SAFETY DATA SHEET

Nitric Acid (60–70 %) — Technical, Laboratory Reagent, Analytical Reagent, PV Pure, Ultrapure PPB and Ultrapure PPT grades

Prepared in accordance with 29 CFR 1910.1200 (OSHA Hazard Communication Standard, 2024 amendment / GHS Rev. 7), UN GHS, US DOT 49 CFR Parts 171–180 and Canada HPR (SOR/2015-17)

SDS number	**HP-SDS-26100-US-01**
Version / Revision	Version 1.0
Issue date	01 November 2026
Supersedes	HP-SDS-HNO3-70-US-01 (September 2026) — scope widened from the 70 % grade to all Highpuris nitric acid grades, 60–70 % w/w
Review due	01 November 2029, or earlier if new hazard information becomes available
Companion sheet	A GB/EU sheet for supply by Highpuris Ltd will be issued separately. Do not substitute one sheet for the other — the classification is the same but the exposure limits, supply restrictions and legal references are not.

1 SECTION 1: IDENTIFICATION

1.1 Product identifier

Product name	**Nitric Acid (60–70 %)**
Product description	Aqueous solution of nitric acid, 60 – 70 % w/w HNO_3. Covers the Technical grade (60.0 – 62.0 %), Laboratory Reagent (68.0 – 70.0 %), Analytical Reagent (69.0 – 70.0 %), PV Pure, Ultrapure PPB and Ultrapure PPT grades (67.0 – 69.0 %). The oxidising classification and the Class 5.1 transport subsidiary hazard apply only to grades at or above 65 % HNO_3 (see Sections 2 and 14).
Synonyms	Aqua fortis; Hydrogen nitrate; Azotic acid; Spirit of nitre; Acide nitrique
CAS number	7697-37-2
EC (EINECS) number	231-714-2
EU Index number	007-004-00-1
REACH registration number	Not applicable to supply in the United States. Highpuris Ltd holds UK REACH registration UK-01-9464807725-6-0009 for supply into Great Britain — see the companion GB/EU sheet. A separate EU REACH registration is required before placement in the EU/EEA.
Molecular formula	HNO_3 (aq)
Molecular weight	63.01 g/mol (HNO_3)
Highpuris product code	**26100** — the 9-digit catalogue SKUs below are built as product code · grade · pack
Pack sizes covered	250 mL, 500 mL, 1 L and 2.5 L glass bottles (GL45) in UN-certified multi-unit shipping cases; 5 L HDPE containers; 25 L HDPE drums; 200 L HDPE drums; 1,000 L IBCs; and, for the Technical grade only, 16,000 L road tankers. Technical-grade drums, IBCs and tankers are supplied with vented closures.

Catalogue SKUs covered by this SDS

Grade	HNO assay	Pack size and SKU
Technical	60.0–62.0 %	5 L **261000044** · 25 L **261000062** · 200 L **261000064** · 1000 L **261000081** · 16,000 L **261000082**
Laboratory Reagent	68.0–70.0 %	500 mL **261000123** · 2.5 L **261000142** · 5 L **261000144** · 25 L **261000162** · 200 L **261000164** · 1000 L **261000181**

Grade	HNO assay	Pack size and SKU
Analytical Reagent	69.0–70.0 %	500 mL **261000223** · 2.5 L **261000242** · 5 L **261000244** · 25 L **261000262** · 200 L **261000264** · 1000 L **261000281**
PV Pure	67.0–69.0 %	25 L **261000362** · 200 L **261000364** · 1000 L **261000381**
Ultrapure PPB	67.0–69.0 %	500 mL **261000423** · 1 L **261000441** · 2.5 L **261000442**
Ultrapure PPT	67.0–69.0 %	250 mL **261000522** · 500 mL **261000523** · 1 L **261000541**

1.2 Relevant identified uses of the substance and uses advised against

- **Identified uses:** laboratory analytical reagent; acid for sample digestion and dissolution, acidification and preservation of samples, titration, cleaning and etching; trace-metal (ppb and ppt) applications in semiconductor, photovoltaic and ICP-MS laboratories; industrial process chemical (Technical grade); further formulation and repackaging by professional users.
- **Uses advised against:** not for food, drug, cosmetic, medicinal, household, pesticide, biocidal or consumer use. Not intended for use by the general public. Not to be used in any application resulting in human ingestion or direct dermal application.

1.3 Details of the supplier of the safety data sheet

Supplier	**Highpuris LLC** 9920 Pacific Heights Blvd, Suite 150 San Diego, CA 92121-4361 United States of America
Telephone	+1 (401) 288-1196
E-mail (SDS contact)	admin@highpuris.com · noreply@highpuris.com
Website	www.highpuris.com

1.4 Emergency telephone number

24-hour emergency (USA / Canada)	**CHEMTREC 1-800-424-9300**
24-hour emergency (international)	**CHEMTREC +1 703-527-3887** (collect calls accepted)
CHEMTREC contract number	**CCN 1024800** — Highpuris LLC, registered August 2026. Quote this number when calling; it must appear with the emergency telephone number on shipping papers under 49 CFR 172.604
Non-emergency (business hours)	+1 (401) 288-1196, 09:00 – 17:00 Pacific Time, Monday to Friday

2 SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture

Classification under 29 CFR 1910.1200 (OSHA HCS 2024), UN GHS Rev. 7, EU CLP (EC) No 1272/2008 and Canada HPR. The classification below applies to the grades at 65 – 70 % HNO_3 (Laboratory Reagent, Analytical Reagent, PV Pure, Ultrapure PPB and PPT). The Technical grade (60 – 62 %) is not an oxidising liquid, so the oxidising-liquid line and the flame-over-circle pictogram do not apply to it; all other lines apply.

Hazard class	Category	Hazard statement
Oxidizing liquids	Category 3	H272 — May intensify fire; oxidizer
Corrosive to metals	Category 1	H290 — May be corrosive to metals
Acute toxicity — inhalation (vapours)	Category 3	H331 — Toxic if inhaled
Skin corrosion / irritation	Category 1A	H314 — Causes severe skin burns and eye damage
Serious eye damage / eye irritation	Category 1	H318 — Causes serious eye damage

H318 is not required on the label where H314 is assigned (GHS labelling precedence rules). Hazards not otherwise classified (HNOC): corrosive to the respiratory tract (EUH071). The harmonised EU classification for nitric acid (Index No. 007-004-00-1) is Ox. Liq. 2, H272 at C ≥ 65 %; Met. Corr. 1, H290; Skin Corr. 1A, H314 at C ≥ 20 %; Skin Corr. 1B, H314 at 5 % ≤ C < 20 %; with supplemental hazard statement EUH071. The US classification above follows the manufacturer's OSHA HCS 2024 classification (Ox. Liq. 3; Acute Tox. 3 by inhalation); both categories carry H272 and the same transport classification.

