

# SAFETY DATA SHEET

according to the OSHA  
Hazard Communication Standard

Version 7.1  
Revision Date 07/22/2026  
Print Date 07/23/2026

## SECTION 1. IDENTIFICATION

### 1.1 Product identifiers

Product name : Barium Standard for ICP 10 g/L Ba in nitric acid

Product Number : 75187  
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

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## 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

Serious eye damage : Category 1

**Other hazards**

None known.

**GHS label elements**

Hazard pictograms

:



Signal word

: Danger

Hazard statements

: H290 May be corrosive to metals.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.

Supplemental Hazard  
Statements

: Corrosive to the respiratory tract.

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 + 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/ doctor.  
P332 + P313 If skin irritation occurs: 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.

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**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 |
|---------------|-------------------|-----------------------|--------------|
|               |                   |                       |              |

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|                  |            |                       |     |
|------------------|------------|-----------------------|-----|
| nitric acid      | 7697-37-2* | $\geq 3 - \leq 7$     | TSC |
| Barium carbonate | 513-77-9*  | $\geq 0.5 - \leq 1.5$ | TSC |

\* Indicates that the identifier is a CAS No.

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

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## 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. Immediately call in ophthalmologist. Remove contact lenses.
- If swallowed : After swallowing: immediately make victim drink water (two glasses at most). 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 GHS label elements) and/or in section 11
- Protection of first-aiders : For personal protection see section 8.
- Notes to physician : No data available

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## 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 products                  | : Carbon oxides<br><br>Nitrogen oxides (NOx)<br><br>Barium oxide                                                                                                     |
| Specific extinguishing methods                 | : No data available                                                                                                                                                  |
| Further information                            | : Suppress (knock down) gases/vapours/mists with a water spray jet.<br>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.      |

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

|                                                                     |                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions, protective equipment and emergency procedures | : Advice for non-emergency personnel:<br>Do not breathe vapours, aerosols.<br>Avoid substance contact.<br>Ensure adequate ventilation.<br>Evacuate the danger area, observe emergency procedures, consult an expert.<br>Advice for emergency responders:<br>Wear appropriate personal protective equipment, as indicated in 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.<br>Observe possible material restrictions (see sections 7 and 10).<br>Take up with liquid-absorbent material (e.g. Chemizorb® ). Dispose of properly. Clean up affected area.                                                                                                      |

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## SECTION 7. HANDLING AND STORAGE

For precautions see section 2 GHS label elements

Conditions for safe storage : No metal containers.

Further information on storage conditions : Tightly closed.

Storage class : 12, Non Combustible Liquids

Recommended storage temperature : 59 - 77 °F / 15 - 25 °C

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## 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   |
|                  |           |                                  |                                                   |           |
| Barium carbonate | 513-77-9  | TWA                              | 0.5 mg/m <sup>3</sup><br>(Barium)                 | OSHA Z-1  |
|                  |           | TWA                              | 0.5 mg/m <sup>3</sup><br>(Barium)                 | ACGIH     |
|                  |           | TWA                              | 0.5 mg/m <sup>3</sup><br>(Barium)                 | NIOSH REL |

**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

Remarks : required

Eye protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).  
Tightly fitting safety goggles

Skin and body protection : protective clothing

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : No data available

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) : The product is not flammable.

|                                                     |                                |
|-----------------------------------------------------|--------------------------------|
| 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            |

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## 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 reactions | : Violent reactions possible with:<br>The generally known reaction partners of water.     |
| Conditions to avoid                | : no information available                                                                |

Incompatible materials :

Metals

Hazardous decomposition products : For Hazardous combustion products in the event of fire: see section 5

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## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Mixture

##### Acute toxicity

Acute toxicity estimate Oral - > 5,000 mg/kg  
(Calculation method)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute toxicity estimate Inhalation - 4 h - 53.54 mg/l - vapour (Calculation method)

Symptoms: Possible symptoms:, mucosal irritations

Dermal: No data available

##### Skin corrosion/irritation

Remarks: Mixture causes skin irritation.

##### Serious eye damage/eye irritation

Remarks: Mixture causes serious eye damage.

##### Respiratory or skin sensitization

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 on OSHA's list of regulated carcinogens.

##### 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

Stomach - 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

## Barium carbonate

### Acute toxicity

LD50 Oral - Rat - male and female - 1,690 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

Dermal: No data available

No data available

### Skin corrosion/irritation

Skin - In vitro study

Result: No skin irritation - 15 min

Remarks: (ECHA)

### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 1 h

(OECD Test Guideline 405)

### Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: Not a skin sensitizer.

(OECD Test Guideline 429)

### Germ cell mutagenicity

No data available

### 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

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

##### **nitric acid:**

Toxicity to fish : Remarks: No data available

##### **Barium carbonate:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 97.5 mg/l  
End point: mortality

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Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 203  
GLP: yes  
Remarks: (referred to the cation)

Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata*): > 100 mg/l

Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes

NOEC (*Pseudokirchneriella subcapitata*): >= 100 mg/l

Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes

Toxicity to fish (Chronic toxicity) : NOEC (*Danio rerio* (zebra fish)): >= 100 mg/l

Exposure time: 33 d  
Test Type: semi-static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 210  
GLP: yes

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l

Exposure time: 3 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 209  
GLP: yes

### Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

### Persistence and degradability

#### Components:

##### **nitric acid:**

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

##### **Barium carbonate:**

Biodegradability : Remarks: The methods for determining

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biodegradability are not applicable to inorganic substances.

### **Bioaccumulative potential**

#### **Components:**

##### **nitric acid:**

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

##### **Barium carbonate:**

Partition coefficient: n-octanol/water : Remarks: Not applicable for inorganic substances

### **Mobility in soil**

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.

### **Endocrine disrupting properties**

No data available

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## **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.

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## 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, 5%)  
Class : 8  
Packing group : III  
Labels : Class 8 - Corrosive substances  
Packing instruction (cargo : 856  
aircraft)  
Packing instruction : 852  
(passenger aircraft)

#### 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, 5%)  
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               | 20202                       |

### SARA 304 Extremely Hazardous Substances Reportable Quantity

| Components  | CAS-No.   | Component RQ (lbs) | Calculated product RQ (lbs) |
|-------------|-----------|--------------------|-----------------------------|
| nitric acid | 7697-37-2 | 1000               | 20202                       |

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

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

**SARA 311/312 Hazards** : Acute Health Hazard  
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 % |
| Barium carbonate | 513-77-9  | >= 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 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 | >= 1 - < 5 % |
|-------------|-----------|--------------|

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

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

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 |
|-------------|-----------|

## Pennsylvania Right To Know

nitric acid  
Barium carbonate

7697-37-2  
513-77-9

## Maine Chemicals of High Concern

Product does not contain any listed chemicals

## Vermont Chemicals of High Concern

Product does not contain any listed chemicals

## Washington Chemicals of High Concern

Product does not contain any listed chemicals

## 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.

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## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

|                 |                                                                                             |
|-----------------|---------------------------------------------------------------------------------------------|
| ACGIH           | : USA. ACGIH Threshold Limit Values (TLV)                                                   |
| 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 -

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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.

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