

**Potential Health Effects**

**Inhalation** May be fatal if inhaled. Causes respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** Toxic if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms : Ammonium trioxovanadate  
Ammonium (meta)vanadate

Formula :  $H_4NO_3V$   
Molecular Weight : 116.98 g/mol

Component	Concentration
<b>Ammonium trioxovanadate</b>	
CAS-No. 7803-55-6	-
EC-No. 232-261-3	-

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**4. FIRST AID MEASURES**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**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. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

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

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**5. FIREFIGHTING MEASURES**

**Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NOx), Sulphur oxides, Borane/boron oxides, Vanadium/vanadium oxides

**Further information**

The product itself does not burn.

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**6. ACCIDENTAL RELEASE MEASURES**



Melting point/freezing point	no data available
Boiling point	no data available
Flash point	not applicable
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	2.32 g/cm <sup>3</sup> at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

no data available

### Conditions to avoid

no data available

### Materials to avoid

Strong acids and oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NO<sub>x</sub>), Sulphur oxides, Borane/boron oxides, Vanadium/vanadium oxides

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

LD50 Oral - rat - 58.1 mg/kg

#### Inhalation LC50

LC50 Inhalation - rat - 4 h - 7.8 µg/l

#### Dermal LD50

LD50 Dermal - rat - 2,102 mg/kg

#### Other information on acute toxicity

LD50 Intraperitoneal - rat - 18 mg/kg

LD50 Subcutaneous - rat - 23 mg/kg

### Skin corrosion/irritation

no data available

**Serious eye damage/eye irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

Laboratory experiments have shown mutagenic effects.

Genotoxicity in vitro - Human - lymphocyte

Micronucleus test

Genotoxicity in vitro - Human - lymphocyte

DNA damage

Genotoxicity in vitro - Human - lymphocyte

Sister chromatid exchange

**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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

Reproductive toxicity - Hamster - Intraperitoneal

Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetal death.

no data available

**Teratogenicity**

Developmental Toxicity - Hamster - Intraplacental

Specific Developmental Abnormalities: Musculoskeletal system.

no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

Inhalation - May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

<b>Inhalation</b>	May be fatal if inhaled. Causes respiratory tract irritation.
<b>Ingestion</b>	Toxic if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.

**Signs and Symptoms of Exposure**

Headache, Tremors, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**

no data available

**Additional Information**

RTECS: YW0875000

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**12. ECOLOGICAL INFORMATION**

**Toxicity**

no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

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**13. DISPOSAL CONSIDERATIONS**

**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.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

UN number: 2859 Class: 6.1 Packing group: II

Proper shipping name: Ammonium metavanadate

Reportable Quantity (RQ): 1000 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

**IMDG**

UN number: 2859 Class: 6.1 Packing group: II EMS-No: F-A, S-A

Proper shipping name: AMMONIUM METAVANADATE

Marine pollutant: No

**IATA**

UN number: 2859 Class: 6.1 Packing group: II

Proper shipping name: Ammonium metavanadate

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**15. REGULATORY INFORMATION**

**OSHA Hazards**

Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Irritant

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Ammonium trioxovanadate	7803-55-6	1993-04-24

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

Ammonium trioxovanadate

CAS-No.  
7803-55-6Revision Date  
1993-04-24**Pennsylvania Right To Know Components**

Ammonium trioxovanadate

CAS-No.  
7803-55-6Revision Date  
1993-04-24**New Jersey Right To Know Components**

Ammonium trioxovanadate

CAS-No.  
7803-55-6Revision Date  
1993-04-24**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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**16. OTHER INFORMATION****Further information**

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