2.2 GHS label elements

Hazard pictograms — required on the label and on every shipped container:



GHS03 — Flame over circle



GHS05 — Corrosion



GHS06 — Skull and crossbones

Pictograms must be a square set on a point, with a black symbol on a white ground and a red border wide enough to be clearly visible. Minimum size is one-fifteenth of the label surface area and never smaller than 10 mm × 10 mm (16 mm × 16 mm where the package holds more than 3 L). Where the corresponding DOT transport label is displayed on the outer packaging, the duplicate GHS pictogram may be omitted from that outer packaging under 29 CFR 1910.1200(f)(5); all pictograms remain required on the inner container label.

Signal word	**DANGER**
Hazard statements	H272 — May intensify fire; oxidizer. H290 — May be corrosive to metals. H314 — Causes severe skin burns and eye damage. H331 — Toxic if inhaled. EUH071 — Corrosive to the respiratory tract.

Precautionary statements — Prevention

- 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.
- P221 — Take any precaution to avoid mixing with combustibles.
- P234 — Keep only in original packaging.
- P260 — Do not breathe dust, fume, gas, mist, vapours or spray.
- P264 — Wash face, hands and any exposed skin thoroughly after handling.
- P271 — Use only outdoors or in a well-ventilated area.
- P280 — Wear protective gloves, protective clothing, eye protection and face protection.
- P284 — Wear respiratory protection.

Precautionary statements — Response

- 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.
- P363 — Wash contaminated clothing before reuse.
- P370 + P378 — In case of fire: use CO_2, dry chemical or foam to extinguish (see Section 5 for the use of water spray on oxidisers).
- P390 — Absorb spillage to prevent material damage.

Precautionary statements — Storage and disposal

- P402 — Store in a dry place.
- P403 + P233 — Store in a well-ventilated place. Keep container tightly closed.
- P405 — Store locked up.
- P406 — Store in a corrosion-resistant polypropylene container with a resistant inner liner.
- P501 — Dispose of contents and container in accordance with federal, state, provincial and local regulations.

2.3 Other hazards which do not result in classification

- Strong oxidiser. Contact with combustible or organic material — wood, paper, oils, clothing, alcohols, acetone, turpentine, aldehydes — can cause ignition, and contact with metal powders, hydrides or other reducing agents can cause fire or explosion.
- Fumes brown nitrogen dioxide (NO_2) on exposure to light or heat and on contact with metals or organic matter. NO_2 is a deep-lung irritant and can cause delayed pulmonary oedema, with onset 4 – 48 hours after exposure; the yellow-brown colour of aged product is dissolved NO_2.
- Stains skin and proteinaceous material yellow (xanthoproteic reaction) — a sign of contact, not a sign that the exposure was trivial. Burns are deep and slow to heal.
- Dilution is strongly exothermic and can cause violent spattering. Always add acid to water, never water to acid. Mixing with hydrochloric acid generates chlorine and nitrosyl chloride; mixing with organic solvents can be explosive.
- Corrosive to most metals, liberating nitrogen oxides (and hydrogen with the more active metals). Closed containers can pressurise from gas evolution — Technical-grade drums, IBCs and tankers are fitted with vented closures.

- The substance is an inorganic acid and does not meet the PBT or vPvB criteria under REACH Annex XIII; it is not an identified endocrine disruptor.

2.4 Unknown acute toxicity

Not applicable. Acute toxicity data are available for the substance; no component of unknown acute toxicity is present.

3 SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Mixture — aqueous solution. Covers Technical 60 – 62 % and all reagent/ultrapure grades at 67 – 70 %. The oxidising classification and the Class 5.1 transport subsidiary apply only at ≥ 65 % HNO_3 (see Section 14).

Chemical name	CAS No.	EC No.	Conc. (% w/w)	GHS classification of the ingredient
Nitric acid	7697-37-2	231-714-2	60 – 70	Ox. Liq. 2, H272 (C ≥ 65 %); Met. Corr. 1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318; EUH071
Water	7732-18-5	231-791-2	30 – 40	Not classified

EU Index number for nitric acid: 007-004-00-1. Specific concentration limits in EU CLP Annex VI: Ox. Liq. 2 / H272 at C ≥ 65 %; Skin Corr. 1A / H314 at C ≥ 20 %; Skin Corr. 1B / H314 at 5 % ≤ C < 20 %. The ingredient classification above is the EU harmonised classification; the US OSHA classification used in Section 2 is Ox. Liq. 3 with, in addition, Acute Tox. 3 (inhalation, vapours), H331, as assigned in the manufacturer's safety data sheet.

Impurities and stabilising additives: none deliberately added. Trace impurities are controlled to the grade specification and are not present at levels that alter the classification.

4 SECTION 4: FIRST-AID MEASURES

4.1 Description of first-aid measures

General. Move the casualty out of the danger area. Rescuers must protect themselves — wear eye/face protection, chemical-resistant gloves and, where fume or mist is present, respiratory protection. Remove all contaminated clothing and footwear immediately while flushing. Never give anything by mouth to an unconscious or convulsing person. Show this Safety Data Sheet to the attending physician. Immediate medical attention is required for all exposures.

Inhalation. Move the casualty to fresh air at once, lay them down and keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should give oxygen. If breathing has stopped, give artificial respiration — do not use mouth-to-mouth; use a pocket mask with a one-way valve, a bag-valve mask or other proper respiratory medical device. Call a physician immediately. Nitrogen dioxide in the fume can cause delayed pulmonary oedema 4 – 48 hours after exposure; the casualty must be kept under medical observation even if initially free of symptoms.

Skin contact. Immediately wash off with copious quantities of lukewarm, gently flowing water for at least 15 minutes (continue up to 30 minutes for large-area contact), removing contaminated clothing, shoes, gloves and jewellery while flushing. Do not attempt to neutralise the acid. Call a physician immediately. Wash contaminated clothing, including the inside, and gloves before re-use; discard heavily contaminated leather articles. Yellow staining of the skin indicates acid contact; it persists after washing and does not itself indicate that decontamination was incomplete.

Eye contact. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes, holding the eyelids wide open. Remove contact lenses if present and if it can be done without delay; do not interrupt flushing to do so. Obtain immediate medical attention from an ophthalmologist. Continue irrigation en route to medical care.

Ingestion. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If the casualty is conscious and alert, clean the mouth with water. Do not give sodium bicarbonate or other neutralising agents — gas evolution can rupture damaged tissue. Do not attempt gastric lavage. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Skin: immediate pain, redness, blistering and deep chemical burns; characteristic yellow staining (xanthoproteic reaction) followed by brown to black eschar; tissue destruction and scarring.
- Eyes: severe pain, lacrimation, corneal burns and opacification; risk of permanent damage and blindness.
- Inhalation: burning of the nose and throat, cough, choking, chest tightness and dyspnoea; at higher concentrations chemical pneumonitis and non-cardiogenic pulmonary oedema, which may be delayed 4 – 48 hours (nitrogen dioxide).
- Ingestion: severe burns of the mouth, throat, oesophagus and stomach; severe swelling, damage to delicate tissue and danger of perforation; yellow staining about the mouth; circulatory collapse in severe cases.
- Repeated or prolonged exposure to low concentrations of fume: erosion of dental enamel, chronic bronchitis and conjunctivitis.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat as a severe acid burn. Treat symptomatically and supportively.
- Monitor the airway closely after inhalation; laryngeal oedema and bronchospasm may require early intubation. Observe the casualty for at least 48 hours for delayed-onset pulmonary oedema (nitrogen dioxide), and obtain a chest radiograph and arterial blood gases as indicated.
- Following ingestion, use of gastric lavage or emesis is contraindicated; possible perforation of the stomach or oesophagus should be investigated, and endoscopy within 12 – 24 hours may be indicated. Activated charcoal is of no value and obscures the endoscopic view.

