Safety Data Sheet

Nitric Acid 69%

SECTION 1: Identification

1.1 GHS Product identifier

Product name	Nitric Acid 69%

1.2 Other means of identification

Azotic acid; Engraver's acid; Aqua fortis

1.3 Recommended use of the chemical and restrictions on use

For laboratory and manufacturing use only.

1.4 Supplier's details

Name	High Purity Products
Address	14546 N. Lombard St. Portland OR 97203 USA
Telephone	503-227-1616
Fax	503-221-6410
email	quality@highpp.com

1.5 Emergency phone number

CHEMTREC 1-800-424-9300

SECTION 2: Hazard identification

General hazard statement

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

2.1 Classification of the substance or mixture

GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)

- Oxidizing liquid, Cat. 2
- Skin corrosion/irritation, Cat. 1B
- Eye damage/irritation, Cat. 1
- Corrosive to metals, Cat. 1

- Acute Toxicity, inhalation, Cat. 1

2.2 GHS label elements, including precautionary statements

Pictogram

Signal word **Danger**

Hazard statement(s)

H272	May intensify fire; oxidizer
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled

Precautionary statement(s)

P220	Keep away from clothing and other combustible materials.
P234	Keep only in original container.
P260	Do not breathe mist or vapors.
P264	Wash thoroughly after handling.
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/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.
P308+P311	IF exposed or concerned: Call POISON CENTER.
P390	Absorb spillage to prevent material-damage.
P405	Store locked up.

SECTION 3: Composition/information on ingredients

3.1 Mixture

Components	CAS #	Percent (weight)
Nitric Acid	7697-37-2	68-70%
Water	7732-18-5	30-32%

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled	Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.
In case of skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower for at least 15 minutes. Call a poison center or doctor if irritation develops or persists. Wash contaminated clothing before reuse.

In case of eye contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.
If swallowed	Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Never give anything by mouth to an unconscious person.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical
Nitric acid: Nitrogen oxides (NOx)

5.3 Special protective actions for fire-fighters
Avoid any skin contact. Effects of contact or inhalation may be delayed. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Emits toxic fumes (nitrogen oxides) under fire conditions. (See also Stability and Reactivity section).

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection if necessary. Avoid breathing gas, mist, vapors, or spray. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Neutralize spill with sodium bicarbonate or lime. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Nitric Acid:
TWA (Inhalation): 2 ppm (NIOSH)

ST (Inhalation): 4 ppm (NIOSH)

8.2 Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms

Eye/face protection

Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Ensure that eyewash stations and/or safety showers are close to the workstation location if working with concentrated product.

Skin protection

Wear protective gloves. Consult manufacturer specifications for further information.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH.

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Liquid
Appearance	Clear liquid
Color	Clear, colorless
Odor	Pungent
Odor threshold	No data available.
pH	<1
Melting point/freezing point	-41 °C
Boiling point or initial boiling point and boiling range	120.5 °C
Flash point	Not applicable
Evaporation rate	No data available.
Flammability	Not flammable
Vapor pressure	7.051 mmHg at 20°C
Relative vapor density	2.3 (air =1)
Density and/or relative density	1.411
Solubility	Soluble in water
Partition coefficient n-octanol/water (log value)	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Kinematic viscosity	No data available.
Oxidizing properties	Strong oxidizing agent.

SECTION 10: Stability and reactivity

10.1 Reactivity

Contact with incompatible materials. Sources of ignition. Exposure to heat.

10.2 Chemical stability

May intensify fire; oxidizer.

10.3 Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4 Conditions to avoid
Heat, flames and sparks. Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials
Alkali metals, organic materials, acetic anhydride, acetonitrile, alcohols, acrylonitrile.

10.6 Hazardous decomposition products
Nitrogen oxides

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
LC50 – inhalation – rat - 67 ppm/4H (red fuming)

Skin corrosion/irritation
Causes severe skin burns. Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Serious eye damage/irritation
Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Respiratory or skin sensitization
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity
Not considered a mutagen.

Carcinogenicity
Not considered a carcinogen.

Reproductive toxicity
Route/Organism: oral/rat
Dose: 21150 mg/kg (1-21D pregnant)
Effect: Reproductive: Effects on embryo or fetus: Fetotoxicity (except death, e.g., stunted fetus)

STOT-single exposure
Causes damage to organs.
May cause respiratory irritation.
May cause drowsiness or dizziness
Lungs, Teeth, Cardiovascular system

STOT-repeated exposure
Causes damage to organs through prolonged or repeated exposure
Lungs, Teeth, Cardiovascular system

Aspiration hazard
No data available.

SECTION 12: Ecological information

Toxicity
LC50 – Gambusia affinis – 72 mg/L – 96h
LC50 - Species: Carcinus maenas - 180 mg/L- 48 hr

Persistence and degradability
Miscible with water Persistence is unlikely based on information available.

Bioaccumulative potential
No data available.

Mobility in soil
Will likely be mobile in the environment due to its water solubility.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
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.
EPA Waste Code: **D001, D002**

SECTION 14: Transport information

DOT (US)
UN Number: UN2031
Class: 8, 5.1
Packing Group: II
Proper Shipping Name: Nitric acid (with 69% Nitric Acid)
Reportable quantity (RQ): 1,000 lbs
Marine pollutant: No

IMDG
UN Number: UN2031
Class: 8, 5.1
Packing Group: II
Proper Shipping Name: Nitric acid (with 69% Nitric Acid)

IATA
UN Number: UN2031
Class: 8, 5.1
Packing Group: II
Proper Shipping Name: Nitric acid (with 69% Nitric Acid)

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

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

Massachusetts Right To Know Components

Chemical name: Nitric acid
CAS number: 7697-37-2

New Jersey Right To Know Components
Common name: NITRIC ACID
CAS number: 7697-37-2

Pennsylvania Right To Know Components
Chemical name: Nitric acid
CAS number: 7697-37-2

Canadian Domestic Substances List (DSL)
Chemical name: Nitric acid
CAS: 7697-37-2

EPCRA Section 302 (EHS) TPQ Extremely Hazardous Substances
Nitric Acid: 1,000 lbs.

EPCRA Section 304 EHS RQ Reportable Quantities
Nitric Acid: 1,000 lbs.

CERCLA RQ Hazardous Substances
Nitric Acid: 1,000 lbs.

EPCRA Section 313 Toxic chemicals
Nitric Acid

HMIS Rating

Nitric Acid 69%	
HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

NFPA Rating

SECTION 16: Other information

Disclaimer:
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