

Revision date: 05.2015 Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation:	Hydrochloric acid, BDH Aristar [®] Plus Hydrochloric acid, BDH Aristar [®] Ultra
Product No.:	87003-251, 87003-253 87003-216, 87003-218, 87003-220
Other means of identification:	EU Index # 017-002-01-X

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

Relevant identified uses: For laboratory use only. Not for drug, food, or household use.

1.3. Details of the supplier of the safety data sheet

Manufactured for	VWR International, LLC Radnor Corporate Center 100 Matsonford Road Radnor, PA 19087-8660	VWR International Co 2360 Argentia Road Mississauga, ON L5N 5Z7 CANADA
Telephone	610.386.1700	800.932.5000

1.4. Emergency Telephone number

CHEMTREC	800.424.9300
CANUTEC	613.996.6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

For the full text of the H-Statement(s) and P-Statement(s) mentioned in this Section, see Section 16.

Hazard classes and hazard categories	Hazard statements
Skin corrosion, category 1B	H314
Specific target organ toxicity, single exposure, category 3	H335
Corrosive to metals, category 1	H290

2.2. GHS Label elements, including precautionary statements

Pictograms:



Signal word: Danger

Hazard statements	
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

Precautionary statements	
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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.
P310	Immediately call a POISON CENTER or doctor.
P501	Dispose of contents/containers in accordance with local, state and federal regulations.

2.4. Hazards not otherwise classified (HNOC) or not covered by GHS or WHIMS

None known.

SECTION 3: Composition / information on ingredients

3.1. Hazard components

Chemical name	Formula	Molecular weight	CAS#	Weight%
Hydrochloric acid	HCl	36.46	7647-01-0	20-38%
Water	H ₂ O	18.02	7732-18-5	Balance

SECTION 4: First aid measures

4.1. General information

In case of inhalation: This chemical is very toxic. Take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate protective equipment, use the buddy system). Remove source of contamination or move victim to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure. If breathing has stopped, trained personnel should begin artificial respiration (AR) or, if the heart has stopped, cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED) immediately. Avoid mouth-to-mouth contact by using mouth guards or shields. Quickly transport victim to an emergency care facility.

In case of skin contact: Avoid direct contact. Wear chemical protective clothing, if necessary. As quickly as possible, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately flush with lukewarm, gently flowing water for at least 30 minutes. If irritation persists, repeat flushing. DO NOT INTERRUPT FLUSHING. If necessary and it can be done safely, continue flushing during transport to emergency care facility. Quickly transport victim to an emergency care facility. Double bag, seal, label and leave contaminated clothing, shoes and leather goods at the scene for safe disposal. NOTE: Any skin contact will also involve significant inhalation exposure.

In case of eye contact: Avoid direct contact. Wear chemical protective gloves, if necessary. Immediately flush the

contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. If necessary, continue flushing during transport to emergency care facility. Take care not to rinse contaminated water into the unaffected eye or onto the face. Quickly transport victim to an emergency care facility. NOTE: Any eye contact will also involve significant inhalation exposure.

In case of ingestion: NEVER give anything by mouth if victim is rapidly losing consciousness, is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. If vomiting occurs naturally, have victim rinse mouth with water again. Quickly transport victim to an emergency care facility.

4.2. Most important symptoms and effects, both acute and delayed

VERY TOXIC. May be fatal if inhaled or swallowed. Concentrated hydrochloric acid solutions are very volatile and can readily release high concentrations of hydrogen chloride gas, which is very toxic and corrosive and poses a serious inhalation hazard. Even low concentrations are irritating and can cause coughing, pain, sore throat, inflammation and swelling in the upper respiratory tract. A severe exposure can cause lung injury; effects may be delayed. A single, high-level exposure may cause long-term airways hypersensitivity (RADS). CORROSIVE to the eyes and skin. Concentrated solutions cause severe eye burns and permanent eye injury, including blindness. Concentrated solutions cause severe skin burns and may cause permanent scarring. Dilute solutions can cause severe eye irritation and mild to severe skin irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Consult a doctor and/or the nearest Poison Control Centre for all exposures.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Hydrochloric acid does not burn. Use extinguishing agents compatible with hydrochloric acid and appropriate for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Hydrochloric acid is not combustible, but it is extremely corrosive and very toxic. Decomposes under intense fire conditions to form extremely flammable and potentially explosive hydrogen gas and very toxic and corrosive chlorine gas. Contact with common metals produces extremely flammable hydrogen gas. When heated or in a fire, toxic and corrosive hydrogen chloride gas is released. Hydrogen chloride is thermally stable up to approximately 1500 °C (2732 °F). Above this temperature, hydrogen chloride begins to dissociate into extremely flammable hydrogen gas and very toxic and corrosive chlorine gas. Heat from a fire can cause a rapid build-up of pressure inside closed containers, which may cause explosive rupture and a sudden release of large amounts of flammable and corrosive gases.