- Do not use chemical neutralising agents on burns or in the gastrointestinal tract.

5 SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

- Suitable (manufacturer): carbon dioxide, dry chemical, dry sand and alcohol-resistant foam, chosen to suit the surrounding fire. Nitric acid is itself not combustible but it supports combustion: flooding with large quantities of water spray or fog is generally the most effective way to cool containers, dilute the acid and control a fire in which it is in contact with combustibles.
- Unsuitable: the manufacturer gives no restriction. Do not direct a solid water jet into a pool of concentrated acid (spattering and acid mist). Do not use combustible absorbents on spills in a fire area.

5.2 Special hazards arising from the substance or mixture

- Oxidiser: contact with combustible or organic material may cause fire and may ignite combustibles (wood, paper, oil, clothing, etc.). Not flammable itself — flash point not applicable; no auto-ignition temperature or explosion limits.
- Thermal decomposition and contact with combustibles or metals release toxic, brown nitrogen oxides (NOx, principally NO_2) and oxygen; the oxygen released intensifies the fire.
- Closed containers may rupture violently when heated owing to pressure build-up from oxygen and nitrogen oxides.
- Contact with organic solvents, alcohols, turpentine, metal powders or hydrides can be explosive.
- The product causes severe burns of the eyes, skin and mucous membranes; fire-fighting run-off is strongly acidic and corrosive.

5.3 Advice for fire-fighters

- Wear a positive-pressure self-contained breathing apparatus (MSHA/NIOSH-approved) and full acid-resistant protective clothing. Structural fire-fighting turnout gear alone provides only limited protection against this material and is itself combustible when soaked in the acid.
- Evacuate and isolate the area. Approach from upwind. Stay out of low areas where nitrogen oxide fume may collect.
- Use water spray to cool fire-exposed containers and to knock down fume; withdraw immediately if a rising sound from a venting safety device or discolouration of a tank occurs.
- Prevent run-off water from entering drains and watercourses; collect contaminated fire-fighting water separately for neutralisation and disposal.
- Refer to ERG 2024 Guide 157 (Substances — toxic and/or corrosive, non-combustible; water-sensitive).

6 SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel. Evacuate personnel to safe areas. Keep people away from and upwind of the spill or leak. Restrict access and ensure adequate ventilation. Do not walk through spilled material. Keep combustible materials (paper, wood, cloth, solvents) away from the spill. Avoid all contact with liquid, fume and brown nitrogen dioxide vapour. Alert the site emergency response team.

For emergency responders. Do not attempt response without suitable PPE: chemical splash goggles with full face shield, acid-resistant suit and boots, butyl rubber or fluoroelastomer gloves, and a self-contained breathing apparatus (the manufacturer specifies SCBA and a protective suit). Do not wear leather or cotton protective clothing that could be soaked and ignited. Ventilate confined spaces before entry. Initial isolation of at least 50 m (150 ft) in all directions for a small liquid spill is recommended; increase the distance for large spills and consult ERG Guide 157.

6.2 Environmental precautions

- Should not be released into the environment. Prevent entry into drains, sewers, surface water, groundwater and soil — do not flush into surface water or the sanitary sewer system. Dyke or bund the spill.
- The acid is harmful to aquatic organisms through pH depression and will corrode concrete and metal drainage infrastructure; as a nitrate source it also contributes to eutrophication.
- Report releases as required by law. Under CERCLA, a release of 1,000 lb (454 kg) or more of nitric acid in a 24-hour period must be reported immediately to the National Response Center (1-800-424-8802); for this product that corresponds to approximately 1,430 lb (650 kg, about 120 US gal) of 70 % acid, or approximately 1,640 lb (745 kg) of 61 % acid.

6.3 Methods and material for containment and cleaning up

- Stop the leak if it can be done without risk. Upright leaking containers and transfer the contents to a sound, labelled, acid-resistant container (glass, HDPE or polypropylene — not metal).
- Soak up with inert, non-combustible absorbent — dry sand, earth, vermiculite or diatomaceous earth. Do NOT use combustible absorbents such as sawdust, paper, rags or cloth: they can ignite.
- Small spills may be carefully neutralised with a dry alkaline material such as soda ash, sodium bicarbonate or lime, added slowly from a distance. Neutralisation liberates heat, spray and carbon dioxide — never confine the reaction.

- Sweep up and shovel into suitable closed, labelled, corrosion-resistant containers for disposal. Keep the collected material away from combustibles and organic waste, and do not seal it tightly while it is still reacting.
- Flush the residual area with large volumes of water only after the bulk has been removed, collecting the wash water for pH adjustment and disposal.
- Ventilate the area thoroughly and check for nitrogen oxide fume before releasing the area.

6.4 Reference to other sections

See Section 8 for exposure controls and personal protection, and Section 13 for disposal considerations.

7 SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

- Handle only in a chemical fume hood or under local exhaust ventilation. Open and dispense with the sash lowered.
- Keep away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles, organic solvents, alcohols, reducing agents and metal powders. Keep paper, wood, cloth and other combustible packaging and wipes out of the work area.
- Always add acid to water, never water to acid; add slowly with stirring and cooling. Use only acid-resistant transfer equipment (PTFE, PFA, PP, PVDF, HDPE or glass); do not use metal containers or fittings.
- Wear the personal protective equipment specified in Section 8 at all times when handling. Do not breathe mist, vapours or spray; do not get in eyes, on skin or on clothing; do not ingest — if swallowed, seek immediate medical assistance.
- Open containers slowly to relieve any internal pressure from evolved nitrogen oxides; point the opening away from the face and body. Do not seal containers of used or contaminated acid.
- Do not eat, drink or smoke in the handling area. Wash face, hands and exposed skin thoroughly after handling; keep contaminated work clothing out of the wider workplace.
- Keep the container tightly closed when not in use. Do not return unused material to the original container.
- Ensure an emergency eyewash station and safety shower are within 10 seconds' unobstructed travel of the work area.
- Empty containers retain product residue and vapour and remain corrosive and oxidising — do not cut, weld, drill or reuse.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions	Keep containers tightly closed in a dry, cool, well-ventilated corrosives area, away from heat, direct sunlight (light accelerates decomposition to NO_2) and combustible materials. Store in a dedicated oxidiser-acid cabinet or segregated acid store, locked up or accessible only to authorised, trained personnel. Do not store near combustible materials. Observe NFPA 400 and local fire-code oxidiser provisions for the quantity held. Technical-grade drums, IBCs and tankers should be fitted with vented closures.
Recommended temperature	Cool, at normal room temperature, away from heat sources and direct sunlight. Not subject to freezing damage under normal storage conditions.
Containment	Store on an acid-resistant, bunded or kerbed floor with secondary containment of at least 110 % of the largest container. Keep the bund free of organic material and combustible pallets or packaging.
Suitable materials	Original supplier packaging: borosilicate glass with PTFE-faced closures; HDPE, PP, PTFE, PFA and PVDF; corrosion-resistant polypropylene container with a resistant inner liner.
Unsuitable materials	Do not store in metal containers. Carbon steel, galvanised surfaces, copper, brass, bronze, aluminium alloys and zinc; wood, paper, cardboard, cloth and other combustible materials; natural rubber.
Incompatible storage	Segregate from combustible and organic materials, strong bases, reducing agents, metals and finely powdered metals, aldehydes, alcohols, cyanides, ammonia and strong reducing agents. Also segregate from acetic acid, acetic anhydride, solvents, turpentine, hydrides, carbides, sulfides and hydrochloric acid.
Shelf life	Stable when stored as specified in unopened original packaging (observe the retest or expiry date on the label); yellowing indicates dissolved NO_2 but does not by itself render the acid unfit for non-trace use. Ultrapure grades should be opened only in a clean environment, after which trace-metal levels can no longer be guaranteed against the released specification.

