Safety Data Sheet · OSHA HCS 2024

Nitric Acid 70% ACS Grade - Low Particle

ACS Grade · 70%

Standard	Revised	Emergency
OSHA HCS 2024 · GHS Rev. 7	2026-11-12	Chemtel 1-800-255-3924 (24/7)

1 Identification

Product Identifier	Nitric Acid 70% ACS Grade - Low Particle
Grade	ACS Grade
Concentration	70% w/w
CAS Number	7697-37-2
Chemical Formula	HNO3
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Synonyms	Aqua fortis; hydrogen nitrate; azotic acid
Recommended Use	Laboratory and analytical reagent (ACS grade); metal etching, cleaning and passivation; chemical synthesis.
Restrictions on Use	For industrial, professional and laboratory use only. Never mix with organic solvents, alcohols or other combustible materials.

2 Hazard Identification



Oxidizer



Corrosive



Acute toxicity

Classification

Oxidizing liquids, Category 3

Corrosive to metals, Category 1

Skin corrosion/irritation, Category 1

Serious eye damage/eye irritation, Category 1

Acute toxicity (inhalation), Category 3

Signal Word

Danger

Hazard Statements

EUH071 Corrosive to the respiratory tract

H272 May intensify fire; oxidizer

H290 May be corrosive to metals

H314 Causes severe skin burns and eye damage

H331 Toxic if inhaled

Precautionary Statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220 Keep away from clothing and other combustible materials.

P234 Keep only in original packaging.

P260 Do not breathe dust, fume, gas, mist, vapors or spray.

P264 Wash hands and face thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves, protective clothing, and eye/face protection.

P284 Wear respiratory 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 or 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.

P311 Call a POISON CENTER or doctor.

P320 Specific treatment is urgent (see first-aid information on this label).

P321 Specific treatment (see first-aid information on this label).

P363 Wash contaminated clothing before reuse.

P370+P378 In case of fire: Use water spray or fog in large quantities to extinguish.

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 a corrosion resistant container with a resistant inner liner.

P501 Dispose of contents and container in accordance with local, regional, national, and international regulations.

Classification, hazard (H) and precautionary (P) statements and pictograms per OSHA HCS 2024 (29 CFR 1910.1200, Appendices A–C), aligned with GHS Rev. 7.

3 Composition / Information on Ingredients

Component	CAS No.	Formula	Concentration
Nitric acid	7697-37-2	HNO3	69-70% (w/w)

Concentrations are nominal; lot-specific values appear on the Certificate of Analysis. Components not contributing to classification are omitted.

4 First-Aid Measures

Eyes Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.

Skin Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.

Inhalation Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

Most Important Symptoms and Effects	Causes burns to the skin, eyes and mucous membranes; eye contact may cause permanent damage including blindness; ingestion burns the mouth, throat and stomach. Inhalation may irritate the nose, throat and respiratory tract (coughing, sore throat). Inhalation may cause coughing, shortness of breath and headache; high concentrations may cause systemic poisoning.
Immediate Medical Attention and Special Treatment	Immediate medical attention is required after eye or skin contact or ingestion; tissue damage may continue after exposure ends. Get immediate medical attention after any significant exposure; symptoms may be delayed.

5 Fire-Fighting Measures

Suitable Extinguishing Media	Water spray or fog in large quantities. Do NOT use dry chemical or CO2.
Unsuitable Extinguishing Media	Do not use dry chemical, CO2, or foam.
Specific Hazards Arising from the Chemical	Oxidizer: may intensify fire and ignite combustible materials (wood, paper, oil). Fire may release corrosive and toxic gases. Containers may rupture when heated.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Hazardous Combustion Products	Nitrogen oxides, including nitrogen dioxide, and oxygen. Contact with metals releases hydrogen and nitrous gases.

6 Accidental Release Measures

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Hazard-Specific Precautions	Keep away from combustible materials. Do not absorb with sawdust, paper or other combustible absorbents. Do not touch spilled material without protective equipment. Neutralize residue only with a method suitable for the material, then collect.
Environmental Precautions	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7 Handling and Storage

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Use corrosion-resistant containers. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.
Specific Storage Precautions	Store away from combustible and organic materials, reducing agents, bases and metals, and not on wooden floors or pallets. Use glass, PTFE, PVC or stainless-steel containers, never ordinary metal containers. Protect from sunlight and heat.

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value
OSHA PEL	2 ppm TWA
ACGIH TLV	2 ppm TWA / 4 ppm STEL
NIOSH REL	2 ppm TWA / 4 ppm STEL
IDLH	25 ppm

Engineering Controls	Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.
Eye/Face Protection	Wear chemical safety goggles or face shield.
Skin Protection	Wear chemical-resistant gloves and protective clothing.
Respiratory Protection	Use a NIOSH-approved full-facepiece respirator with cartridges or a canister providing protection against this substance, or a supplied-air respirator. For emergencies, unknown concentrations or IDLH conditions, use a pressure-demand self-contained breathing apparatus. Ensure local exhaust ventilation.

Exposure limits sourced from NIOSH Pocket Guide, OSHA 29 CFR 1910.1000 and ACGIH TLVs.