5.3. Special protective equipment for firefighters

Do not enter without wearing specialized equipment suitable for the situation. Firefighter's normal protective clothing (Bunker Gear) will not provide adequate protection. A full-body encapsulating chemical protective suit with positive pressure self-contained breathing apparatus (NIOSH approved or equivalent) may be necessary.

5.4. Hazardous combustion products

Hydrogen chloride gas, hydrogen gas, chlorine gas.

5.5. Advice for firefighters

Evacuate area and fight fire from a safe distance or protected location. Approach fire from upwind to avoid corrosive and very toxic hydrogen chloride and chlorine gases.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate all downwind, unprotected personnel. Restrict access to area until completion of clean-up. Ensure clean-up is conducted by fully-trained personnel only. Wear adequate personal protective equipment. Ventilate area.

6.2. Environmental precautions

Notify government occupational health and safety and environmental authorities.

6.3. Methods and material for containment and cleaning up

Do not touch spilled material. Keep upwind and out of low areas. Prevent material from entering sewers, waterways or confined spaces. Stop or reduce leak if it can be done without risk. Water fog or spray may be necessary to knock down vapors. Recover spilled hydrochloric acid if feasible. Contain spill with earth, sand, or absorbent material that does not react with spilled material.

Small spills: Contain and soak up spill with absorbent material that does not react with spilled chemical. Put material in suitable, covered, labeled containers. Flush area with water. Do not get water inside containers. Contaminated absorbent material may pose the same hazards as the spilled product.

Large spills: Contact fire and emergency services and supplier for advice.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

This material is VERY TOXIC (INHALATION HAZARD, may be fatal). It is also a SKIN CONTACT HAZARD and CORROSIVE to the eyes and skin. Before handling, it is very important that engineering controls are operating and that protective equipment requirements and personal hygiene measures are being followed. People working with this chemical should be properly trained regarding its hazards and its safe use.

Avoid generating hydrogen chloride vapors or mists. Prevent the release of vapors/mist into workplace air. Consider using closed handling systems for processes involving this material. If a closed handling system is not possible, use in the smallest possible amounts in a well-ventilated area, separate from the storage area.

In case of leaks or spills, escape-type respiratory protective equipment should be available in the work area. If hydrochloric acid is released, immediately put on a suitable respirator and leave the area until the severity of the release is determined. Immediately report leaks, spills or ventilation failures. Be aware of typical signs and symptoms of poisoning and first aid procedures. Any signs of illness should be reported immediately to supervisory personnel. Seek medical attention for all exposures even if an exposure did not seem excessive. Symptoms of a severe exposure can be delayed.

Do not use near welding operations, flames or hot surfaces. Do not use with incompatible materials such as oxidizing agents, reducing agents, metals, bases, sulfuric acid, perchloric acid and many more. See Section 10 for more information. Inspect containers for leaks before handling. Prevent damage to containers. Label containers. Open containers carefully on a stable surface. Keep containers tightly closed when not in use. Assume that empty containers contain residues which are hazardous. Do not perform any welding, cutting, soldering, drilling or other hot work on an empty vessel, container or piping until all liquid and vapors have been cleared.

To avoid splashing, carefully dispense into sturdy containers made of compatible materials. Secondary protective containers must be used when this material is being carried. Use corrosion-resistant transfer equipment when dispensing. Whenever possible, use self-closing, portable containers for dispensing small amounts of this material. Never transfer liquid by pressurizing original container with air or inert gas. Never add water to a corrosive. Always add corrosives to water. When mixing with water, stir small amounts in slowly. Use cold water to prevent excessive heat generation.

Practice good housekeeping. Maintain handling equipment. Comply with applicable regulations. Have suitable emergency equipment for fires, spills and leaks readily available.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Keep quantity stored as small as possible. Drums should be vented when received and then at least weekly to relieve internal pressure. Store away from incompatible materials, such as oxidizing agents, reducing agents, bases and metals. See Section 10 for more information.

Use corrosion-resistant structural materials and lighting and ventilation systems in the storage area. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Keep storage area separate from work areas, eating areas and protective equipment storage. Post warning signs. Inspect periodically for damage or leaks. Consider leak detection system with an alarm. Provide raised sills or ramps at doorways or create a trench which drains to a safe location. Floors should not allow liquids to penetrate.

