

# SAFETY DATA SHEET

according to the OSHA  
Hazard Communication Standard

Version 7.3  
Revision Date 07/10/2026  
Print Date 07/11/2026

## SECTION 1. IDENTIFICATION

### 1.1 Product identifiers

Product name : Antimony Standard for ICP

Product Number : 73495  
Brand : Sigma-Aldrich

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

Restrictions on use : Not Available

### 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

### 1.4 Emergency telephone number

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-  
527-3887 CHEMTREC (International) 24  
Hours/day; 7 Days/week

---

## SECTION 2. HAZARDS IDENTIFICATION

### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

#### Hazards for the product as supplied

Corrosive to metals : Category 1

Skin irritation : Category 2

Eye irritation : Category 2A

**Other hazards**

None known.

**GHS label elements**

Hazard pictograms

:



Signal word

: Warning

Hazard statements

: H290 May be corrosive to metals.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.

Precautionary statements

**Prevention:**

P234 Keep only in original packaging.  
P264 Wash skin thoroughly after handling.  
P280 Wear protective gloves/ eye protection/ face protection.

**Response:**

P302 + P352 IF ON SKIN: Wash with plenty of water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P390 Absorb spillage to prevent material damage.

**Storage:**

P406 Store in a corrosion resistant container with a resistant inner liner.

---

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture

: Mixture

CAS-No.

: Not Assigned

**Components**

| Chemical name | CAS No./Unique ID | Concentration (% w/w) | Trade secret |
|---------------|-------------------|-----------------------|--------------|
| nitric acid   | 7697-37-2*        | $\geq 1 - \leq 5$     | TSC          |

Sigma-Aldrich - 73495

Page 2 of 17

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada

**MILLIPORE  
SIGMA**

|                      |            |                     |     |
|----------------------|------------|---------------------|-----|
| antimony trifluoride | 7783-56-4* | $\geq 0.1 - \leq 1$ | TSC |
|----------------------|------------|---------------------|-----|

\* Indicates that the identifier is a CAS No.

TSC- the actual concentration or concentration range is withheld as a trade secret

---

## SECTION 4. FIRST AID MEASURES

|                                                             |                                                                                                                       |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| General advice                                              | : Show this safety data sheet to the doctor in attendance.                                                            |
| If inhaled                                                  | : After inhalation: fresh air.                                                                                        |
| In case of skin contact                                     | : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.             |
| In case of eye contact                                      | : After eye contact: rinse out with plenty of water.<br>Call in ophthalmologist.<br>Remove contact lenses.            |
| If swallowed                                                | : After swallowing: immediately make victim drink water (two glasses at most).<br>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 |
| Protection of first-aiders                                  | : For personal protection see section 8.                                                                              |
| Notes to physician                                          | : No data available                                                                                                   |

---

## SECTION 5. FIREFIGHTING MEASURES

|                                       |                                                                                                           |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media          | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media        | : For this substance/mixture no limitations of extinguishing agents are given.                            |
| Specific hazards during fire fighting | : Not combustible.                                                                                        |

Ambient fire may liberate hazardous vapours.

|                      |                                      |
|----------------------|--------------------------------------|
| Hazardous combustion | : Nitrogen oxides (NO <sub>x</sub> ) |
|----------------------|--------------------------------------|

products

Antimony oxide

Gaseous hydrogen fluoride (HF).

Hazardous combustion products

Nitrogen oxides (NOx)

Specific extinguishing methods : No data available

Further information : Suppress (knock down) gases/vapours/mists with a water spray jet.  
Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for fire-fighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

---

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Advice for non-emergency personnel:  
Do not breathe vapours, aerosols.  
Avoid substance contact.  
Ensure adequate ventilation.  
Evacuate the danger area, observe emergency procedures, consult an expert.  
Advice for emergency responders:  
For personal protection see section 8.

Environmental precautions : Do not let product enter drains.

Methods and materials for containment and cleaning up : Cover drains. Collect, bind, and pump off spills.  
Observe possible material restrictions (see sections 7 and 10).  
Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® HF, Merck Art. No. 101591). Dispose of properly. Clean up affected area.

