COLUMBUS CHEMICAL INDUSTRIES
*-An Employee-Owned Company-*

# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Revision date** 18-Nov-2026 **Revision Number** 1

## 1. Identification

**Product identifier**

**Product Name** Nitric/HF/Water Blend, Tech Grade

**Other means of identification**

**Product Code(s)** 9079

**UN number or ID number** UN2922

**Synonyms** No information available

**Recommended use of the chemical and restrictions on use**

**Recommended use** Industrial use
Laboratory use
Industrial Manufacturing (all)

**Restrictions on use** No information available

**Details of the supplier of the safety data sheet**

**Supplier Address**
Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI 53925 USA
Phone: (920) 623-2140
Fax: (920) 623-2577
www.columbuschemical.com

**Emergency telephone number**

**24 Hour Emergency Phone Number** CHEMTREC: 1-800-424-9300 for US / 703-527-3887 outside US

**Emergency Telephone** 911

## 2. Hazard(s) identification

**Classification**

| | |
|---|---|
| Corrosive to metals | Category 1 |
| Acute toxicity - Oral | Category 3 |
| Acute toxicity - Dermal | Category 3 |
| Acute toxicity - Inhalation (Vapors) | Category 2 |
| Skin corrosion/irritation | Category 1 |
| Serious eye damage/eye irritation | Category 1 |

**Hazards not otherwise classified (HNOC)**

Not applicable

**Label elements**
**Danger**

**Hazard statements**
H290 - May be corrosive to metals.
H301 - Toxic if swallowed.
H311 - Toxic in contact with skin.
H332 - Fatal if inhaled.
H314 - Causes severe skin burns and eye damage.



**Precautionary Statements - Prevention**
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P260 - Do not breathe dust, fume, gas, mist, vapors and spray.
P271 - Use only outdoors or in a well-ventilated area.
P284 - Wear respiratory protection.
P234 - Keep only in original packaging.

**Precautionary Statements - Response**
P321 - Specific treatment (see First-Aid Measures on SDS).
P310 - Immediately call a POISON CENTER or doctor/physician
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.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P363 - Wash contaminated clothing before reuse.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P330 - Rinse mouth.
P331 - Do NOT induce vomiting.
P390 - Absorb spillage to prevent material damage.

**Precautionary Statements - Storage**
P405 - Store locked up.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P406 - Store in corrosion resistant container with a resistant inner liner.

**Precautionary Statements - Disposal**
P501 - Dispose of contents/ container to an approved waste disposal plant.

**Unknown acute toxicity**
18-22 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
18-22 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
18-22 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**
No information available.

**Other information**
No information available.

## 3. Composition/information on ingredients

**Mixture**

| Chemical name | CAS No | Weight-% | Formula | Molecular Weight |
|---|---|---|---|---|
| Nitric acid | 7697-37-2 | 18-22 | HNO3 | 63.01 g/mol |
| Hydrofluoric acid | 7664-39-3 | 2-4 | HF | 20.01 g/mol |
| Water | 7732-18-5 | Balance | H2O | 18.02 g/mol |

## 4. First-aid measures

**Description of first aid measures**

**General advice** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Inhalation** IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur.

**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention. Remove contact lenses, if present and easy to do. Continue rinsing.

**Skin contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention.

**Ingestion** Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical attention.

**Self-protection of the first aider** Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe dust, fume, gas, mist, vapors and spray. Use personal protective equipment. See section 8 for more information. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Coughing and/ or wheezing. Difficulty in breathing. Burning sensation. Redness. May cause blindness. May cause redness and tearing of the eyes.

**Effects of Exposure** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

**Hazardous combustion products** Nitrogen oxides (NOx). Hydrogen fluoride.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** Yes.

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protective equipment.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Do not breathe dust, fume, gas, mist, vapors and spray. Use personal protective equipment. Keep people away from and upwind of spill/leak. Attention! Corrosive material.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and storage

**Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust, fume, gas, mist, vapors and spray. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse. Handle product only in closed system or provide appropriate exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Use personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse.

**General hygiene considerations** Wear protective gloves, eye protection and face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is

recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. Do not breathe dust, fume, gas, mist, vapors and spray. Do not get in eyes, on skin, or on clothing. Use personal protection recommended in Section 8. Take off immediately all contaminated clothing and wash it before reuse. Contaminated work clothing must not be allowed out of the workplace.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

## 8. Exposure controls/personal protection

**Control parameters**

**Exposure Limits**

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH |
|---|---|---|---|
| Nitric acid | STEL: 4 ppm<br>TWA: 2 ppm | TWA: 2 ppm<br>TWA: 5 mg/m$^3$<br>(vacated) TWA: 2 ppm<br>(vacated) TWA: 5 mg/m$^3$<br>(vacated) STEL: 4 ppm<br>(vacated) STEL: 10 mg/m$^3$ | IDLH: 25 ppm<br>TWA: 2 ppm<br>TWA: 5 mg/m$^3$<br>STEL: 4 ppm<br>STEL: 10 mg/m$^3$ |
| Hydrofluoric acid | TWA: 0.5 ppm FS*Ceiling: 2 ppm F | TWA: 3 ppm F<br>(vacated) TWA: 3 ppm F<br>(vacated) STEL: 6 ppm F | IDLH: 30 ppm<br>Ceiling: 6 ppm 15 min<br>Ceiling: 5 mg/m$^3$ 15 min<br>TWA: 3 ppm<br>TWA: 2.5 mg/m$^3$ |

