SAFETY DATA SHEET

Sulphuric Acid (93–98.5 %) — Technical, Laboratory Reagent, Analytical Reagent, PV Pure and Ultrapure PPB 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-26700-US-01**
Version / Revision	Version 1.0
Issue date	01 November 2026
Supersedes	Not applicable (first issue)
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	**Sulphuric Acid (93–98.5 %)**
Product description	Concentrated (non-fuming) sulphuric acid, assay 93.0 – 98.5 % w/w H_2SO_4 depending on grade: Technical 97.0 – 98.5 %; Laboratory Reagent 97.0 – 98.0 %; Analytical Reagent 95.0 – 98.0 %; PV Pure 96.0 – 98.0 %; Ultrapure PPB 93.0 – 98.0 %. The balance is water. All grades carry the same hazard classification and transport description.
Synonyms	Sulfuric acid; Oil of vitriol; Hydrogen sulfate; Dihydrogen sulfate; Acide sulfurique
CAS number	7664-93-9
EC (EINECS) number	231-639-5
EU Index number	016-020-00-8
REACH registration number	Not applicable to supply in the United States. A REACH registration (or coverage under a registrant's supply chain) is required before placement in the EU/EEA or Northern Ireland; UK REACH applies to Great Britain. Registered substance; not an SVHC.
Molecular formula	H_2SO_4
Molecular weight	98.08 g/mol
Highpuris product code	**26700** — the 9-digit catalogue SKUs below are built as product code · grade · pack
Pack sizes covered	500 mL, 1 L and 2.5 L glass bottles (GL45), 5 L and 25 L HDPE containers, 200 L HDPE drums, 1000 L IBCs and 16,000 L road tankers, depending on grade; small packs in UN-certified multi-unit shipping cases

Catalogue SKUs covered by this SDS

Grade	HSO assay	Pack size and SKU
Technical	97.0–98.5 %	5 L **267000044** · 25 L **267000062** · 200 L **267000064** · 1000 L **267000081** · 16,000 L **267000082**
Laboratory Reagent	97.0–98.0 %	500 mL **267000123** · 2.5 L **267000142** · 5 L **267000144** · 25 L **267000162** · 200 L **267000164** · 1000 L **267000181**
Analytical Reagent	95.0–98.0 %	500 mL **267000223** · 2.5 L **267000242** · 5 L **267000244** · 25 L **267000262** · 200 L **267000264** · 1000 L **267000281**

Grade	HSO assay	Pack size and SKU
PV Pure	96.0–98.0 %	5 L **267000344** · 25 L **267000362** · 1000 L **267000381**
Ultrapure PPB	93.0–98.0 %	500 mL **267000423** · 1 L **267000441**

1.2 Relevant identified uses of the substance and uses advised against

- **Identified uses:** laboratory analytical reagent; sample digestion and preparation, titration, pH adjustment and acidification; trace-metal (ppb) applications in semiconductor, photovoltaic and ICP-MS laboratories (PV Pure and Ultrapure PPB grades); industrial process chemical (Technical grade), including further formulation and repackaging by professional users.
- **Uses advised against:** not for food, drug, cosmetic, medicinal, household, pesticide or biocidal use. Not intended for use by the general public. Not to be used in any application resulting in human ingestion or direct dermal application. Supply is restricted under explosives-precursor and chemical-diversion rules (see Section 15).

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:

Hazard class	Category	Hazard statement
Corrosive to metals	Category 1	H290 — May be corrosive to metals
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
Specific target organ toxicity, single exposure (respiratory tract irritation)	Category 3	H335 — May cause respiratory irritation

H318 is not required on the label where H314 is assigned (GHS labelling precedence rules). The harmonised EU classification for sulphuric acid (Index No. 016-020-00-8, sulphuric acid … %) is Skin Corr. 1A, H314 (pictogram GHS05; signal word Danger), with specific concentration limits: Skin Corr. 1A at C ≥ 15 %; Skin Irrit. 2 / Eye Irrit. 2 at 5 % ≤ C < 15 %. Met. Corr. 1 (H290) and STOT SE 3 (H335) are assigned on the OSHA classification of the manufacturer's safety data sheet and are not part of the harmonised EU entry.

2.2 GHS label elements

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





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	H290 — May be corrosive to metals. H314 — Causes severe skin burns and eye damage. H335 — May cause respiratory irritation.

Precautionary statements — Prevention

- P234 — Keep only in original packaging.
- P260 — Do not breathe dust, fume, gas, mist, vapours or spray.
- P264 — Wash hands and 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.

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.
- P390 — Absorb spillage to prevent material damage.

