

SAFETY DATA SHEET

Date Printed: 05/02/2024

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SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Antimony Pentafluoride

Product Code: SB-F5-05

CAS Number: 7783-70-2

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)

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Acute aquatic toxicity (Category 2), H401

Chronic aquatic toxicity (Category 2), H411

GHS Label elements, including precautionary statements

Pictogram



Signal word: Warning

Hazard statement(s)

H302 + H332

Harmful if swallowed or if inhaled

H411

Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261

Avoid breathing dust/ fume/ gas/ mist/ Vapors/ spray.

P264

Wash skin thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P271

Use only outdoors or in a well-ventilated area.

P273

Avoid release to the environment.

P301 + P312 + P330

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

P304 + P340 + P312

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

P391

Collect spillage.

P501

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

Hazards not otherwise classified (HNOC) or not covered by GHS - none.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Synonyms: Antimony pentafluoride

Formula: F₅Sb

Molecular weight: 216.75 g/mol

CAS-No.: 7783-70-2

EC-No.: 232-021-8

Index-No.: 051-003-00-9

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.

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. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

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

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

Hydrogen fluoride, Antimony oxide

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing Vapors, mist or gas. Ensure adequate ventilation.

For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. 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.

Reacts violently with water.

Storage class (TRGS 510): Non Combustible Liquids

Specific end use(s)

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

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

Face shield and safety glasses 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

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Form: liquid

Colour: colourless

Odor: No data available

Odor Threshold: No data available

pH: No data available

Melting point/freezing point

Melting point/range: 7 °C (45 °F) - lit.

Initial boiling point and boiling range: 148 - 150 °C (298 - 302 °F) - lit.

Flash point: N/A

Evaporation rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits: No data available

Vapor pressure: 13 hPa (10 mmHg) at 25 °C (77 °F)

Vapor density: 7.48 - (Air = 1.0)

Relative density: 2.993 g/cm³ at 25 °C (77 °F)

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

Relative Vapor density: 7.48 - (Air = 1.0)

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
Do not allow water to enter container because of violent reaction.
Incompatible materials
Strong oxidizing agents
Strong bases, Water, Highly toxic fumes
Hazardous decomposition products
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

No data available

Inhalation: No data available

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:

3 - Group 3: Not classifiable as to its carcinogenicity to humans (Antimony(V) fluoride)

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

Salivation, Nausea, Abdominal pain, Vomiting, Fever, Rapid respiration, Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia., 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

Stomach - Irregularities - Based on Human Evidence

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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life with long lasting effects.

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.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

UN number: 1732

Class: 8 (6.1)

Packing group: II

Proper shipping name: Antimony pentafluoride

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

IMDG

UN number: 1732

Class: 8 (6.1)

Packing group: II

EMS-No: F-A, S-B

Proper shipping name: ANTIMONY PENTAFLUORIDE

Marine pollutant: yes

IATA

UN number: 1732

Class: 8 (6.1)

Packing group: II

Proper shipping name: Antimony pentafluoride

IATA Passenger: Not permitted for transport

SECTION 15. REGULATORY INFORMATION

SARA 302

Components

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

Antimony(V) fluoride

CAS-No.: 7783-70-2

Revision Date: 2007-07-01

SARA 313

Components

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

Antimony(V) fluoride

CAS-No.: 7783-70-2

Revision Date: 2007-07-01

SARA 311/312

Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Antimony(V) fluoride

CAS-No.: 7783-70-2

Revision Date: 2007-07-01

Pennsylvania Right To Know Components

Antimony(V) fluoride

CAS-No.: 7783-70-2

Revision Date: 2007-07-01

New Jersey Right To Know Components

Antimony(V) fluoride

CAS-No.: 7783-70-2

Revision Date: 2007-07-01

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.

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.