Inspect all incoming containers to make sure they are properly labeled and not damaged. Store containers at a convenient height for handling, below eye level if possible. Avoid stacking. Keep containers tightly closed when not in use and when empty. Protect from damage. Keep empty containers in separate storage area. Empty containers may contain hazardous residues. Keep closed.

Contain spills or leaks by storing in trays made from compatible materials. Keep absorbents for leaks and spills readily available. Storage tanks should be above ground, over an area sealed on the bottom and diked to hold entire contents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical Name	Limit Value Type	Exposure Limit Value	Source
Hydrogen chloride	TLV-C	2 ppm	USA ACGIH
	PEL-T-C, REL-C	5 ppm (7 mg/m ³)	USA OSHA, USA NIOSH
Water	None listed.	Not applicable	Not applicable

8.2. Exposure controls

Appropriate engineering controls: Engineering methods to control hazardous conditions are preferred. Methods include mechanical ventilation (dilution and local exhaust), process or personnel enclosure, control of process conditions, and process modification (e.g., substitution of a less hazardous material). Administrative controls and personal protective equipment may also be required.

Because of the high potential hazard associated with this substance, stringent control measures such as enclosure or isolation are recommended when dealing with large quantities.

Use corrosion-resistant ventilation systems separate from other exhaust ventilation systems. Consider down-draft general exhaust ventilation in potential high concentration areas such as unloading stations, cylinder, drum or carboy filling stations, treatment vats, and waste disposal areas. Exhaust directly to the outside. Local exhaust ventilation is usually required. Supply sufficient replacement air to make up for air removed by exhaust system. Cleaning of contaminated exhaust air before release to the outdoors is usually necessary.

Personal protective equipment:

Eye/face protection: Gas-tight chemical safety goggles. A face shield may also be necessary.

Skin protection: Chemical protective gloves, coveralls, boots, and/or other chemical protective clothing to prevent all possible skin contact. A chemical protective acid-resistant full-body encapsulating suit and respiratory protection may be required. Have a safety shower/eye-wash fountain readily available in the immediate work area.

Respiratory protection: NIOSH RECOMMENDATIONS FOR HYDROGEN CHLORIDE CONCENTRATIONS IN AIR:

UP TO 50 ppm: Chemical cartridge respirator with cartridge(s) to protect against hydrogen chloride; or gas mask with canister to protect against hydrogen chloride; or powered air-purifying respirator with cartridge(s) to protect against hydrogen chloride; or SAR; or full face piece SCBA.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATION OR IDLH CONDITIONS: Positive pressure, full face piece SCBA; or positive pressure, full face piece SAR with an auxiliary positive pressure SCBA.

ESCAPE: Gas mask with acid gas canister; or escape-type SCBA.

Hygiene measures: Remove contaminated clothing immediately. Keep contaminated clothing in closed containers. Discard or launder before re-wearing. Inform laundry personnel of contaminant's hazards. Do not eat or drink in work areas.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

a) Appearance:	
Physical state	Liquid
Color	Clear, colorless to slight yellow
b) Odor	Strong – pungent odor
c) Odor threshold	0.13-10.1 ppm
d) pH	1.1 (0.1M solution); 0.1 (1M solution) at 25°C
e) Melting point/freezing point	20.69% (w/w): -62.25°C (-80.1°F); 31.24% (w/w): -46.2°C (-51.2°F); 35.2% (w/w): -35°C (-31°F)
f) Boiling point/boiling range	20.2% (w/w): 108.6°C (227.4°F) (constant boiling mixture)
g) Flash point	Not combustible (does not burn).
h) Evaporation rate	Hydrochloric acid solutions of greater than 28% are very volatile and can readily release high concentrations of hydrogen chloride gas.
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability/explosive limits	Not applicable
k) Vapor pressure (partial pressure, at 20 °C)	20% (w/w): 0.027 kPa (0.205 mm Hg); 30% (w/w): 1.41 kPa (10.6 mm Hg); 36% (w/w): 14.1 kPa (105.5 mm Hg); 38% (w/w): 28.0 kPa (210 mm Hg)
l) Vapor density	1.3 (approx. 36%) (air = 1)
m) Relative density (at 20 °C)	20% (w/w): 1.0980 g/cm ³ ; 30% (w/w): 1.1492 g/cm ³ ; 36% (w/w): 1.1791 g/cm ³ ; 38% (w/w): 1.1886 g/cm ³
n) Solubilities	Soluble in all proportions in water. Very soluble in ethanol, methanol, dioxane and tetrahydrofuran; insoluble in hydrocarbons.
o) Partition coefficient (n-Octanol/Water)	Log P(oct) = 0.3 (36% hydrochloric acid)
p) Auto-ignition temperature	Not applicable
q) Decomposition temperature	No information available.
r) Viscosity (dynamic, at 20 °C)	20% (w/w): 1.36 mPa.s (1.36 centipoises); 30% (w/w): 1.71 mPa.s (1.71 centipoises); 36% (w/w): 2.0 mPa.s (2.0 centipoises) (36%); 38% (w/w): 2.11 mPa.s (2.11 centipoises)
s) Explosive properties	Not applicable
t) Oxidizing properties	Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Large amounts of heat can be released when concentrated hydrochloric acid is mixed with water or with organic solvents.