Precautionary statements — Storage and disposal

- P403 + P233 — Store in a well-ventilated place. Keep container tightly closed.
- P405 — Store locked up.
- P406 — Store in a corrosive-resistant 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

- Reacts violently and exothermically with water, with spattering and the formation of corrosive acid mist. Dilution is strongly exothermic: ALWAYS add acid slowly to water with stirring and cooling — never add water to the acid.
- Powerful dehydrating agent: chars wood, paper, sugar, cotton and tissue (including skin and clothing) and can ignite finely divided combustible materials. Hygroscopic — absorbs moisture from air.
- Reacts with metals, especially in the presence of moisture or after dilution, liberating flammable hydrogen gas which can accumulate in container headspace and confined spaces.
- Contact with chlorates, perchlorates, permanganates, nitrates, carbides, cyanides and sulphides can cause fire, explosion or the release of toxic gases (including hydrogen cyanide and hydrogen sulphide).
- Strong inorganic acid mists containing sulfuric acid are classified by IARC as Group 1 (carcinogenic to humans) and by NTP as known human carcinogens; ACGIH A2. The liquid in closed containers does not generate mist, but heated, sprayed, electrolytic or agitated operations can — mist control is essential (see Sections 8 and 11, and California Proposition 65 in Section 15).
- Freezes at approximately 3 – 10 °C for 96 – 98.5 % grades (lower for the 93 % grade); partially frozen acid is non-uniform in concentration. The substance does not meet PBT or vPvB criteria under REACH Annex XIII and 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

Substance — concentrated sulphuric acid. Covers Technical 97–98.5 % through Ultrapure PPB 93–98 %.

Chemical name	CAS No.	EC No.	Conc. (% w/w)	GHS classification of the ingredient
Sulphuric acid	7664-93-9	231-639-5	93 – 98.5	Met. Corr. 1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318

Chemical name	CAS No.	EC No.	Conc. (% w/w)	GHS classification of the ingredient
Water	7732-18-5	231-791-2	1.5 – 7	Not classified

EU Index number for sulphuric acid: 016-020-00-8. Specific concentration limits in EU CLP Annex VI: Skin Corr. 1A / H314 at C ≥ 15 %; Skin Irrit. 2 / H315 and Eye Irrit. 2 / H319 at 5 % ≤ C < 15 %. Respiratory tract irritation (STOT SE 3, H335) is assigned in Section 2 on the manufacturer's OSHA classification and is not part of the EU harmonised entry.

Impurities and stabilising additives: none deliberately added. Trace impurities (including trace metals in the PV Pure and Ultrapure PPB grades) 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, acid-resistant gloves and, where mist or vapour 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 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. Obtain medical attention immediately. Pulmonary oedema may be delayed; keep the casualty under medical observation even if initially asymptomatic.

Skin contact. Immediately flush the affected area with copious quantities of lukewarm, gently flowing water for at least 15 minutes (30 minutes for large-area contact), removing contaminated clothing, shoes and jewellery while flushing. Do not attempt to neutralise the acid. Obtain medical attention immediately. Wash contaminated clothing, including the inside, and gloves before re-use; discard heavily contaminated leather articles.

Eye contact. Immediately flush the eyes with lukewarm, gently flowing water for at least 15 minutes, also under the eyelids, 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 — re-exposure of the oesophagus and the risk of aspiration make vomiting dangerous. Never give anything by mouth to an unconscious person. If the casualty is conscious and alert, rinse the mouth thoroughly with water; give nothing further to drink unless directed by a physician or poison control centre. Do not give sodium bicarbonate or other neutralising agents. Do not attempt gastric lavage. Call a physician or poison control centre and obtain medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Skin: immediate pain, redness, blistering, deep chemical burns with charring and tissue destruction; scarring. Heat is generated on contact with moist tissue.
- Eyes: severe pain, lacrimation, corneal burns and opacification; risk of permanent damage and blindness.
- Inhalation: burning of the nose and throat, cough, hoarseness, chest tightness and dyspnoea; high concentrations of mist may cause laryngeal spasm, chemical pneumonitis and delayed non-cardiogenic pulmonary oedema. Causes burns by all exposure routes.
- Ingestion: severe burns of the mouth, throat, oesophagus and stomach; severe swelling, damage to delicate tissue and danger of perforation; circulatory collapse in severe cases; oesophageal stricture as a late sequela.
- Repeated exposure to low concentrations of acid mist: erosion of dental enamel, chronic bronchitis, conjunctivitis and dermatitis.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat as a severe acid burn. Symptomatic and supportive treatment.
- Monitor the airway closely after inhalation; laryngeal oedema and bronchospasm may require early intubation. Observe for delayed-onset pulmonary oedema.
- Use of gastric lavage or emesis is contraindicated. Possible perforation of the stomach or oesophagus should be investigated; endoscopy within 12 – 24 hours may be indicated to assess the extent of injury. 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: carbon dioxide, dry chemical, dry sand or alcohol-resistant foam, as appropriate to the surrounding fire. Water spray may be used from a safe distance to cool fire-exposed containers, but only if no water can enter containers or contact spilled acid.
- Unsuitable: DO NOT USE WATER on the product, and never direct a solid water jet into it — water reacts violently and exothermically with the concentrated acid, causing spattering and the generation of corrosive acid mist.