7.3 Specific end use(s)

Laboratory reagent and industrial process chemical. No further specific guidance beyond the identified uses in Section 1.2.

8 SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits — nitric acid (CAS 7697-37-2) and nitrogen dioxide (decomposition product)

Source	Type	Value
OSHA PEL (29 CFR 1910.1000, Table Z-1)	8-hour TWA	2 ppm (5 mg/m³)
NIOSH REL	10-hour TWA / 15-minute STEL	2 ppm (5 mg/m³) / 4 ppm (10 mg/m³)
ACGIH TLV	8-hour TWA / STEL	2 ppm / 4 ppm
NIOSH IDLH	Immediately dangerous to life or health	25 ppm
Cal/OSHA PEL (8 CCR 5155)	8-hour TWA / STEL	2 ppm / 4 ppm
Mexico OEL (NOM-010-STPS)	TWA / STEL	2 ppm / 4 ppm
EU IOELV (Directive 2017/164/EU)	Short-term (STEL)	1 ppm (2.6 mg/m³)
Nitrogen dioxide — ACGIH TLV	8-hour TWA	0.2 ppm
Nitrogen dioxide — OSHA (29 CFR 1910.1000, Table Z-1)	Ceiling	5 ppm

8.2 Exposure controls

Appropriate engineering controls

- Use only under a chemical fume hood with a minimum face velocity of 0.5 m/s (100 ft/min), or under equivalent local exhaust ventilation captured at the point of generation. Ensure adequate ventilation, especially in confined areas.
- Provide general dilution ventilation sufficient to keep airborne concentrations of nitric acid and nitrogen dioxide below the exposure limits. Exhaust ducting and fans must be corrosion-resistant; do not discharge to ducts containing organic vapours or combustible deposits. Route vent gases through a scrubber where necessary.
- Safety shower and eyewash station must be close to the workstation and immediately available (ANSI/ISEA Z358.1).

Eye and face protection

- Tight-sealing chemical splash goggles conforming to ANSI/ISEA Z87.1 or EN 166 (OSHA 29 CFR 1910.133), worn together with a full face shield. Ordinary safety spectacles are not adequate.

Skin and body protection

- Gloves: wear appropriate protective gloves to prevent skin exposure. Butyl rubber or fluoroelastomer (Viton®) are preferred for concentrated nitric acid; neoprene is suitable for incidental contact. Nitrile, natural rubber latex, PVC, leather and cotton are not recommended for the concentrated acid and must be changed immediately on contact. Confirm breakthrough performance with the glove manufacturer for the specific task.
- Body: wear appropriate protective clothing — acid-resistant apron or coveralls over a laboratory coat for small-scale work; a full chemically resistant suit (Type 3/4, EN 14605) with hood for bulk transfer, drumming and spill response. Avoid wool, cotton and other combustible outer garments that could be soaked with the acid.
- Feet: closed, chemically resistant boots or overboots. Trouser legs worn outside the boots.
- Hygiene: keep away from food, drink and animal feeding stuffs; do not eat, drink or smoke when using. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

Respiratory protection

- Not normally required where work is carried out in an effective fume hood. Follow the OSHA respirator regulations in 29 CFR 1910.134 or European Standard EN 149. Where the exposure limits may be exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA-approved respirator with acid-gas cartridges (EN 14387 type E, yellow) combined with a particulate filter (EN 143 / P100) within its assigned protection factor.
- For unknown concentrations, oxygen-deficient atmospheres, emergency response or concentrations at or above 25 ppm (IDLH), use a positive-pressure self-contained breathing apparatus or a supplied-air respirator with escape bottle.
- Respirator use requires a written programme under 29 CFR 1910.134, including medical evaluation, fit testing and training.

Environmental exposure controls

- Do not discharge to the environment, drains or surface water. Route vent gases through a scrubber where necessary. Neutralise aqueous effluent to the pH range permitted by the receiving authority before discharge.

9 SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Property	Value
Physical state	Liquid
Colour	Clear, colourless to light yellow (yellowing on ageing from dissolved NO_2)
Odour	Strong, acrid
Odour threshold	No information available
Melting point / freezing point	−41 °C (−41.8 °F)
Boiling point / initial boiling point	No data available from the manufacturer (the 68 % HNO_3–water azeotrope boils at approximately 120 °C with partial decomposition)
Flammability	Not flammable. Oxidising liquid (≥ 65 % grades).
Lower / upper explosion limit	No data available
Flash point	Not applicable
Auto-ignition temperature	No data available
Decomposition temperature	No data available (decomposes with release of nitrogen oxides on heating or exposure to light)
pH	< 1.0 (0.1 M aqueous solution)
Kinematic / dynamic viscosity	No data available
Solubility (water)	Miscible in all proportions, with evolution of heat
Solubility (other)	No information available. Reacts with many organic solvents (see Section 10).
Partition coefficient n-octanol/water (log Kow)	−2.3
Vapour pressure	0.94 kPa at 20 °C
Density / relative density	1.40 g/cm³ (relative density 1.40) for the 67 – 70 % grades; the Technical grade (60 – 62 %) is less dense
Relative vapour density	No data available (air = 1)
Particle characteristics	Not applicable (liquid)
Molecular weight	63.01 g/mol (HNO_3)
Oxidising properties	Oxidiser (grades ≥ 65 % HNO_3)
Explosive properties	Not explosive as supplied; may react explosively on contact with organic compounds, reducing agents and metal powders
Bulk density	Not applicable (liquid)
Concentration	60.0 – 62.0 % w/w (Technical); 68.0 – 70.0 % w/w (Laboratory Reagent); 69.0 – 70.0 % w/w (Analytical Reagent); 67.0 – 69.0 % w/w (PV Pure, Ultrapure PPB and PPT)

9.2 Other information

No additional physical or chemical hazard information. Test data above relate to the 67 – 70 % grades unless otherwise stated.

10 SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Reactive hazard: yes. A strong mineral acid and strong oxidising agent. Contact with combustible or organic material may cause fire. Reacts exothermically with bases and violently or explosively with many organic compounds and reducing agents, and attacks most metals with release of nitrogen oxides.

