

# SAFETY DATA SHEET

Date Printed: 05/04/2024

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (4N) 99.99% Titanium(IV) Oxysulfate - Sulfuric Acid Solution

**Product Code:** TI-OXSAT-04-SOL

**CAS Number:** 13825-74-6

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Corrosive to metals (Category 1), H290

Skin corrosion (Category 1A), H314

Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS Label elements, including precautionary statements

Pictogram



Signal word: Danger

Hazard statement(s)

H290

May be corrosive to metals.

H314

Causes severe skin burns and eye damage.

Precautionary statement(s)

P234

Keep only in original container.

P264

Wash skin thoroughly after handling.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water/shower.

P304 + P340 + P310

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

P305 + P351 + P338 + P310

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

P363

Wash contaminated clothing before reuse.

P390

Absorb spillage to prevent material damage.

P405

Store locked up.

P406

Store in corrosive resistant stainless steel container with a resistant inner liner.

P501

Dispose of contents/ container to an approved waste disposal plant.

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: O5STi

Molecular weight: 159.93 g/mol

CAS-No.: 13825-74-6

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## SECTION 4. FIRST AID MEASURES

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.

Consult a physician.

In case of eye contact

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

Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2)

and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Sulphur oxides, Titanium/titanium oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas.

For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

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## **SECTION 7. HANDLING AND STORAGE**

Precautions for safe handling

Avoid inhalation of vapor or mist.

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage class (TRGS 510): Non-combustible, corrosive hazardous materials

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## Personal protective equipment

### Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.

### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls.

If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

#### Appearance

Form: clear, liquid

Colour: colourless

#### Odor

No data available

#### Odor Threshold

No data available

#### pH

No data available

#### Melting point/freezing point

No data available

#### Initial boiling point and boiling range

100 °C (212 °F) at 1,013 hPa (760 mmHg)

#### Flash point

No data available

#### Evaporation rate

No data available

#### Flammability (solid, gas)

No data available

#### Upper/lower flammability or explosive limits

No data available

#### Vapor pressure

No data available

#### Vapor density

No data available

#### Relative density

1.361 g/cm<sup>3</sup>

#### Water solubility

No data available  
Partition coefficient: n-octanol/water  
No data available  
Auto-ignition temperature  
No data available  
Decomposition temperature  
No data available  
Viscosity  
No data available  
Explosive properties  
No data available  
Oxidizing properties  
No data available  
Other safety information  
No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity  
No data available  
Chemical stability  
Stable under recommended storage conditions.  
Possibility of hazardous reactions  
No data available  
Conditions to avoid  
No data available  
Incompatible materials  
No data available  
Hazardous decomposition products  
Other decomposition products - No data available  
In the event of fire: see section 5

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects  
Acute toxicity  
Dermal:  
No data available  
No data available  
Skin corrosion/irritation  
No data available  
Serious eye damage/eye irritation  
No data available  
Respiratory or skin sensitisation  
No data available  
Germ cell mutagenicity  
No data available  
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.

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

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS:

Not available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence (Sulfuric acid)

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## SECTION 12. ECOLOGICAL INFORMATION

Toxicity

No data available

Persistence and degradability:

No data available

Bioaccumulative potential:

No data available

Mobility in soil:

No data available

Results of PBT and vPvB assessment:

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

No data available

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## SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

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## SECTION 14. TRANSPORT INFORMATION

DOT (US)

UN number: 3264

Class: 8

Packing group: II

Proper shipping name:

Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid, Titanium oxide sulphate)

Reportable Quantity

(RQ): 294 lbs

Poison Inhalation Hazard: No

IMDG

UN number: 3264

Class: 8

Packing group: II

EMS-No: F-A, S-B

Proper shipping name:

CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulfuric acid, Titanium oxide sulphate)

IATA

UN number: 3264

Class: 8

Packing group: II

Proper shipping name:

Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid, Titanium oxide sulphate)

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## SECTION 15. REGULATORY INFORMATION

SARA 302

Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

Sulfuric acid

CAS-No. 7664-93-9

Revision Date 2007-07-01

SARA 313

Components

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

Sulfuric acid

CAS-No. 7664-93-9

Revision Date 2007-07-01

SARA 311/312

Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know

Components

Sulfuric acid

CAS-No. 7664-93-9

Revision Date 2007-07-01

Pennsylvania Right To Know

Components

Water CAS-No. 7732-18-5

Revision Date 2007-07-01

Sulfuric acid 7664-93-9

Titanium oxide sulphate

13825-74-6  
1994-07-31  
New Jersey Right To Know  
Components  
Water CAS-No. 7732-18-5  
Revision Date 2007-07-01  
Sulfuric acid 7664-93-9  
Titanium oxide sulphate 13825-74-6  
1994-07-31  
California Prop. 65  
Components  
WARNING! This product contains a chemical known to the State of California to cause cancer.  
Sulfuric acid

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.