5.2 Special hazards arising from the substance or mixture

- The product is not flammable or combustible (flash point not applicable; no explosion limits available), but it is a powerful dehydrating agent and may ignite finely divided combustible materials on contact.
- Contact with metals liberates hydrogen, which is highly flammable and forms explosive mixtures with air (4 – 75 vol %). Hydrogen may accumulate in the headspace of damaged or improperly vented containers.
- Thermal decomposition (above about 340 °C) generates dense, irritating and corrosive fumes of sulphur oxides (sulphur dioxide and sulphur trioxide) and hydrogen.
- Containers may rupture violently when heated or when contaminated with water, owing to internal pressure from heat of dilution, vapour and evolved hydrogen.
- The product causes severe burns of the eyes, skin and mucous membranes; fire-fighting water run-off is acidic and corrosive.

5.3 Advice for fire-fighters

- Wear a positive-pressure self-contained breathing apparatus (NIOSH-approved) and full acid-resistant protective clothing. Structural fire-fighting turnout gear alone provides only limited protection against this material.
- Evacuate and isolate the area. Approach from upwind. Stay out of low areas where corrosive vapour may collect.
- Cool fire-exposed containers with water spray from a safe distance, avoiding any contact of water with the acid; 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 137 (Substances — water-reactive — corrosive).

6 SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel. Evacuate the area immediately. Move upwind. Restrict access. Do not walk through spilled material and do not touch or direct water at it. Avoid all contact with liquid and mist. Ensure adequate ventilation, keep people away from and upwind of the spill or leak, and alert the site emergency response team.

For emergency responders. Do not attempt response without suitable PPE: chemical splash goggles with full face shield, full acid-resistant suit and boots, butyl rubber or Viton gloves, and a NIOSH-approved supplied-air respirator or SCBA where mist or vapour concentrations are unknown or exceed exposure limits. 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 137.

6.2 Environmental precautions

- Prevent entry into drains, sewers, surface water, groundwater and soil. Dyke or bund the spill. Should not be released into the environment.
- The acid is harmful to aquatic life through pH depression and will corrode concrete, metal drainage systems and sewer infrastructure.
- Report releases as required by law. Under CERCLA, a release of 1,000 lb (454 kg) or more of sulfuric acid in a 24-hour period must be reported immediately to the National Response Center (1-800-424-8802); for this product, 1,000 lb of sulfuric acid corresponds to approximately 1,030 lb (467 kg) of 97 % 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, PTFE or PP). Do NOT add water to the spilled acid.
- Soak up and contain the spill with inert, non-combustible absorbent — dry sand, earth, vermiculite, diatomaceous earth or a proprietary acid absorbent. Do NOT use combustible absorbents such as sawdust, paper, cloth or straw — they char and may ignite.
- Residual and small spills may be cautiously neutralised by covering with a dry alkaline material such as soda ash, sodium bicarbonate or lime, added slowly from a distance. Neutralisation liberates heat, spray and (with carbonates) carbon dioxide — never confine the reaction and never neutralise inside a closed container.
- Collect the absorbed or neutralised material with clean tools into a labelled, sealed, corrosion-resistant container for disposal.
- 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 monitor for acid mist and, where metals were contacted, for hydrogen 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. Do not breathe mist, vapours or spray; avoid operations that generate acid mist (heating, spraying, agitation, electrolysis).
- When diluting, ALWAYS add the acid slowly to water with stirring and cooling — never add water to the acid. Use heat-resistant (borosilicate) vessels; expect a large temperature rise.
- Wear the personal protective equipment specified in Section 8 at all times when handling. Avoid contact with skin, eyes and clothing.
- Open containers slowly to relieve any internal pressure; point the opening away from the face and body.
- Keep away from water, moist air and incompatible materials. Use only acid-resistant transfer equipment (PTFE, PP, HDPE, PVDF, borosilicate glass) that is clean and dry; ground and bond containers when transferring in bulk.
- Do not eat, drink or smoke in the handling area. Wash hands and exposed skin thoroughly after handling.
- Keep the container tightly closed when not in use — the acid is hygroscopic. Do not return unused material to the original container. Keep only in original packaging.
- Ensure an emergency eyewash station and safety shower are within 10 seconds' unobstructed travel of the work area and are tested regularly.
- Empty containers retain product residue and remain hazardous — 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 water and moist air, direct sunlight and sources of heat. Keep locked up or in an area accessible only to authorised, trained personnel.
Recommended temperature	15 – 25 °C (59 – 77 °F). Protect from freezing — the product solidifies at approximately 3 – 10 °C for 96 – 98.5 % grades (lower for the 93 % grade). If partly frozen, thaw gently at room temperature and mix before use; never apply direct heat.
Containment	Store on an acid-resistant, bunded or kerbed floor with secondary containment of at least 110 % of the largest container. Segregate from other chemical classes.
Suitable materials	Original supplier packaging: borosilicate glass with PTFE-faced closures; HDPE, PP, PTFE, PVDF, PFA. Bulk storage and transfer systems for the concentrated acid must be designed by a competent engineer for the specific concentration and temperature.
Unsuitable materials	Most metals when moisture is present or the acid is diluted — carbon steel, stainless steel, aluminium, zinc, galvanised surfaces, copper, brass and bronze liberate hydrogen. Concrete, marble and limestone are attacked; wood, paper, cotton and leather are charred.
Incompatible storage	Segregate from water, alkalis and amines, other strong acids, organic materials and alcohols, chlorates, perchlorates, permanganates, nitrates, carbides, cyanides, sulphides and metal powders. Do not store with flammable liquids or oxidisers in the same cabinet.
Shelf life	Indefinite when stored as specified in unopened original packaging. The acid absorbs moisture once opened; assay and, for PV Pure and Ultrapure PPB grades, the trace-metal specification can no longer be guaranteed after the container is opened outside a clean environment.