**Note** See section 16 for terms and abbreviations.

**Other information on limit values** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Biological occupational exposure limits**

| Chemical name | ACGIH |
|---|---|
| Hydrofluoric acid | 3 mg/g creatinine - urine (Fluoride) - prior to shift 10 mg/g creatinine - urine (Fluoride) - end of shift |

**Appropriate engineering controls**

**Engineering controls** Showers
Eyewash stations
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Tight sealing safety goggles. Face protection shield.

**Hand protection** Wear suitable gloves. Impervious gloves.

**Skin and body protection** Chemical resistant apron. Wear fire/flame resistant/retardant clothing. Wear suitable protective clothing. Long sleeved clothing. Impervious clothing.

**Respiratory protection** Use appropriate respiratory protection. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material.

**General hygiene considerations** Do not eat, drink or smoke when using this product. Remove and wash contaminated

clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

## 9. Physical and chemical properties

**Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Liquid |
| **Appearance** | Clear |
| **Color** | Colorless |
| **Odor** | No information available |
| **Odor threshold** | No information available |

| Property | Values | Remarks • Method |
|---|---|---|
| **pH** | No data available | None known |
| **pH (as aqueous solution)** | No data available | None known |
| **Melting point / freezing point** | No data available | None known |
| **Initial boiling point and boiling range** | No data available | None known |
| **Flash point** | No data available | None known |
| **Evaporation rate** | No data available | None known |
| **Flammability** | No data available | None known |
| **Flammability Limit in Air** | | None known |
| **Upper flammability or explosive limits** | No data available | |
| **Lower flammability or explosive limits** | No data available | |
| **Vapor pressure** | No data available | None known |
| **Relative vapor density** | No data available | None known |
| **Relative density** | 1.09 | None known |
| **Water solubility** | No data available | None known |
| **Solubility(ies)** | No data available | None known |
| **Partition coefficient** | No data available | None known |
| **Autoignition temperature** | No data available | None known |
| **Decomposition temperature** | | None known |
| **Kinematic viscosity** | No data available | None known |
| **Dynamic viscosity** | No data available | None known |
| **Particle characteristics** | | |
| **Particle Size** | No data available | None known |
| **Particle Size Distribution** | No data available | None known |

**Other information**

| | |
|---|---|
| **Explosive properties** | No information available |
| **Oxidizing properties** | No information available |
| **Softening point** | No information available |
| **Molecular weight** | No information available |
| **VOC content** | No information available |
| **Liquid Density** | No information available |
| **Bulk density** | No information available |

## 10. Stability and reactivity

**Reactivity** No information available.

**Chemical stability** Stable under normal conditions.

**Possibility of hazardous reactions** None under normal processing.

**Conditions to avoid** Exposure to air or moisture over prolonged periods. Excessive heat.

**Incompatible materials** Strong oxidizing agents. Strong bases. Reducing agents. Combustible materials. Organic materials. Metals.

**Hazardous decomposition products** Corrosive vapors. Nitrogen oxides (NOx). Hydrogen fluoride.

## 11. Toxicological information

**Information on likely routes of exposure**

**Product Information**

**Inhalation** Specific test data for the substance or mixture is not available. Fatal if inhaled. (based on components). Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.

**Eye contact** Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness. May result in permanent damage including blindness.

**Skin contact** Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns. Toxic in contact with skin.

**Ingestion** Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Coughing and/ or wheezing. Difficulty in breathing. Burning sensation. Redness. May cause blindness. May cause redness and tearing of the eyes.

**Acute toxicity** Fatal if inhaled. Toxic if swallowed. Toxic in contact with skin.

**Numerical measures of toxicity**

**The following values are calculated based on chapter 3.1 of the GHS document**

| | |
|---|---|
| **ATEmix (oral)** | 242.427 mg/kg |
| **ATEmix (dermal)** | 242.427 mg/kg |
| **ATEmix (inhalation-gas)** | 650.00 mg/L |

**Unknown acute toxicity**

18-22 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
18-22 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
18-22 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

**Component Information**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Water | >90 ml/kg (Rat) | - | - |
| Nitric acid | - | - | = 67 ppm ( Rat ) 1 h |
| Hydrofluoric acid | - | - | = 1395 ppm ( Rat ) 1 h |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Classification based on data available for ingredients. Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes serious eye damage. Causes burns.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target organ effects** Respiratory system, Eyes, Skin, Teeth.