---

## SECTION 7. HANDLING AND STORAGE

For precautions see section 2.2.

Conditions for safe storage : No metal containers.

Further information on storage conditions : Tightly closed.

Storage class : 12, Non Combustible Liquids

Recommended storage temperature : Recommended storage temperature see product label.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

| Components           | CAS-No.   | Value type<br>(Form of exposure) | Control parameters /<br>Permissible concentration | Basis     |
|----------------------|-----------|----------------------------------|---------------------------------------------------|-----------|
| nitric acid          | 7697-37-2 | TWA                              | 2 ppm                                             | ACGIH     |
|                      |           | STEL                             | 4 ppm                                             | ACGIH     |
|                      |           | TWA                              | 2 ppm<br>5 mg/m <sup>3</sup>                      | NIOSH REL |
|                      |           | ST                               | 4 ppm<br>10 mg/m <sup>3</sup>                     | NIOSH REL |
|                      |           | TWA                              | 2 ppm<br>5 mg/m <sup>3</sup>                      | OSHA Z-1  |
|                      |           | TWA                              | 2 ppm<br>5 mg/m <sup>3</sup>                      | OSHA P0   |
|                      |           | STEL                             | 4 ppm<br>10 mg/m <sup>3</sup>                     | OSHA P0   |
| antimony trifluoride | 7783-56-4 | TWA                              | 2.5 mg/m <sup>3</sup><br>(Fluorine)               | OSHA Z-1  |
|                      |           | TWA                              | 0.5 mg/m <sup>3</sup><br>(antimony)               | OSHA Z-1  |
|                      |           | TWA                              | 2.5 mg/m <sup>3</sup><br>(Fluorine)               | ACGIH     |
|                      |           | TWA                              | 0.5 mg/m <sup>3</sup><br>(antimony)               | ACGIH     |
|                      |           | TWA                              | 0.5 mg/m <sup>3</sup><br>(antimony)               | NIOSH REL |

### Biological occupational exposure limits

| Components           | CAS-No.   | Control parameters     | Biological specimen | Sampling time                | Permissible concentration | Basis        |
|----------------------|-----------|------------------------|---------------------|------------------------------|---------------------------|--------------|
| antimony trifluoride | 7783-56-4 | Fluoride<br>(Fluorine) | Urine               | Prior to shift<br>(16 hours) | 2 mg/l                    | ACGIH<br>BEI |

|  |  |                        |       |                                                                                   |        |              |
|--|--|------------------------|-------|-----------------------------------------------------------------------------------|--------|--------------|
|  |  |                        |       | after<br>exposur<br>e<br>ceases)                                                  |        |              |
|  |  | Fluoride<br>(Fluorine) | Urine | End of<br>shift<br>(As<br>soon as<br>possible<br>after<br>exposur<br>e<br>ceases) | 3 mg/l | ACGIH<br>BEI |

**Engineering measures** : No data available

### **Personal protective equipment**

Respiratory protection : required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: : Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

### **Hand protection**

Material : Nitrile rubber  
Break through time : 480 min  
Glove thickness : 0.11 mm  
Protective index : Full contact  
Manufacturer : Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

Material : Nitrile rubber  
Break through time : 480 min  
Glove thickness : 0.11 mm  
Protective index : Splash contact  
Manufacturer : Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

Manufacturer : data source: KCL GmbH, D-36124 Eichenzell, phone

Sigma-Aldrich - 73495

Page 6 of 17

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Remarks                  | : 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.<br>If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. |
| Eye protection           | : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).<br>Safety glasses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Skin and body protection | : protective clothing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Hygiene measures         | : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