7.3 Specific end use(s)

Laboratory reagent, semiconductor / photovoltaic process chemical 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 — sulfuric acid (CAS 7664-93-9)

Source	Type	Value
OSHA PEL (29 CFR 1910.1000, Table Z-1)	8-hour TWA	1 mg/m³
NIOSH REL	10-hour TWA	1 mg/m³
ACGIH TLV	8-hour TWA	0.2 mg/m³ (thoracic particulate fraction); A2 — suspected human carcinogen (strong inorganic acid mists containing sulfuric acid)
NIOSH IDLH	Immediately dangerous to life or health	15 mg/m³
Cal/OSHA PEL (8 CCR 5155)	8-hour TWA	0.1 mg/m³ (thoracic fraction)

Source	Type	Value
Mexico OEL (NOM-010-STPS)	TWA	0.2 mg/m³ (A2)
EU IOELV (Directive 2009/161/EU)	8-hour TWA	0.05 mg/m³ (thoracic fraction)

8.2 Exposure controls

Appropriate engineering controls

- Use in a certified 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. Control acid mist at source: enclose heated baths, spraying and electrolytic operations, and fit mist eliminators or scrubbers to exhausts.
- Provide general dilution ventilation sufficient to keep airborne concentrations below the exposure limits (the lowest applicable limit is 0.05 mg/m³). Exhaust ducting must be of corrosion-resistant construction.
- Consider closed transfer systems for bulk handling, and air monitoring (thoracic fraction) where mist may be generated.
- Safety shower and eyewash station must be immediately available (ANSI/ISEA Z358.1).

Eye and face protection

- Chemical splash goggles conforming to ANSI/ISEA Z87.1 or EN 166, worn together with a full face shield whenever there is any risk of splashing, pouring or pressurised release. Ordinary safety spectacles are not adequate.

Skin and body protection

- Gloves: butyl rubber, Viton® or neoprene (≥ 0.5 mm; breakthrough time typically > 480 minutes for butyl rubber, EN ISO 374 performance level 6). PVC is suitable for short tasks; nitrile is suitable only for incidental splash and must be changed immediately on contact. Natural rubber latex is not recommended. Wear and wash gloves, including the inside, as directed; confirm performance with the glove manufacturer for the specific task and concentration.
- Body: 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. Cotton and wool clothing are charred by the concentrated acid.
- Feet: closed, chemically resistant boots or overboots. Trouser legs worn outside the boots.

Respiratory protection

- Not normally required where work is carried out in an effective fume hood and no mist is generated. Where the exposure limits may be exceeded or irritation is experienced, use a NIOSH-approved air-purifying respirator with acid-gas cartridges and a P100 particulate filter (EN 14387 type E with EN 143 particulate filter) within its assigned protection factor.
- For unknown concentrations, oxygen-deficient atmospheres, emergency response or concentrations at or above 15 mg/m³ (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. Route vent gases and mist 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 (oily, dense); may solidify at low temperature
Colour	Clear, colourless to pale brown
Odour	Odourless (irritating when heated or as mist)
Odour threshold	No information available
Melting point / freezing point	Approximately 3 – 10 °C (37 – 50 °F) for 96 – 98.5 %; lower for the 93 % grade (supplier value: 10 °C / 50 °F)
Boiling point / initial boiling point	290 – 338 °C (554 – 640.4 °F), depending on concentration; decomposes at the upper end
Flammability	Not flammable. Contact with metals liberates flammable hydrogen gas
Lower / upper explosion limit	No data available for the liquid. Hydrogen evolved on contact with metals: 4 – 75 vol % in air
Flash point	Not applicable
Auto-ignition temperature	No data available
Decomposition temperature	340 °C (644 °F)
pH	0.3 (1 N aqueous solution)