10.2 Chemical stability

Oxidiser: contact with combustible or organic material may cause fire. Stable under recommended storage and handling conditions, but gradually decomposes on exposure to light, heat, air or moisture over prolonged periods, forming brown nitrogen dioxide and oxygen. Hazardous polymerisation does not occur.

10.3 Possibility of hazardous reactions

- None under normal processing (manufacturer). Under abnormal conditions: fire or explosion on contact with combustible and organic materials — wood, paper, oils, textiles, alcohols, acetone, turpentine, aldehydes, acetic acid and acetic anhydride, amines and nitrated or solvent residues.
- Violent reaction with strong reducing agents, metal hydrides, carbides, phosphorus, sulfides and finely powdered metals, sometimes with ignition or detonation.
- Exothermic reaction with bases and ammonia; mixing with cyanides can liberate hydrogen cyanide, and mixing with hydrochloric acid generates chlorine and nitrosyl chloride.
- Reaction with metals liberates toxic nitrogen oxides (NO, NO_2) and, with active metals, flammable hydrogen, which may form an explosive atmosphere in confined space or container headspace.
- Dilution with water is strongly exothermic and can cause boiling and spattering.

10.4 Conditions to avoid

Incompatible products; combustible material; excess heat; exposure to air or moisture over prolonged periods; direct sunlight and strong light; contact with organic material; confinement of evolved gas in closed systems.

10.5 Incompatible materials

Class	Examples
Combustible and organic materials	Wood, paper, cloth, oils, greases, solvents, alcohols, acetone, aldehydes, turpentine, acetic acid, acetic anhydride, amines, organic waste
Reducing agents and hydrides	Strong reducing agents, metal hydrides, carbides, phosphorus, sulfides, hydrazines
Metals and alloys	Metals and finely powdered metals (aluminium, magnesium, zinc, iron, copper, brass, bronze), carbon steel, galvanised surfaces
Bases and ammonia	Sodium and potassium hydroxide, ammonia and ammonium hydroxide, amines, strong bases
Cyanides and halide acids	Cyanides (hydrogen cyanide); hydrochloric acid and chlorides (chlorine and nitrosyl chloride)
Construction materials	Concrete, limestone and marble (attacked); natural rubber; cellulosic packing and absorbents

10.6 Hazardous decomposition products

Nitrogen oxides (NOx — nitric oxide and brown nitrogen dioxide) and oxygen, with irritating gases and vapours, on heating, on exposure to light and on contact with metals or organic matter.

11 SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in 29 CFR 1910.1200(c) / GHS

Likely routes of exposure: skin and eye contact, inhalation of fume or mist, and accidental ingestion.

Endpoint	Data and conclusion
Acute toxicity — oral	No LD_{50} data available. Ingestion causes burns of the upper digestive and respiratory tracts and may be harmful if swallowed. Not classified for acute oral toxicity; corrosivity governs.
Acute toxicity — dermal	No LD_{50} data available. May be harmful in contact with skin; local corrosion dominates. Not classified for acute dermal toxicity.
Acute toxicity — inhalation	LC_{50} (rat, 1 h): 2,500 ppm (vapour, nitric acid). Causes severe burns and may cause pulmonary oedema. Classified Acute Toxicity Category 3 (inhalation, vapours) — H331, Toxic if inhaled; EUH071, corrosive to the respiratory tract.
Skin corrosion / irritation	Corrosive. Causes severe, full-thickness chemical burns on short contact, with yellow staining. Classified Skin Corrosion Category 1A. Animal testing is not required for a substance of known corrosivity.
Serious eye damage / irritation	Causes serious, irreversible eye damage, including corneal opacification and blindness. Classified Eye Damage Category 1.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met. Not classified.
Germ cell mutagenicity	Based on available data, the classification criteria are not met. Not classified.
Carcinogenicity	Based on available data, the classification criteria are not met. Not listed by IARC, NTP, ACGIH, OSHA or Mexico as a carcinogen. Not classified.
Reproductive toxicity	Based on available data, the classification criteria are not met. Not classified.

Endpoint	Data and conclusion
STOT — single exposure	Based on available data, the classification criteria are not met. Fume and mist are corrosive to the respiratory tract (EUH071); this effect is covered by the inhalation and corrosivity classifications.
STOT — repeated exposure	Based on available data, the classification criteria are not met. Target organs: none known. Repeated occupational exposure to fume has been associated with erosion of dental enamel, chronic bronchitis and conjunctivitis.
Aspiration hazard	Based on available data, the classification criteria are not met.

11.2 Other information

Symptoms and effects, acute and delayed: ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation; the product is a corrosive material. Nitrogen dioxide released from the acid can cause delayed pulmonary oedema. Persons with pre-existing skin disorders, eye disease or chronic respiratory disease may be at increased risk from exposure. Endocrine disrupting properties: this product does not contain any known or suspected endocrine disruptors. Toxicologically synergistic products: no information available.

The toxicological properties have not been fully investigated in all endpoints; the assessment above is based on the manufacturer's data for the 67 – 70 % grades and on the corrosivity and pH of the acid, which determine local effects. The same toxicological profile is applied to the Technical grade (60 – 62 %).

12 SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Endpoint	Value
Fish — acute	No data available.
Aquatic invertebrates — acute	No data available.
Algae	No data available.
Microorganisms	No data available. Large amounts will affect pH and harm aquatic organisms and the biomass of sewage treatment plants.

Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. The ecotoxicity of nitric acid is governed by the pH depression it causes in the receiving water; in waters of adequate buffering capacity it dissociates to hydronium and nitrate ions. Nitrate is a plant nutrient and may contribute to eutrophication at the point of release.

12.2 Persistence and degradability

Miscible with water. Persistence is unlikely based on available information; as an inorganic acid it dissociates completely and biodegradation testing is not applicable.

12.3 Bioaccumulative potential

No information available. Not expected to bioaccumulate; log Kow = −2.3.

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility; an acidic release will be buffered and neutralised by soil carbonates and alkalinity.

12.5 Results of PBT and vPvB assessment

The substance is an inorganic acid and does not meet the criteria for PBT or vPvB under REACH Annex XIII.

12.6 Other adverse effects

Germany water hazard class WGK 1 (slightly hazardous to water). Not an ozone-depleting substance; not a persistent organic pollutant; global warming potential not applicable.

13 SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

- Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste under 40 CFR 261 and must consult federal, state, regional and local hazardous waste regulations to ensure complete and accurate classification.
- Dispose of surplus and non-recyclable material via a licensed hazardous-waste contractor. Do not discharge to sewers, drains or watercourses. Do not mix nitric acid waste with organic solvent or other combustible waste streams — explosive reactions and pressurised containers have resulted from such mixing.