---

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

|                             |                     |
|-----------------------------|---------------------|
| Appearance                  | : liquid            |
| Colour                      | : clear, colourless |
| Odour                       | : No data available |
| Odour Threshold             | : No data available |
| pH                          | : No data available |
| Melting point               | : No data available |
| Boiling point/boiling range | : No data available |
| Flash point                 | : No data available |
| Evaporation rate            | : No data available |
| Flammability (solid, gas)   | : No data available |

|                                                     |                                |
|-----------------------------------------------------|--------------------------------|
| Flammability (liquids)                              | : No data available            |
| Burning rate                                        | : No data available            |
| Upper explosion limit /<br>Upper flammability limit | : No data available            |
| Lower explosion limit /<br>Lower flammability limit | : No data available            |
| Vapour pressure                                     | : No data available            |
| Relative vapour density                             | : No data available            |
| Relative density                                    | : No data available            |
| Density                                             | : No data available            |
| Water solubility                                    | : No data available            |
| Partition coefficient: n-<br>octanol/water          | : No data available            |
| Autoignition temperature                            | : No data available            |
| Decomposition<br>temperature                        | : No data available            |
| Viscosity, dynamic                                  | : No data available            |
| Viscosity, kinematic                                | : No data available            |
| Flow time                                           | : No data available            |
| Explosive properties                                | : Not classified as explosive. |
| Oxidizing properties                                | : none                         |
| Particle characteristics<br>Particle size           | : No data available            |

---

## SECTION 10. STABILITY AND REACTIVITY

|                          |                                                                                           |
|--------------------------|-------------------------------------------------------------------------------------------|
| Reactivity               | : No data available                                                                       |
| Chemical stability       | : The product is chemically stable under standard ambient conditions (room temperature) . |
| Possibility of hazardous | : Violent reactions possible with:                                                        |

Sigma-Aldrich - 73495

Page 8 of 17





**Reproductive toxicity**

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

**11.2 Additional Information**

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

Liver - Irregularities - Based on Human Evidence

**Components****nitric acid****Acute toxicity**

Oral: No data available

Acute toxicity estimate Inhalation - 4 h - 2.65 mg/l - vapour  
(Expert judgement)

Dermal: No data available

**Skin corrosion/irritation**

Skin - Rabbit

Result: Causes severe burns.

Remarks: (IUCLID)

Remarks: Causes poorly healing wounds.

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Causes burns.

Remarks: (IUCLID)

Remarks: Causes serious eye damage.

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

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

**antimony trifluoride****Acute toxicity**

LD50 Oral - Rat - 804 mg/kg

Inhalation: Toxic by inhalation.

LD50 Dermal - 300 mg/kg

No data available

**Skin corrosion/irritation**

Remarks: No data available

**Serious eye damage/eye irritation**

Remarks: No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**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

---

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****nitric acid:**

Toxicity to fish : Remarks: No data available

**antimony trifluoride:**

Toxicity to fish : Remarks: No data available

LC50 : 2 mg/l  
Exposure time: 96 h

## **Persistence and degradability**

### **Components:**

#### **nitric acid:**

Biodegradability : Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

#### **antimony trifluoride:**

Biodegradability : Remarks: No data available

## **Bioaccumulative potential**

### **Components:**

#### **nitric acid:**

Partition coefficient: n-octanol/water : log Pow: -2.3  
Method: OECD Test Guideline 107  
Remarks: Bioaccumulation is not expected.

#### **antimony trifluoride:**

Bioaccumulation : Remarks: No data available

## **Mobility in soil**

### **Components:**

#### **antimony trifluoride:**

Stability in soil : Remarks: No data available

## **Other adverse effects**

### **Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

### **Components:**

#### **nitric acid:**

Results of PBT and vPvB assessment : Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

Additional ecological information : May be harmful to aquatic organisms due to the shift of the pH.

**antimony trifluoride:**

Additional ecological information : No data available

**Endocrine disrupting properties**

No data available

---

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

---

**SECTION 14. TRANSPORT INFORMATION****International Regulations****IATA-DGR**

UN/ID No. : UN 3264  
Proper shipping name : Corrosive liquid, acidic, inorganic, n.o.s.  
(nitric acid, 2%)  
Class : 8  
Packing group : III  
Labels : Class 8 - Corrosive substances  
Packing instruction (cargo aircraft) : 856  
Packing instruction (passenger aircraft) : 852

**IMDG-Code**

UN number : UN 3264  
Proper shipping name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
(nitric acid)  
Class : 8  
Packing group : III  
Labels : 8  
EmS Code : F-A, S-B  
Marine pollutant : no

**Transport in bulk according to IMO instruments**

Not applicable for product as supplied.