Property	Value
Kinematic / dynamic viscosity	No data available
Solubility (water)	Soluble in water in all proportions, with violent evolution of heat — always add acid to water
Solubility (other)	No information available. Miscible with ethanol with evolution of heat and reaction; reacts with most organic solvents
Partition coefficient n-octanol/water (log Kow)	Not applicable — inorganic substance, fully ionised in water
Vapour pressure	< 0.001 mmHg (< 0.13 Pa) at 20 °C
Density / relative density	1.84 g/cm³ (relative density 1.84) for the concentrated acid; slightly lower at the 93 % end of the range
Relative vapour density	3.38 (air = 1)
Particle characteristics	Not applicable (liquid)
Molecular weight	98.08 g/mol (H_2SO_4)
Evaporation rate	Slower than ether
Oxidising properties	Not classified as an oxidiser; hot concentrated acid is oxidising
Explosive properties	None
Surface tension	Not determined
Concentration	93.0 – 98.5 % w/w H_2SO_4 across grades (Technical 97.0 – 98.5 %; Laboratory Reagent 97.0 – 98.0 %; Analytical Reagent 95.0 – 98.0 %; PV Pure 96.0 – 98.0 %; Ultrapure PPB 93.0 – 98.0 %)

9.2 Other information

Hygroscopic. No additional physical or chemical hazard information. Test data above relate to the concentrated acid unless otherwise stated.

10 SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Reactive hazard: yes. Highly corrosive and strongly dehydrating; reacts violently with water, exothermically with bases, and with most metals to liberate hydrogen, as detailed below.

10.2 Chemical stability

Stable under the recommended storage and handling conditions in closed containers. Reacts violently with water. Hygroscopic — absorbs moisture from air, which dilutes the acid and increases its corrosivity to metals. Not sensitive to mechanical impact or static discharge. Hazardous polymerisation does not occur.

10.3 Possibility of hazardous reactions

- Violent, heat-generating reaction with water, with spattering of corrosive acid; dilution can cause boiling. Always add acid to water, never water to acid.
- Reaction with most metals (especially when diluted or moist) releases flammable hydrogen gas, which may form an explosive atmosphere in enclosed spaces or container headspace.
- Violent or explosive reaction with chlorates, perchlorates, permanganates, nitrates, picrates, fulminates and other strong oxidisers, and with carbides and finely divided metals.
- Reaction with cyanides liberates hydrogen cyanide; reaction with sulphides liberates hydrogen sulphide; reaction with hypochlorites and chlorides can liberate chlorine and hydrogen chloride.
- Dehydrates and chars organic materials (wood, paper, sugar, cellulose); violent or runaway reaction with alcohols, acetone, acrylonitrile, aniline and other reactive organics. Violent exothermic reaction with strong bases.

10.4 Conditions to avoid

Exposure to water, moist air and humidity; excess heat; contact with incompatible materials; confinement of evolved gas in closed systems; freezing and uncontrolled thawing; generation of acid mist.

10.5 Incompatible materials

Class	Examples
Water	Violent exothermic reaction; also moist air (hygroscopic) and aqueous solutions added to the concentrated acid

Class	Examples
Bases and amines	Sodium and potassium hydroxide, ammonia and ammonium hydroxide, amines, carbonates and bicarbonates (violent heat; CO_2 evolution)
Oxidising agents and strong acids	Chlorates, perchlorates, permanganates, nitrates, nitric acid, chromates, peroxides; other strong acids
Organic materials and alcohols	Alcohols, acetone, acrylonitrile, aniline, sugars, cellulose, wood, paper, cotton and other organic matter (charring, heat, possible ignition)
Metals and alloys	Carbon steel, stainless steel, aluminium, zinc, galvanised surfaces, copper, brass, bronze, magnesium, alkali metals and metal powders (hydrogen evolution)
Cyanides, sulphides and carbides	Cyanides (hydrogen cyanide); sulphides (hydrogen sulphide); carbides (acetylene and other flammable gases)

10.6 Hazardous decomposition products

Sulphur oxides (SO_2, SO_3) and hydrogen on heating above about 340 °C, in a fire or on contact with metals; irritating, corrosive acid fumes.