10.2. Chemical stability

Normally stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur. See Section 10.5 for incompatible materials.

10.4. Conditions to avoid

High temperatures.

10.5. Incompatible materials

METALS (e.g. steel, copper, brass or zinc) - extremely flammable hydrogen gas is released on reaction with many common metals.

SODIUM - explodes on contact.

BASES (e.g. sodium hydroxide, potassium hydroxide, ammonium hydroxide, amines, 2-aminoethanol or thyleneimine) - react violently generating heat and pressure.

FORMALDEHYDE - can react to form the potent human carcinogen, bis(chloromethyl) ether.

OXIDIZING AGENTS (e.g. hydrogen peroxide, chlorates or chlorites) - may react generating heat and very toxic and corrosive chlorine gas.

REDUCING AGENTS (e.g. metal hydrides) - reaction may produce extremely flammable hydrogen gas, heat and fire.

PERCHLORIC ACID - decomposes spontaneously and violently.

SULFURIC ACID - dehydrates concentrated hydrochloric acid to release some 250 volumes of hydrogen chloride gas. In a closed tank, sufficient gas may be formed to cause the tank to burst violently.

POTASSIUM PERMANGANATE - a sharp explosion may be produced on adding concentrated hydrochloric acid to potassium permanganate.

ALDEHYDES or EPOXIDES - hydrochloric acid may catalyze violent polymerization, generating heat and pressure.

FLUORINE - incandesces on contact. Aqueous solutions produce flame.

ACETYLIDES (e.g. cesium acetylide or rubidium acetylide), BORIDES (e.g. magnesium boride), CARBIDES (e.g. rubidium carbide), PHOSPHIDE (e.g. uranium phosphide) or SILICIDES (e.g. lithium silicide) - react producing spontaneously flammable gases (e.g. acetylene, borane, phosphine or silane, respectively).

HEXALITHIUM DISILICIDE - incandesces in concentrated acid; flammable silanes (silicon hydrides) are evolved on contact with dilute acid.

OTHER - Mixing 36% hydrochloric acid with acetic anhydride or chlorosulfonic acid or oleum or propiolactone or propylene oxide or vinyl acetate in a closed container caused the temperature and pressure to increase.

10.6. Hazardous decomposition products

None reported.

SECTION 11: Toxicology

11.1. Information on toxicological effects

Acute toxicity

Oral LD50: No information available.

Inhalation LC50: 3124 ppm/2H (rat); 1108 ppm/1H (mouse)

Dermal LD50: No information available.

Other information on acute toxicity: RTECS# MW4025000

Skin corrosion/irritation: Hydrochloric acid is corrosive. Corrosive materials are capable of producing severe burns, blisters, ulcers and permanent scarring, depending on the concentration of the solution and the duration of contact. Any skin contact is likely to involve significant inhalation exposure. Skin absorption is not expected to occur to a significant extent.

Serious eye damage/eye irritation: Hydrochloric acid is corrosive. Corrosive materials are capable of producing severe eye burns, and permanent injury, including blindness, depending on the concentration of the solutions and duration of contact. Any eye contact may also involve significant inhalation exposure.

Respiratory or skin sensitization: Hydrochloric acid solutions can readily release high concentrations of hydrogen chloride gas, which is very toxic and corrosive and poses a serious inhalation hazard. The gas absorbs moisture from the air and can form an acid fog in damp air. The gas is very soluble in water and reacts with the surface of the upper respiratory tract where the majority is neutralized and not likely to cause effects on the lungs. However, higher penetration of the respiratory system can be expected with higher breathing rates and from higher concentrations.

Germ cell mutagenicity: No information available.

Carcinogenicity: There is insufficient evidence available to conclude that hydrochloric acid is a carcinogen.

Reproductive toxicity: No information available.

