

## Section 1 Chemical Product and Company Information

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**Innovating Science**<sup>®</sup> by Aldon Corporation  
 "cutting edge science for the classroom"

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**CHEMTREC 24 Hour Emergency**  
**Phone Number (800) 424-9300**  
 For laboratory use only.  
 Not for drug, food or household use.

<b>Product</b>	<b>NITRIC ACID, 70%</b>
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<b>Synonyms</b>	Azotic Acid
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## Section 2 Hazards Identification

**Signal word:** DANGER

**Pictograms:** GHS03 / GHS05

**Target organs:** Eyes, Skin, Respiratory system, Teeth



**GHS Classification:**

Oxidizing liquid (Category 3)

Skin corrosion (Category 1A)

Eye damage (Category 1)

**GHS Label information: Hazard statement:**

H272: May intensify fire; oxidizer.

H314: Causes severe skin burns and eye damage.

**Supplementary information:**

Remove cap slowly to release pressure.

**Precautionary statement:**

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P220: Keep away from clothing/incompatible/combustible materials.

P221: Take any precaution to avoid mixing with combustibles/acids/oxidizers.

P260: Do not breathe mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish.

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/shower.

P304+P340: IF INHALED: Remove person to fresh air and keep 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.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Nitric acid	7697-37-2	68-70%	231-714-2
Water	7732-18-5	30-32%	231-791-2

## Section 4 First Aid Measures

**INGESTION:** MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** MAY BE HARMFUL IF INHALED. MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** CAUSES SEVERE EYE BURNS. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire Fighting Measures

**Suitable Extinguishing Media:** Carbon dioxide, dry chemical, dry sand, alcohol foam.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

## Section 6 Accidental Release Measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, well-ventilated area away from incompatible substances. Protect from physical damage and sunlight.

## Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Nitric acid	TWA: 2 ppm STEL: 4 ppm	TWA: 2 ppm	TWA: 2 ppm STEL: 4 ppm

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical &amp; Chemical Properties

**Appearance:** Clear to pale yellow liquid.

**Odor:** Irritating, suffocating odor.

**Odor threshold:** Data not available.

**pH:** <1 (1% solution)

**Melting / Freezing point:** -22 to -41°C (-7.6 to -42°F)

**Boiling point:** 120-122°C (248-252°F)

**Flash point:** Non flammable

**Evaporation rate ( = 1):** Data not available

**Flammability (solid/gas):** Data not available.

**Explosion limits: Lower / Upper:** Data not available

**Vapor pressure (mm Hg):** 49-55 @ 25°C

**Vapor density (Air = 1):** Data not available

**Relative density (Specific gravity):** 1.37-1.42

**Solubility(ies):** Soluble in water.

**Partition coefficient:** Data not available

**Auto-ignition temperature:** Data not available

**Decomposition temperature:** Data not available.

**Viscosity:** Data not available.

**Molecular formula:** HNO<sub>3</sub>

**Molecular weight:** 63.01

## Section 10 Stability &amp; Reactivity

**Chemical stability:** Stable

**Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Containers may burst when heated. Avoid contact with water.

**Incompatible materials:** Reacts with a wide variety of metals (especially when powdered), bases, carbides, sulfides, fulminates, picrates, turpentine and combustible materials.

**Hazardous decomposition products:** Nitrogen oxides and hydrogen gas.

## Section 11 Toxicological Information

**Acute toxicity:** Oral-human LD<sub>50</sub>: 430 mg/kg ; Inhalation-rat LC50: 0.8 mg/L

**Skin corrosion/irritation:** Skin-rabbit - Corrosive

**Serious eye damage/irritation:** Eyes-rabbit - Corrosive

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

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.

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.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: Burning sensation, cough, labored breathing, shortness of breath, sore throat. Symptoms may be delayed.

Ingestion: Sore throat, abdominal pain, burning sensation in the throat and chest, vomiting, shock or collapse.

Skin: Serious skin burns, pain, yellow staining of the skin.

Eyes: Redness, pain, burns.

**Signs and symptoms of exposure:** Effects may be delayed. Large doses may cause: conversion of hemoglobin to methemoglobin, producing cyanosis, marked fall in blood pressure, leading to collapse, coma, and possibly death. Exercise appropriate procedures to minimize potential hazards.

**Additional information:** RTECS #: QU5775000

## Section 12 Ecological Information

**Toxicity to fish:** *Gambusia affinis* (fish, fresh water), LC50 = 72 mg/L/96 hours

**Toxicity to daphnia and other aquatic invertebrates:** *Daphnia magna* (Crustacea), EC<sub>50</sub> = 107 mg/L

**Toxicity to algae:** No data available

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**PBT and vPvB assessment:** No data available

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport Information (US DOT / CANADA TDG)

**UN/NA number:** UN2031

**Shipping name:** Nitric acid

**Hazard class:** 8, (5.1)

**Packing group:** II

**Reportable Quantity:** 1,000 lbs (454 kg)

**Marine pollutant:** No

**Exceptions:** No exceptions

**2012 ERG Guide #** 157

## Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Nitric acid	Listed	1,000 lbs (454 kg)	D001	Listed	Not listed	 C ; E

## Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.