9 Physical & Chemical Properties

Appearance	Colorless to pale yellow liquid
Odor	Pungent, acrid (choking) odor
Odor Threshold	No data available
pH	< 1 at 20 °C
Melting Point / Freezing Point	-41 °C (-42 °F), freezing point (aqueous solution)
Boiling Point	119.3 to 120.5 °C (247 to 249 °F) (aqueous solution)
Flash Point	Not applicable
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	No data available
Vapor Pressure	7–8 mmHg (9.4–11 hPa) at 20 °C
Vapor Density	2.2–2.3 (air = 1)
Relative Density	1.413
Solubility	Miscible with water in all proportions (releases heat)
Partition Coefficient (n-octanol/water)	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Particle Characteristics	Not applicable
Form	Liquid

Density	1.404 - 1.414

Values shown reflect product-specific canonical data. Lot-specific ranges may vary; see the Certificate of Analysis for the shipped lot.

10 Stability and Reactivity

Reactivity	Oxidizer: reacts with combustible and reducing materials, which may cause fire. May be corrosive to metals.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat and direct sunlight (decomposes and releases nitrogen dioxide), contact with combustible materials and metals.
Incompatible Materials	Combustible and organic materials (wood, paper, oils); alcohols, acetone, acetic anhydride, acetonitrile and acrylonitrile; reducing agents; bases; alkali metals, metal powders and most metals (releases hydrogen and nitrogen oxides); cyanides and sulfides.
Hazardous Decomposition Products	Nitrogen oxides, including nitrogen dioxide, and oxygen. Contact with metals releases hydrogen and nitrous gases.

11 Toxicological Information

See below for route-specific acute toxicity data.

Likely Routes of Exposure	Inhalation, skin contact, eye contact, ingestion.
Symptoms	Causes burns to the skin, eyes and mucous membranes; eye contact may cause permanent damage including blindness; ingestion burns the mouth, throat and stomach. Inhalation may irritate the nose, throat and respiratory tract (coughing, sore throat). Inhalation may cause coughing, shortness of breath and headache; high concentrations may cause systemic poisoning.
Delayed and Chronic Effects	No delayed or chronic effects identified beyond the classification in Section 2.

Route	Value
LC50 Inhalation (rat, 4h)	> 2.65 mg/L

Carcinogen Classification

Agency	Status
IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12 Ecological Information

Ecotoxicity	Daphnia EC50: ~ 100 mg/L (48 h, Marine invertebrates — pH-driven; Carcinus maenas 180, Asterias rubens 100–300 mg/L); Fish LC50: ~ 100 mg/L (48 h, Agonus cataphractus — pH-driven; range 100–330 mg/L)
Persistence & Degradability	Not applicable (inorganic; dissociates to nitrate and hydronium ions)
Bioaccumulative Potential	log Kow −0.21
Mobility in Soil	High; mobile toward groundwater after partial neutralization

13 Disposal Considerations

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

If discarded, this material may be an ignitable hazardous waste as an oxidizer (EPA RCRA D001, 40 CFR 261.21(a)(4)). If discarded, this material may be a corrosive hazardous waste (EPA RCRA D002, 40 CFR 261.22): aqueous with pH ≤ 2 or ≥ 12.5, or a liquid that corrodes steel at more than 6.35 mm per year. The waste generator must make the final hazardous-waste determination.

14 Transport Information

US DOT (49 CFR)

UN Number	UN2031
Proper Shipping Name	Nitric acid, other than red fuming, with at least 65 percent, but not more than 70 percent nitric acid
Hazard Class	8
Subsidiary Hazard Class	5.1
Packing Group	II
Additional US DOT Requirements	A package containing 1,000 lb or more of nitric acid (about 1,430 lb or 121 gal of 70% solution, for example a 275-gal tote) is a hazardous substance: UN2031, Nitric acid, other than red fuming, with at least 65 percent, but not more than 70 percent nitric acid, 8 (5.1), II, RQ (Nitric acid). Not a marine pollutant.

IMDG / IATA classifications may differ from US DOT. Verify current regulations before international shipment.

15 Regulatory Information

Inventory / List	Status
California Proposition 65	Not listed
US EPA TSCA Active Inventory	Listed
EPCRA SARA 313 (TRI)	Listed
CERCLA Reportable Quantity (RQ)	Nitric acid (CAS 7697-37-2) 1,000 lb (454 kg). EPCRA Section 302 extremely hazardous substance, threshold planning quantity 1,000 lb.

SARA 311/312 hazard categories correspond to the GHS classification in Section 2. Data retrieved as of: California Proposition 65 2026-11-02; US EPA TSCA Active Inventory 2026-11-02; EPCRA SARA 313 (TRI) 2026-11-02.

16 Other Information

Revision Date	2026-11-12
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

Disclaimer: The information provided in this Safety Data Sheet is correct to the best of our knowledge at the date of publication. It relates only to the specific product identified and does not relate to its use in combination with other materials. ALLIANCE CHEMICAL MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALLIANCE CHEMICAL DOES NOT ASSUME LIABILITY FOR LOSS, INJURY, DAMAGE, OR EXPENSE ARISING FROM THE HANDLING, STORAGE, USE, OR DISPOSAL OF THIS PRODUCT.

Alliance Chemical, 204 South Edmond Street, Taylor, TX 76574. Published by Alliance Chemical from first-party canonical product data. Our authority is hands-on chemical handling, DOT/GHS-compliant shipping, and government-registered distribution — not bench chemistry. This Safety Data Sheet is prepared from the regulatory data on file for this product.