Specific target organ toxicity-single exposure: May cause respiratory irritation.

Specific target organ toxicity-repeated exposure: No information available.

Aspiration hazard: No information available.

Additional information: A single, high-level exposure may cause long-term airways hypersensitivity (RADS). Prolonged or repeated inhalation may cause nosebleeds, nasal congestion, erosion of the teeth, perforation of the nasal septum, chest pains, and bronchitis. Repeated exposure may cause conjunctivitis or dermatitis. To the best of our knowledge the chronic toxicity of this substance has not been fully investigated.

SECTION 12: Ecological information

12.1. Ecotoxicity: Shrimp: LC50 = 100-330 ppm/48H (salt water); Shore crab (*Carcinus maenas*): LC50 = 240 mg/L/48H (salt water, 15 °C)

12.2. Persistence and degradability: Persistent. Hydrogen chloride dissociates readily in water to chloride and hydronium ions, decreasing the pH of the water.

12.3. Bioaccumulative potential: Bioaccumulation is not anticipated for inorganic compounds that are miscible with water.

12.4. Mobility in soil: Hydrogen chloride dissociates into chloride and hydronium ions in moist soil.

12.5. Results of PBT and vPvB assessment: Not applicable for inorganic substances.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Review federal, provincial and local government requirements prior to disposal. Store material for disposal as indicated in Storage Conditions. Waste treatment procedures must only be performed by trained, experienced personnel using appropriate protective equipment in approved treatment facilities. Disposal of neutralized waste by secure landfill may be acceptable.

SECTION 14: Transport information

Land Transport DOT (U.S.)

UN Number	UN1789
Proper Shipping Name	HYDROCHLORIC ACID
Class(es)	8
Hazard Label(s)	Corrosive
Packing Group	II
Environmental Hazard(s)	--

Sea Transport IMDG

UN Number	UN1789
Proper Shipping Name	HYDROCHLORIC ACID
Class(es)	8
Hazard Label(s)	Corrosive
EMS- No.	F-A, S-B
Packing Group	II
Environmental Hazard(s)	--
Segregation Group	Category C

Air Transport IATA

UN Number	UN1789
Proper Shipping Name	HYDROCHLORIC ACID
Class(es)	8
Hazard Label(s)	Corrosive
Packing Group	II

SECTION 15: Regulatory information

OSHA Hazards: CAS #7647-01-0 meets criteria for hazardous material, as defined by 29 CFR 1910.1200.

SARA 302 Extremely Hazardous Substances: This material contains Hydrochloric acid (CAS# 7647-01-0), which is subject to the reporting requirement of 500 lbs RQ (Hydrogen chloride, gas only).

SARA 313 (TRI reporting): This material contains Hydrochloric acid (CAS# 7647-01-0), which is subject to the reporting requirements of Section 313 of SARA Title III in aerosol forms.

SARA 311/312 Hazardous Chemicals: This material contains Hydrochloric acid (CAS# 7647-01-0).

Massachusetts Right-To-Know Substance List: CAS# 7647-01-0 is listed, 100 lbs RQ.

Pennsylvania Right-To-Know Hazardous Substances: CAS# 7647-01-0 is listed, E (environmental hazard).

New Jersey Worker and Community Right-To-Know Components: CAS# 7647-01-0 is listed, RTK# 1012.

California Proposition 65: CAS# 7647-01-0 is not subject to this act. CAS# 7732-18-5 is not subject to this act.

Inventory Status:

Canada DSL/NDSL Inventory List: CAS# 7647-01-0 is listed. CAS# 7732-18-5 is listed.

US TSCA Inventory List: CAS# 7647-01-0 is listed. CAS# 7732-18-5 is listed.

EINECS, ELINCS or NLP: CAS# 7647-01-0 is listed, EC# 231-595-7. CAS# 7732-18-5 is listed, EC# 231-791-2.

SECTION 16: Other information

Full text of H-Statement(s) and P-Statement(s)

H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H290	May be corrosive to metals.
P234	Keep only in original container.
P260	Do not breathe fumes/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P271	Use only in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P406	Store in corrosion resistant container with a resistant inner liner.
P501	Dispose of contents/containers in accordance with local, state and federal regulations.

Canadian Carcinogenicity hazard class: Not applicable.

PHNOC hazard class: Not applicable.

HHNOC hazard class: Not applicable.

Biohazardous Infectious Materials hazard class: Not applicable.

NFPA Rating:

Health: 3
Flammability: 0
Reactivity: 1
Special Hazard: Not applicable



DISCLAIMER

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and its Affiliates shall not be held liable for any damage resulting from handling.