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 mist or fume, and accidental ingestion. The acid causes burns by all exposure routes.

Endpoint	Data and conclusion
Acute toxicity — oral	LD_{50} (rat): 2,140 mg/kg bw. Effects are principally local corrosion of the gastrointestinal tract. Not classified for acute oral toxicity (above the Category 4 cut-off of 2,000 mg/kg); corrosivity governs. May be harmful if swallowed.
Acute toxicity — dermal	No data available. Not classified; local corrosion dominates (may be harmful in contact with skin).
Acute toxicity — inhalation	LC_{50} (rat, 4 h): 0.375 mg/L (acid mist/aerosol). Not classified for acute inhalation toxicity in the manufacturer's classification or in the EU harmonised entry; the mist hazard is addressed through the corrosivity, respiratory-irritation (STOT SE 3) and carcinogenic-mist entries below and by the exposure limits in Section 8. The supplier warns that inhalation may be fatal at high concentrations.
Skin corrosion / irritation	Corrosive. Causes severe, full-thickness chemical burns on short contact. Classified Skin Corrosion Category 1A on the basis of the harmonised EU classification (C ≥ 15 %) and human experience. 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 (neither respiratory nor skin sensitiser). Not classified.
Germ cell mutagenicity	Based on available data, the classification criteria are not met. Not classified.
Carcinogenicity	Product as supplied (closed container): based on available data, the classification criteria are not met. However, exposure to strong inorganic acid mists containing sulfuric acid may cause cancer by inhalation: IARC Group 1 (carcinogenic to humans; laryngeal and lung cancer in occupationally exposed workers); NTP known human carcinogen; ACGIH A2 (suspected human carcinogen); also marked as listed by OSHA in the manufacturer's table and by Mexico (A2). Listed under California Proposition 65 (see Section 15).
Reproductive toxicity	Based on available data, the classification criteria are not met. Not classified.
STOT — single exposure	Category 3 — may cause respiratory irritation (target organ: respiratory system). Mist and fume are corrosive and irritating to the upper respiratory tract.
STOT — repeated exposure	Based on available data, the classification criteria are not met; no target organs known. Repeated occupational exposure to acid mist has been associated with erosion of dental enamel, chronic bronchitis, conjunctivitis and skin changes, generally at concentrations at or above current exposure limits.
Aspiration hazard	Based on available data, the classification criteria are not met.

11.2 Other information

Target organs: eyes, skin, mucous membranes, respiratory system, gastrointestinal tract and teeth. Persons with pre-existing skin disorders, eye disease or chronic respiratory disease (asthma, chronic bronchitis, emphysema) may be at increased risk from exposure. No toxicologically synergistic products are known. Endocrine disrupting properties: this product does not contain any known or suspected endocrine disruptors.

The toxicological properties have not been fully investigated in all endpoints. Use of gastric lavage or emesis is contraindicated; possible perforation of the stomach or oesophagus should be investigated. The assessment above is based on the manufacturer's data and on the corrosivity of the acid, which is the determining factor for local effects.

12 SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Endpoint	Value
Fish — acute	LC_{50} (Brachydanio rerio, zebra fish, 96 h, static): > 500 mg/L.
Aquatic invertebrates — acute	EC_{50} (water flea, 24 h): 29 mg/L.
Algae	No data available.
Microorganisms	No data available.

The ecotoxicity of sulphuric acid is governed almost entirely by the pH depression it causes in the receiving water. In waters of adequate buffering capacity the acid dissociates to hydronium and sulphate ions and is neutralised. Should not be released into the environment.

12.2 Persistence and degradability

No information available from the manufacturer. As an inorganic acid the substance is not subject to biodegradation; it dissociates completely in water to hydronium and sulphate ions, and persistence of the acid itself is not relevant.

12.3 Bioaccumulative potential

No information available from the manufacturer. Not expected to bioaccumulate (inorganic, fully ionised in water).

12.4 Mobility in soil

No information available from the manufacturer. Soluble in and miscible with water, and therefore highly mobile in soil and groundwater; mobility of the acid is limited by neutralisation by carbonates and other bases in soil and sediments.

12.5 Results of PBT and vPvB assessment

The substance does not meet the criteria for PBT or vPvB under REACH Annex XIII (inorganic substance; criteria not applicable).

12.6 Other adverse effects

Germany water hazard class WGK 1 (slightly hazardous to water). Not an ozone-depleting substance; global warming potential not applicable. Contains no PFAS.