- Small laboratory quantities may be diluted with a large excess of water (always acid to water) and neutralised with dilute alkali (sodium carbonate, sodium bicarbonate or lime) by trained personnel before disposal in accordance with the receiving authority's permit; neutralisation is exothermic and liberates carbon dioxide and nitrogen oxide fume — never carry it out in a closed container.
- Empty containers retain product residue and vapour and remain corrosive and oxidising. Do not cut, weld, braze, drill, grind or expose to heat, flame or sparks.
- Triple-rinse containers with water, collecting the rinsate for neutralisation and permitted disposal, before offering for recycling or reconditioning; otherwise dispose of the container as unused product. Deface or remove the label from a properly cleaned container.
- Dispose of the container in accordance with local regulations. RCRA "empty" criteria are set out in 40 CFR 261.7.

13.2 Waste codes

RCRA (40 CFR 261): discarded unused product exhibits the ignitability characteristic through its oxidiser properties (40 CFR 261.21(a)(4)) — EPA hazardous waste number D001 — and the corrosivity characteristic (aqueous solutions of pH ≤ 2) — D002. Not a P- or U-listed commercial chemical product. European waste catalogue: EWC code 06 01 05* (nitric acid and nitrous acid). Final code allocation is the responsibility of the waste producer.

14 SECTION 14: TRANSPORT INFORMATION

This product is a regulated dangerous good in all modes of transport.

14.1 Common transport classification (all modes)

UN number / UN ID number	UN 2031
UN proper shipping name	Nitric acid other than red fuming, with at least 65 percent, but not more than 70 percent nitric acid (Laboratory Reagent, Analytical Reagent, PV Pure, Ultrapure PPB and PPT grades); Nitric acid other than red fuming, with more than 20 percent and less than 65 percent nitric acid (Technical grade, 60 – 62 %)
Transport hazard class	Class 8 — Corrosive substances
Subsidiary hazard	Class 5.1 — Oxidizer, for grades ≥ 65 % HNO_3 only. The Technical grade (60 – 62 %) has no subsidiary hazard.
Packing group	II
Label(s) required	Grades ≥ 65 %: Class 8 "Corrosive" (white upper half / black lower half) and Class 5.1 "Oxidizer" (yellow) — both labels on every package. Technical grade 60 – 62 %: Class 8 "Corrosive" label only.
Environmental hazards	Not classified as a marine pollutant under the IMDG Code (DOT marine pollutant: no) and not an environmentally hazardous substance under ADR/RID.
Special precautions for user	Transport upright, secured against movement, away from foodstuffs, combustible and organic materials, bases, reducing agents and metals. Packagings for nitric acid must not have inner receptacles of metal. Glass inner packagings of not more than 2.5 L in absorbent-cushioned outer packagings are used per 49 CFR 173.158 for the ≥ 65 % grades. Protect from heat and light; vented closures are fitted to Technical-grade bulk packagings.
Transport in bulk (MARPOL Annex II / IBC Code)	Nitric acid is a Chapter 17 product of the IBC Code; the applicable pollution category and ship type depend on concentration and must be taken from the IBC Code edition in force and the ship's Certificate of Fitness. Not applicable to packaged goods.

Transport hazard label(s) required on the package:



Class 8 — Corrosive



Class 5.1 — Oxidizer

Minimum 100 mm × 100 mm on each side, set on a point, with a solid inner line 5 mm inside the edge (49 CFR 172.407). Grades ≥ 65 % bear both the Class 8 and Class 5.1 labels; the Technical grade (60 – 62 %) bears the Class 8 label only. Where a subsidiary hazard label is required, it is displayed next to the primary label.

14.2 US DOT — 49 CFR (road, rail and domestic transport)

Hazardous materials table entry	(a) Grades ≥ 65 % (Laboratory Reagent, Analytical Reagent, PV Pure, Ultrapure PPB and PPT): Nitric acid other than red fuming, with at least 65 percent, but not more than 70 percent nitric acid — 8, UN2031, PG II. (b) Technical grade 60 – 62 %: Nitric acid other than red fuming, with more than 20 percent and less than 65 percent nitric acid — 8, UN2031, PG II

Label codes	(a) 8, 5.1. (b) 8
Special provisions (49 CFR 172.102)	(a) and (b): A6, B2, B47, B53, IB2, IP15, T8, TP2
Packaging — exceptions	(a) 49 CFR 173.158. (b) 49 CFR 173.154
Packaging — non-bulk	(a) and (b): 49 CFR 173.202. Packagings for nitric acid must not have inner receptacles of metal; glass inner packagings not exceeding 2.5 L in absorbent-cushioned outer packagings per §173.158.
Packaging — bulk	(a) and (b): 49 CFR 173.242
Quantity limitation — passenger aircraft/rail	(a) Forbidden. (b) 1 L
Quantity limitation — cargo aircraft only	(a) and (b): 30 L
Vessel stowage	(a) Location D; other stowage provisions 44, 66, 89, 90, 110. (b) Location D; other stowage provisions 44, 89, 90
Limited quantity	≥ 65 % — not authorised as a limited quantity. < 65 % — authorised under 49 CFR 173.154(b): inner packagings not exceeding 1.0 L, package gross mass not exceeding 30 kg. Limited quantity marking required in place of labels.
Reportable quantity (RQ)	1,000 lb (454 kg) of nitric acid — approximately 1,430 lb (650 kg) of 70 % product or approximately 1,640 lb (745 kg) of 61 % product. Where a single package contains an RQ or more, the letters "RQ" must appear on the shipping paper and package marking.
ERG 2024 guide number	157 — Substances — toxic and/or corrosive (non-combustible)
Emergency response telephone	Required on the shipping paper under 49 CFR 172.604 — see Section 1.4
Placarding	CORROSIVE placard required for bulk packagings and for non-bulk shipments where the aggregate gross weight of Table 2 materials is 454 kg (1,001 lb) or more. An OXIDIZER placard may be displayed for the subsidiary hazard of the ≥ 65 % grades but is not required.
Note	Passenger-aircraft prohibition and the 173.158 packaging restrictions for the ≥ 65 % entry must be verified against the current HMT before each air shipment.

14.3 IMDG Code (sea)

UN number / class / PG	UN 2031, Class 8 (5.1) for ≥ 65 %; Class 8 for < 65 %; PG II
Proper shipping name	NITRIC ACID other than red fuming, with at least 65 % but not more than 70 % nitric acid (or NITRIC ACID other than red fuming, with less than 65 % nitric acid, Technical grade)
EmS (emergency schedules)	F-A (fire) and S-Q (spillage)
Segregation group	Group 1 — Acids
Marine pollutant	No
Limited quantity	1 L
Excepted quantity	E2 (< 65 %) / E0 (≥ 65 %)
Stowage and segregation	Stowage category D. Segregate from organics, flammables, alkalis, cyanides and Class 4.3 substances; "away from" sources of heat. Refer to the IMDG Code edition in force for the stowage category and segregation table.