**National Regulations****49 CFR**

UN/ID/NA number : UN 3264  
Proper shipping name : Corrosive liquid, acidic, inorganic, n.o.s.

(nitric acid, 2%)

Class : 8

Packing group : III

Labels : Class 8 - Corrosive substances

ERG Code : 154

Marine pollutant : no

Poison Inhalation Hazard : No

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

### CERCLA Reportable Quantity

| Components  | CAS-No.   | Component RQ (lbs) | Calculated product RQ (lbs) |
|-------------|-----------|--------------------|-----------------------------|
| nitric acid | 7697-37-2 | 1000               | 50000                       |

### SARA 304 Extremely Hazardous Substances Reportable Quantity

| Components  | CAS-No.   | Component RQ (lbs) | Calculated product RQ (lbs) |
|-------------|-----------|--------------------|-----------------------------|
| nitric acid | 7697-37-2 | 1000               | 50000                       |

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

| Components  | CAS-No.   | Component TPQ (lbs) |
|-------------|-----------|---------------------|
| nitric acid | 7697-37-2 | 1000                |

**SARA 311/312 Hazards** : Chronic Health Hazard

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

nitric acid          7697-37-2          >= 1 - < 5 %

### Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

## Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

|                      |           |                     |
|----------------------|-----------|---------------------|
| nitric acid          | 7697-37-2 | $\geq 1 - < 5 \%$   |
| antimony trifluoride | 7783-56-4 | $\geq 0.1 - < 1 \%$ |
| Hydrofluoric acid    | 7664-39-3 | $\geq 0 - < 0.1 \%$ |

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

|                      |           |                     |
|----------------------|-----------|---------------------|
| nitric acid          | 7697-37-2 | $\geq 1 - < 5 \%$   |
| antimony trifluoride | 7783-56-4 | $\geq 0.1 - < 1 \%$ |
| Hydrofluoric acid    | 7664-39-3 | $\geq 0 - < 0.1 \%$ |

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

## US State Regulations

### Massachusetts Right To Know

|                   |           |
|-------------------|-----------|
| nitric acid       | 7697-37-2 |
| Hydrofluoric acid | 7664-39-3 |

### Pennsylvania Right To Know

|                      |           |
|----------------------|-----------|
| nitric acid          | 7697-37-2 |
| antimony trifluoride | 7783-56-4 |
| Hydrofluoric acid    | 7664-39-3 |

### Maine Chemicals of High Concern

Product does not contain any listed chemicals

### Vermont Chemicals of High Concern

|                      |           |
|----------------------|-----------|
| antimony trifluoride | 7783-56-4 |
|----------------------|-----------|

### Washington Chemicals of High Concern

|                      |           |
|----------------------|-----------|
| antimony trifluoride | 7783-56-4 |
|----------------------|-----------|

### The components of this product are reported in the following inventories:

US TSCA : All substances listed as active on the TSCA inventory

### TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

---

## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

|           |                                                                      |
|-----------|----------------------------------------------------------------------|
| ACGIH     | : USA. ACGIH Threshold Limit Values (TLV)                            |
| ACGIH BEI | : ACGIH - Biological Exposure Indices (BEI)                          |
| NIOSH REL | : USA. NIOSH Recommended Exposure Limits                             |
| OSHA P0   | : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values) |

|                 |                                                                                             |
|-----------------|---------------------------------------------------------------------------------------------|
| OSHA Z-1        | : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants          |
| ACGIH / TWA     | : 8-hour, time-weighted average                                                             |
| ACGIH / STEL    | : Short-term exposure limit                                                                 |
| NIOSH REL / TWA | : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek |
| NIOSH REL / ST  | : STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday    |
| OSHA P0 / TWA   | : 8-hour time weighted average                                                              |
| OSHA P0 / STEL  | : Short-term exposure limit                                                                 |
| OSHA Z-1 / TWA  | : 8-hour time weighted average                                                              |

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above



product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.  
Copyright 2025 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

Revision Date : 07/10/2026

US / EN