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 and local hazardous waste regulations to ensure complete and accurate classification.
- Dispose of surplus and non-recyclable material via a licensed hazardous-waste contractor, preferably by acid regeneration or recovery, or by controlled neutralisation at a permitted treatment facility. Do not discharge to sewers, drains or watercourses.
- Never neutralise concentrated acid directly. Small laboratory quantities may be disposed of only by trained personnel, by first adding the acid slowly to a large excess of cold water (or ice) with stirring and cooling, then neutralising with dilute alkali (sodium carbonate, sodium bicarbonate or lime) in accordance with the receiving authority's permit; the process is strongly exothermic and, with carbonates, liberates carbon dioxide — never carry it out in a closed container.
- Empty containers retain product residue and remain hazardous. Do not cut, weld, braze, drill, grind or reuse them, and do not add water to a container that still holds acid.
- Triple-rinse containers with water, adding rinse water to the container slowly and 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 corrosivity characteristic (aqueous solutions of pH ≤ 2) — EPA hazardous waste number D002. Not a P- or U-listed commercial chemical product. European waste catalogue: EWC code 06 01 01* (sulphuric acid and sulphurous acid) from

the manufacture, formulation, supply and use of acids. 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 1830
UN proper shipping name	Sulphuric acid with more than 51 % acid (US DOT: "Sulfuric acid with more than 51 percent acid")
Transport hazard class	Class 8 — Corrosive substances
Subsidiary hazard	None
Packing group	II
Label(s) required	Class 8 "Corrosive" (white upper half / black lower half)
Environmental hazards	Not classified as a marine pollutant under the IMDG Code and not an environmentally hazardous substance under ADR/RID.
Special precautions for user	Transport upright, secured against movement, away from foodstuffs. Keep dry — protect from water and moist air. Segregate from alkalis, oxidisers, cyanides, organic materials and metals. Vehicles and containers must be of, or lined with, acid-resistant material. Protect from freezing (approximately 3 – 10 °C for 96 – 98.5 %).
Transport in bulk (MARPOL Annex II / IBC Code)	Sulphuric acid is listed in Chapter 17 of the IBC Code (pollution category Z, ship type 3). Not applicable to packaged goods; consult the ship's Certificate of Fitness for bulk carriage.

Transport hazard label(s) required on the package:



Class 8 — Corrosive

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). Reduced-size labels are permitted only where the package is too small to bear a full-size label. 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	Sulfuric acid with more than 51 percent acid — 8, UN1830, PG II
Label codes	8
Special provisions (49 CFR 172.102)	A3, A7, B3, B83, B84, IB2, N34, T8, TP2
Packaging — exceptions	49 CFR 173.154
Packaging — non-bulk	49 CFR 173.202
Packaging — bulk	49 CFR 173.242
Quantity limitation — passenger aircraft/rail	1 L
Quantity limitation — cargo aircraft only	30 L
Vessel stowage	Location C
Limited quantity	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 sulfuric acid — approximately 1,030 lb (467 kg) of 97 % 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	137 — Substances — water-reactive — corrosive
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.

14.3 IMDG Code (sea)

UN number / class / PG	UN 1830, Class 8, PG II
Proper shipping name	SULPHURIC ACID with more than 51 % acid
EmS (emergency schedules)	F-A (fire) and S-B (spillage)
Segregation group	Group 1 — Acids
Marine pollutant	No
Limited quantity	1 L
Excepted quantity	E2
Stowage and segregation	Stowage category C. Segregate from alkalis, oxidising agents (Class 5.1), cyanides, Class 4.3 substances and organic materials; keep dry. 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 1830, Class 8, PG II
Proper shipping name	Sulphuric acid with more than 51 % acid
Passenger and cargo aircraft	Packing Instruction 851 — maximum net quantity 1 L per package
Cargo aircraft only	Packing Instruction 855 — maximum net quantity 30 L per package
Limited quantity (passenger aircraft)	Packing Instruction Y840 — maximum net quantity 0.5 L per package
Excepted quantity code	E2
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 1830, Class 8, PG II
Classification code	C1 — corrosive substances, acidic, inorganic, liquid
Labels	8
Tunnel restriction code	(E)
Hazard identification number (Kemler)	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

UN1830, Sulfuric acid, 8, PG II — followed by the number and type of packages, total quantity, packaging authorisation, emergency response telephone number and, where applicable, the "RQ" designation and limited-quantity marking.