14.4 IATA DGR / ICAO Technical Instructions (air)

UN number / class / PG	UN 2031, Class 8 (5.1) for ≥ 65 %; Class 8 for < 65 %; PG II
Proper shipping name	Nitric acid other than red fuming, with at least 65 % but not more than 70 % nitric acid (or with less than 65 % nitric acid, Technical grade)
Passenger and cargo aircraft	≥ 65 %: Forbidden. < 65 %: Packing Instruction 851 — maximum net quantity 1 L per package
Cargo aircraft only	Packing Instruction 855 — maximum net quantity 30 L per package (≥ 65 % and < 65 %)
Limited quantity (passenger aircraft)	< 65 %: Packing Instruction Y840 — maximum net quantity 0.5 L per package. ≥ 65 %: not authorised as a limited quantity
Excepted quantity code	E2 (< 65 %) / E0 (≥ 65 %)

ERG code (ICAO)	8L
Note	Packing instruction numbers change between editions of the IATA Dangerous Goods Regulations. Verify against the edition in force on the date of shipment before completing the Shipper's Declaration.

14.5 ADR / RID / ADN (European road, rail and inland waterway)

UN number / class / PG	UN 2031, Class 8, PG II (subsidiary Class 5.1 for ≥ 65 %)
Classification code	≥ 65 %: CO1 — corrosive, oxidising, liquid. < 65 %: C1 — corrosive, liquid
Labels	≥ 65 %: 8 + 5.1. < 65 %: 8
Tunnel restriction code	(E)
Hazard identification number (Kemler)	≥ 65 %: 85. < 65 %: 80
Transport category / limited quantity	Transport category 2; limited quantity 1 L
Packing instructions	P001, IBC02
Note	Verify against the ADR/RID edition in force before shipment.

14.6 Shipping documentation example

UN2031, Nitric acid, 8, (5.1), PG II — followed by the number and type of packages, total quantity, packaging authorisation, emergency response telephone number and, where applicable, the "RQ" designation. For the Technical grade (60 – 62 %): UN2031, Nitric acid, 8, PG II — followed by the same information.

The shipper is responsible for confirming that packaging is UN-performance tested and marked to the required standard, that all personnel involved are trained and certified under 49 CFR 172 Subpart H (and IATA/IMDG equivalents), and that the classification remains valid under the regulatory edition in force on the date of shipment.

15 SECTION 15: REGULATORY INFORMATION

15.1 United States federal regulations

Regulation	Status
TSCA (15 U.S.C. §2601 et seq.)	Nitric acid, CAS 7697-37-2, and water are listed on the TSCA Chemical Substance Inventory with an "active" designation. No TSCA section 12(b) export notification requirement applies. Not subject to a section 5(a)(2) significant new use rule and not a TSCA 6(h) PBT substance.
OSHA Hazard Communication (29 CFR 1910.1200)	Classified as a hazardous chemical. This SDS is prepared to the HCS 2024 amendment (GHS Rev. 7), for which the compliance date for substances was 19 May 2026.
OSHA flammable liquids (29 CFR 1910.106)	Not a flammable or combustible liquid (no flash point). Oxidising liquid — fire-code and NFPA 400 oxidiser storage and quantity provisions apply to the grades at ≥ 65 % HNO_3.
OSHA PSM (29 CFR 1910.119, App. A)	Listed only as "Nitric acid (94.5 % by weight or greater)", threshold quantity 500 lb. Not applicable — this product is 60 – 70 % HNO_3.
CERCLA section 103 (40 CFR 302.4)	Hazardous substance. Reportable quantity 1,000 lb (454 kg) of nitric acid. Releases at or above the RQ in any 24-hour period must be reported immediately to the National Response Center, 1-800-424-8802.
EPCRA section 302 (40 CFR 355, App. A)	Nitric acid is an extremely hazardous substance: threshold planning quantity (TPQ) 1,000 lb; reportable quantity 1,000 lb. APPLIES (by acid content): section 302 emergency planning notification is triggered where the acid content on site reaches the TPQ.
EPCRA sections 311 / 312 (40 CFR 370)	Reportable. Applicable hazard classes: oxidizer, corrosive to metals, acute toxicity (inhalation), skin corrosion (Category 1A) and serious eye damage (Category 1). Reporting threshold 500 lb (extremely hazardous substance threshold) on site at any one time.
EPCRA section 313 (TRI, 40 CFR 372)	LISTED (nitric acid, CAS 7697-37-2; de minimis concentration 1.0 %). Annual reporting thresholds 25,000 lb (manufactured or processed) and 10,000 lb (otherwise used).
Clean Air Act section 112 / 112(r)	Not a listed hazardous air pollutant. Listed under 40 CFR 68.130 only as "Nitric acid (conc 80 % or greater)", threshold 15,000 lb — not applicable to this product.
Clean Water Act section 311 (40 CFR 116/117)	Designated hazardous substance; reportable quantity 1,000 lb. Not a section 307 priority pollutant or toxic pollutant.

Regulation	Status
RCRA (40 CFR 261)	Discarded unused product exhibits the ignitability (oxidizer, 40 CFR 261.21(a)(4); D001) and corrosivity (D002) characteristics. Not P- or U-listed.
DEA / Chemical Diversion and Trafficking Act (21 CFR 1310)	Not listed.
FDA / USDA	Not supplied as a food-grade, USP, FCC or NF material. Not for use in food, drug or cosmetic applications.
US Department of Homeland Security (6 CFR 27, App. A)	Chemical of interest: "Nitric acid (conc 68 % or greater)" — theft/diversion (explosives precursor, EXP/IEDP), screening threshold quantity 400 lb. APPLIES to Laboratory Reagent 68 – 70 %, Analytical Reagent 69 – 70 % and any PV Pure, Ultrapure PPB or PPT batch assaying ≥ 68 %. Facilities holding 400 lb or more must complete a CSAT Top-Screen. The Technical grade (60 – 62 %) is not covered. The release-security threshold (15,000 lb) applies to the ≥ 80 % entry and does not apply to this product.

15.2 United States state regulations

State list	Status
California Proposition 65	Nitric acid is not listed under the Safe Drinking Water and Toxic Enforcement Act of 1986. The manufacturer reports that this product does not contain any Proposition 65 chemicals; no warning is required.
California — other	Cal/OSHA PEL 2 ppm TWA / 4 ppm STEL.
Massachusetts Right-to-Know	Listed (Substance List, 105 CMR 670).
New Jersey Right-to-Know	Listed (Hazardous Substance List; substance list). Special Health Hazard Substance — oxidizer, corrosive.
Pennsylvania Right-to-Know	Listed (Hazardous Substance List; environmental hazard).
Rhode Island, Minnesota, Illinois	Listed on the respective state hazardous substance / right-to-know lists (Illinois as reported in the manufacturer's safety data sheet).