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

## 12. Ecological information

**Ecotoxicity** Based on available data, the classification criteria are not met.

**Aquatic ecotoxicity**

**Component Information**

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|---|---|---|---|
| Nitric acid | - | 96h LC50: = 72 mg/L (Gambusia affinis) | - | - |
| Hydrofluoric acid | - | - | - | 48h EC50: = 270 mg/L(Daphnia species) |

**Persistence and degradability** No information available.

**Bioaccumulation**

**Component Information**

| Chemical name | Partition coefficient |
|---|---|
| Nitric acid | -2.3 |
| Hydrofluoric acid | -1.4 |

**Other adverse effects** No information available.

## 13. Disposal considerations

**Disposal methods**

| | |
|---|---|
| **Waste from residues/unused products** | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
| **Contaminated packaging** | Do not reuse empty containers. Dispose of contents/containers in accordance with local regulations. |
| **US EPA Waste Number** | D002, U134. |
| **California Hazardous Waste Status** | This product contains one or more substances that are listed with the State of California as a hazardous waste. |

## 14. Transport information

**DOT** Regulated

| | |
|---|---|
| **UN number or ID number** | UN2922 |
| **Proper shipping name** | Corrosive liquids, toxic, n.o.s. (Nitric acid and Hydrofluoric acid) |
| **Transport hazard class(es)** | 8 |
| **Subsidiary hazard class** | (6.1) |
| **Packing group** | II |
| **DOT Marine Pollutant** | No |

**TDG** Regulated

| | |
|---|---|
| **UN number or ID number** | UN2922 |
| **UN proper shipping name** | Corrosive liquids, toxic, n.o.s. (Nitric acid and Hydrofluoric acid) |
| **Transport hazard class(es)** | 8 |
| **Subsidiary hazard class** | (6.1) |
| **Packing group** | II |

**ICAO (air)** Regulated

| | |
|---|---|
| **UN number or ID number** | UN2922 |
| **UN proper shipping name** | Corrosive liquids, toxic, n.o.s. (Nitric acid and Hydrofluoric acid) |
| **Transport hazard class(es)** | 8 |
| **Subsidiary hazard class** | (6.1) |
| **Packing group** | II |

**IATA** Regulated

| | |
|---|---|
| **UN number or ID number** | UN2922 |
| **UN proper shipping name** | Corrosive liquids, toxic, n.o.s. (Nitric acid and Hydrofluoric acid) |
| **Transport hazard class(es)** | 8 |
| **Subsidiary hazard class** | (6.1) |
| **Packing group** | II |

**IMDG** Regulated

| | |
|---|---|
| **UN number or ID number** | UN2922 |
| **UN proper shipping name** | Corrosive liquids, toxic, n.o.s. (Nitric acid and Hydrofluoric acid) |
| **Transport hazard class(es)** | 8 |
| **Subsidiary hazard class** | (6.1) |
| **Packing group** | II |

## 15. Regulatory information

**International Inventories**

| | |
|---|---|
| **TSCA** | Complies. |
| **DSL/NDSL** | Complies. |
| **EINECS/ELINCS** | Contact supplier for inventory compliance status. |

| | |
|---|---|
| **ENCS** | Contact supplier for inventory compliance status. |
| **IECSC** | Contact supplier for inventory compliance status. |
| **KECL** | Contact supplier for inventory compliance status. |
| **PICCS** | Contact supplier for inventory compliance status. |
| **AIIC** | Contact supplier for inventory compliance status. |
| **NZIoC** | Contact supplier for inventory compliance status. |

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances
**NZIoC** - New Zealand Inventory of Chemicals

**US Federal Regulations**

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical name | SARA 313 - Threshold Values % |
|---|---|
| Nitric acid<br>7697-37-2 | 1.0 |
| Hydrofluoric acid<br>7664-39-3 | 1.0 |

**SARA 311/312 Hazard Categories**
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---|---|---|---|---|
| Nitric acid | 1000 lb | - | - | X |
| Hydrofluoric acid | 100 lb | - | - | X |

**CAA (Clean Air Act)**
This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**CERCLA**
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

| Chemical name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | Reportable Quantity (RQ) |
|---|---|---|---|
| Nitric acid | 1000 lb | 1000 lb | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |
| Hydrofluoric acid | 100 lb | 100 lb | RQ 100 lb final RQ<br>RQ 45.4 kg final RQ |

**US State Regulations**

**California Proposition 65**
This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|---|---|---|---|
| Nitric acid | X | X | X |
| Hydrofluoric acid | X | X | X |

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

## 16. Other information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **NFPA** | **Health hazards** 3 | **Flammability** 0 | **Instability** 0 | **Special hazards** - |
| **HMIS** | **Health hazards** 3 | **Flammability** 0 | **Physical hazards** 0 | **Personal protection** X |

**Key or legend to abbreviations and acronyms used in the safety data sheet**

| **Legend** | **Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION** | | |
|---|---|---|---|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

**Revision date** 18-Nov-2026
**Revision Note** No information available.

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.**

**End of Safety Data Sheet**