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.)	Sulfuric acid, CAS 7664-93-9, is 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; not applicable. Contact with metals liberates flammable hydrogen — see Section 10.
OSHA PSM (29 CFR 1910.119, App. A)	Sulfuric acid itself is not a listed highly hazardous chemical. "Oleum (fuming sulfuric acid)" (threshold quantity 1,000 lb) is listed, but this non-fuming product is not oleum and the entry does not apply.
CERCLA section 103 (40 CFR 302.4)	Hazardous substance. Reportable quantity 1,000 lb (454 kg) of sulfuric 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)	Applies. Sulfuric acid is an extremely hazardous substance: threshold planning quantity (TPQ) 1,000 lb; EHS reportable quantity 1,000 lb. Facilities holding the TPQ or more must notify the State Emergency Response Commission and Local Emergency Planning Committee.
EPCRA sections 311 / 312 (40 CFR 370)	Reportable. Applicable hazard classes: skin corrosion or irritation (Category 1A), serious eye damage or eye irritation (Category 1), corrosive to metals, specific target organ toxicity (single exposure), and carcinogenicity of acid mists. Reporting threshold 500 lb (or the TPQ if lower) on site at any one time, as an extremely hazardous substance.
EPCRA section 313 (TRI, 40 CFR 372)	Listed as "Sulfuric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)". Only aerosol forms count toward the reporting threshold; the liquid as supplied in closed containers is not counted unless it is manufactured, processed or otherwise used in a way that generates acid aerosols.
Clean Air Act section 112 / 112(r)	Not a listed hazardous air pollutant. Sulfuric acid is not a regulated substance under 40 CFR 68.130 (oleum is listed; 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.
RCRA (40 CFR 261)	Discarded unused product exhibits the corrosivity characteristic (D002). Not P- or U-listed.
DEA / Chemical Diversion and Trafficking Act (21 CFR 1310)	List II regulated chemical (sulfuric acid, DEA chemical code 6552). Recordkeeping, reporting and suspicious-order requirements apply to regulated transactions.
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)	Not a chemical of interest.

15.2 United States state regulations

State list	Status
California Proposition 65	"Strong inorganic acid mists containing sulfuric acid" are listed under the Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer. A Proposition 65 warning is required where the product is used in a way that generates acid mist (for example electroplating, heated baths and spraying). The liquid as supplied in closed containers does not generate mist.
California — other	Cal/OSHA PEL 0.1 mg/m³ TWA (thoracic fraction).
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 — corrosive, carcinogen (mists).
Pennsylvania Right-to-Know	Listed (Hazardous Substance List).
Rhode Island, Minnesota	Listed on the respective state hazardous substance / right-to-know lists. Not listed: Illinois.

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 (sulfuric acid, Part 1A).

Jurisdiction	Status
European Union — CLP	Harmonised classification, Annex VI to Regulation (EC) No 1272/2008, Index No. 016-020-00-8: Skin Corr. 1A, H314, 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) applies to the use of the substance in tattoo inks only. Regulation (EU) 2019/1148 (explosives precursors): sulfuric acid above 15 % w/w is a restricted precursor — supply to members of the general public is prohibited, and a licence is required to acquire, import, possess or use it above 40 % w/w. Supplier REACH registration number to be inserted before EU/EEA placement.
Seveso III (Directive 2012/18/EU)	Not named individually and not captured under any Annex I hazard category (corrosive only): no qualifying quantity applies.
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), 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 Chemical (MSIHC) Rules.
Mexico	Hazard grade not stated by the manufacturer; classify under NOM-018-STPS. OEL (NOM-010-STPS): TWA 0.2 mg/m³ (A2).
Germany	Water Hazard Class WGK 1 (slightly hazardous to water).

15.4 Chemical safety assessment

A chemical safety assessment has been carried out for sulphuric 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 3 · Flammability 0 · Instability 2 · Special: W	Corrosive; reacts violently with water (W). Rating per manufacturer's safety data sheet; commonly also marked ACID or COR
HMIS® III	Health 3 · Flammability 0 · Physical hazard 2 · 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

- H290 — May be corrosive to metals.
- H314 — Causes severe skin burns and eye damage.
- H315 — Causes skin irritation.
- H318 — Causes serious eye damage.
- H319 — Causes serious eye irritation.
- H335 — May cause respiratory irritation.

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

Abbreviation	Meaning
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
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 137.
- 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 and 40 CFR 261; 21 CFR 1310.
- Regulation (EC) No 1272/2008 Annex VI, Index No. 016-020-00-8; Regulation (EC) No 1907/2006 Annex II; Regulation (EU) 2019/1148; Directive 2009/161/EU.
- NIOSH Pocket Guide to Chemical Hazards, sulfuric acid; ACGIH TLVs and BEIs, current edition; IARC Monographs Volume 100F (strong inorganic acid mists containing sulfuric acid).
- Manufacturer safety data sheet for sulfuric acid (US OSHA HCS 2024 format, revision 11, 18 December 2025) — source of the physical, toxicological and ecotoxicological test values reproduced here.
- ECHA registered substance dossier and PubChem CID 1118, sulfuric acid.

16.5 Revision information

Version	1.0
Date of issue	01 November 2026

Reason for revision	First issue under Highpuris LLC for Sulphuric Acid (93–98.5 %). 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 this product.
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 sulphuric acid (93–98.5 %) 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 —

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