15.3 International regulations

Jurisdiction	Status
Canada	Classified under the Hazardous Products Regulations (SOR/2015-17) consistently with Section 2. Listed on the Domestic Substances List (DSL). Subject to NPRI reporting (nitric acid, Part 1A).
European Union — CLP	Harmonised classification, Annex VI to Regulation (EC) No 1272/2008, Index No. 007-004-00-1: Ox. Liq. 2, H272 (C ≥ 65 %); Met. Corr. 1, H290; Skin Corr. 1A, H314 (C ≥ 20 %); Skin Corr. 1B, H314 (5 % ≤ C < 20 %); EUH071 — with the specific concentration limits given in Section 3.
European Union — REACH	Registered substance. Not on the Candidate List of substances of very high concern and not subject to authorisation (Annex XIV). Annex XVII restriction entry 75 (tattoo inks and permanent make-up) applies to the use of the substance in tattoo inks only. Supplier REACH registration number to be inserted before EU/EEA placement. Separately, under Regulation (EU) 2019/1148 on explosives precursors, nitric acid above 3 % w/w is a restricted precursor: supply to the general public is prohibited, and national licensing, registration and suspicious-transaction reporting provisions apply to professional supply.
Seveso III (Directive 2012/18/EU)	Not named individually; captured under hazard category P8 (oxidising liquids and solids): lower tier 50 t / upper tier 200 t.
Rotterdam / Stockholm / Montreal Conventions	Not listed under the PIC procedure, not a persistent organic pollutant and not an ozone-depleting substance.
Basel Convention	Annex I — Y34 (acidic solutions or acids in solid form) when exported as waste.
Chemical Weapons Convention	Not a scheduled chemical.
Chemical inventories	Listed on TSCA (USA), DSL (Canada), EC Inventory / REACH (EU), AICS/AIIC (Australia), IECSC (China), ENCS and ISHL (Japan), KECI (Korea), PICCS (Philippines), NZIoC (New Zealand), TCSI (Taiwan) and the Indian Chemical Inventory. India: listed in Schedule 1 of the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules (nitric acid).
Mexico	No hazard grade reported by the manufacturer. OEL (NOM-010-STPS): TWA 2 ppm; STEL 4 ppm.
Germany	Water Hazard Class WGK 1 (slightly hazardous to water).

15.4 Chemical safety assessment

A chemical safety assessment has been carried out for nitric acid under REACH by the registrant consortium. No exposure scenarios are annexed to this SDS; users placing the substance on the EU/EEA market should obtain the extended SDS from the registrant.

16 SECTION 16: OTHER INFORMATION

16.1 Hazard rating systems

System	Rating	Notes
NFPA 704	Health 4 · Flammability 0 · Instability 0 · Special: OX	Oxidiser (OX) for the ≥ 65 % grades; commonly also marked ACID or COR. The Technical grade is not an oxidising liquid but is conventionally marked in the same way.
HMIS® III	Health 4 · Flammability 0 · Physical hazard 1 · PPE: X	PPE code to be assigned by the employer based on the task



Rating scale 0 = minimal, 4 = severe. These ratings are supplementary and are not a substitute for the GHS classification in Section 2.

16.2 Full text of hazard statements referred to in this SDS

- H272 — May intensify fire; oxidizer.
- H290 — May be corrosive to metals.
- H314 — Causes severe skin burns and eye damage.
- H318 — Causes serious eye damage.
- H331 — Toxic if inhaled.
- EUH071 — Corrosive to the respiratory tract.

16.3 Abbreviations and acronyms

Abbreviation	Meaning
ACGIH	American Conference of Governmental Industrial Hygienists
ADR / RID / ADN	European agreements concerning the international carriage of dangerous goods by road / rail / inland waterway
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging
DNEL / PNEC	Derived no-effect level / predicted no-effect concentration
EmS	Emergency schedule (IMDG Code)
EPCRA	Emergency Planning and Community Right-to-Know Act
ERG	Emergency Response Guidebook (PHMSA / Transport Canada / SCT)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
HCS	Hazard Communication Standard, 29 CFR 1910.1200
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA DGR	International Air Transport Association Dangerous Goods Regulations
IDLH	Immediately dangerous to life or health
IMDG	International Maritime Dangerous Goods Code
LC_{50} / LD_{50} / EC_{50}	Concentration / dose / effective concentration lethal or effective to 50 % of a test population
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PBT / vPvB	Persistent, bioaccumulative and toxic / very persistent and very bioaccumulative
PEL / REL / TLV	Permissible exposure limit / recommended exposure limit / threshold limit value

Abbreviation	Meaning
PG	Packing group
RCRA	Resource Conservation and Recovery Act
RQ / TPQ / TQ	Reportable quantity / threshold planning quantity / threshold quantity
SCBA	Self-contained breathing apparatus
STOT SE / RE	Specific target organ toxicity — single exposure / repeated exposure
TSCA	Toxic Substances Control Act
TWA / STEL	Time-weighted average / short-term exposure limit
WGK	Wassergefährdungsklasse (German water hazard class)

16.4 Key references

- 29 CFR 1910.1200, OSHA Hazard Communication Standard, as amended by the final rule of 19 July 2024 (89 FR 44144), aligning with GHS Revision 7.
- 49 CFR Parts 171–180, US DOT Hazardous Materials Regulations; Hazardous Materials Table, 49 CFR 172.101.
- 2024 Emergency Response Guidebook, Guide 157.
- IMDG Code and IATA Dangerous Goods Regulations, editions in force.
- 40 CFR 302.4, 40 CFR 355 Appendix A, 40 CFR 370, 40 CFR 372, 40 CFR 68.130, 40 CFR 261 and 6 CFR 27 Appendix A.
- Regulation (EC) No 1272/2008 Annex VI, Index No. 007-004-00-1; Regulation (EC) No 1907/2006 Annex II; Regulation (EU) 2019/1148.
- NIOSH Pocket Guide to Chemical Hazards, nitric acid; ACGIH TLVs and BEIs, current edition.
- Manufacturer safety data sheet for nitric acid (67 – 70 %) (US OSHA HCS 2024 format, revision 10, 18 December 2025) — source of the physical, toxicological and ecotoxicological values reproduced here.
- ECHA registered substance dossier and PubChem CID 944, nitric acid.

16.5 Revision information

Version	1.0
Date of issue	01 November 2026
Reason for revision	First issue under Highpuris LLC. Content prepared in the 16-section format of 29 CFR 1910.1200, Appendix D, with full US DOT 49 CFR transport detail, IMDG / IATA / ADR classification, and the complete Highpuris catalogue SKU list for nitric acid (60 – 70 %). Supersedes HP-SDS-HNO3-70-US-01, whose scope was limited to the 70 % grade.
Sections revised	All — first issue
Prepared by	Regulatory Affairs, Highpuris LLC

16.6 Disclaimer

The information in this Safety Data Sheet is provided in good faith and is believed to be accurate as at the date of issue. It has been compiled from data on nitric acid (60–70 %) published by regulatory authorities, manufacturers and recognised technical sources, and relates only to the specific material identified in Section 1. It does not constitute a warranty, express or implied, of merchantability, fitness for a particular purpose or of any other kind, and Highpuris LLC accepts no liability for loss or damage arising from the handling or use of the product. The material may present hazards in combination with other substances or in processes not described here. It is the responsibility of the user to determine the suitability of this information for their own particular purpose, to comply with all applicable laws and regulations, and to ensure that the material is handled only by adequately trained personnel. Transport classifications, exposure limits and regulatory listings change. This document must be reviewed against the regulatory editions in force at the date of each shipment.

— END OF SAFETY DATA SHEET —

Highpuris LLC · 9920 Pacific Heights Blvd, Suite 150, San Diego, CA 92121-4361, USA · +1 (401) 288-1196 · admin@highpuris.com · noreply@highpuris.com · www.highpuris.com