SAFETY DATA SHEET

Ammonia Solution (20–26 % NH) — 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-10200-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	**Ammonia Solution (20–26 % NH_3)**
Product description	Aqueous solution of ammonia (ammonium hydroxide), nominal assay 24.0 – 26.0 % w/w NH_3 (Laboratory Reagent and PV Pure), 25.0 – 26.0 % w/w NH_3 (Analytical Reagent) or 20.0 – 22.0 % w/w NH_3 (Ultrapure PPB). All grades carry the same hazard classification and transport description.
Synonyms	Ammonium hydroxide; Aqueous ammonia; Ammonia water; Spirit of hartshorn; Ammoniaque
CAS number	1336-21-6
EC (EINECS) number	215-647-6
EU Index number	007-001-01-2
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.
Molecular formula	NH_3 (aq) / NH_4OH
Molecular weight	17.03 g/mol (NH_3); 35.05 g/mol (NH_4OH)
Highpuris product code	**10200** — 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 HDPE bottles, 25 L HDPE containers, 200 L HDPE drums and 1000 L IBCs, in UN-certified multi-unit shipping cases where applicable

Catalogue SKUs covered by this SDS

Grade	NH assay	Pack size and SKU
Laboratory Reagent	24.0–26.0 %	500 mL **102000123** · 2.5 L **102000142**
Analytical Reagent	25.0–26.0 %	500 mL **102000223** · 2.5 L **102000242**
PV Pure	24.0–26.0 %	25 L **102000362** · 200 L **102000364** · 1000 L **102000381**
Ultrapure PPB	20.0–22.0 %	250 mL **102000422** · 500 mL **102000423** · 1 L **102000441**

1.2 Relevant identified uses of the substance and uses advised against

- **Identified uses:** laboratory analytical reagent; pH adjustment, buffer preparation, titration, precipitation and extraction; sample preparation and dilution for trace-metal (ppb) work in semiconductor, photovoltaic and ICP-MS laboratories; wafer and photovoltaic wet-process cleaning and etch formulations; further formulation and repackaging by professional users.
- **Uses advised against:** not for food, drug, cosmetic, medicinal, pesticide, biocidal, household 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:

Hazard class	Category	Hazard statement
Skin corrosion / irritation	Category 1B	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
Hazardous to the aquatic environment — acute	Category 1	H400 — Very toxic to aquatic life

H318 is not required on the label where H314 is assigned (GHS labelling precedence rules). The aquatic hazard class is not adopted by the OSHA Hazard Communication Standard but applies under UN GHS, EU CLP and Canada HPR and is included for that reason. The harmonised EU classification for ammonia solution (Index No. 007-001-01-2) is Skin Corr. 1B, H314; STOT SE 3, H335; Aquatic Acute 1, H400 (M-factor 1), with specific concentration limits: Skin Corr. 1B at C ≥ 25 %; Skin Irrit. 2 / Eye Irrit. 2 at 5 % ≤ C < 25 %; STOT SE 3 at C ≥ 5 %. The Ultrapure PPB grade (20.0 – 22.0 % NH_3) therefore falls below the 25 % limit for Category 1B under the EU specific concentration limits; this sheet nevertheless classifies the whole 20 – 26 % range as Skin Corr. 1B / Eye Dam. 1 (the more protective classification, consistent with the manufacturer's sheet for 20 – 22 % solutions).

2.2 GHS label elements

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



GHS05 — Corrosion



GHS07 — Exclamation mark



GHS09 — Environment

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	H314 — Causes severe skin burns and eye damage. H335 — May cause respiratory irritation. H400 — Very toxic to aquatic life.

Precautionary statements — Prevention

- P260 — Do not breathe mist, vapours or spray.
- P264 — Wash hands and exposed skin thoroughly after handling.
- P271 — Use only outdoors or in a well-ventilated area.
- P273 — Avoid release to the environment.
- 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.
- P391 — Collect spillage.

Precautionary statements — Storage and disposal

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

- Ammonia vapour is released continuously from the solution. Ammonia–air mixtures are flammable in the range 15 – 28 vol % and may be ignited in confined spaces or container headspace; the solution itself is not classified as a flammable liquid. The vapour is lighter than air (vapour density 0.59).
- Containers develop internal pressure on warming because dissolved ammonia comes out of solution: open slowly, point the opening away from the face, and store at or below 25 °C (77 °F).
- Reacts with hypochlorite (bleach) to form toxic chloramines and with halogens exothermically; contact with mercury, silver or gold compounds can form shock-sensitive explosive amides. Corrodes copper, zinc, brass, bronze and aluminium and galvanised surfaces.
- The vapour and mist are strongly irritating to the eyes and respiratory tract; inhalation of high concentrations may cause delayed pulmonary oedema, which may be fatal.
- Very toxic to aquatic organisms (Aquatic Acute 1). Toxicity to fish is governed by the un-ionised ammonia fraction, which increases with pH and temperature.
- 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 — aqueous solution of ammonia (ammonium hydroxide). The Highpuris range is 20 – 26 % w/w NH_3; the balance is water. Trace impurities are controlled to the grade specification and are not present at levels that alter the classification.

Chemical name	CAS No.	EC No.	Conc. (% w/w)	GHS classification of the ingredient
Ammonium hydroxide (ammonia, aqueous)	1336-21-6	215-647-6	20 – 26 (as NH_3)	Skin Corr. 1B, H314; Eye Dam. 1, H318; STOT SE 3, H335; Aquatic Acute 1, H400
Ammonia (dissolved gas — same species as the row above)	7664-41-7	231-635-3	Included in the row above	Listed by the manufacturer without a separate concentration; not an additional component
Water	7732-18-5	231-791-2	74 – 80	Not classified

EU Index number for ammonia solution: 007-001-01-2. Specific concentration limits in EU CLP Annex VI: Skin Corr. 1B / H314 at C ≥ 25 %; Skin Irrit. 2 / H315 and Eye Irrit. 2 / H319 at 5 % ≤ C < 25 %; STOT SE 3 / H335 at C ≥ 5 %. Aquatic Acute 1 / H400, M = 1.

Impurities and stabilising additives: none deliberately added. The ammonia and ammonium hydroxide entries describe the same dissolved species and are not additive.

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, 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, remove from exposure, lie 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. Pulmonary oedema may be delayed and may be fatal; keep the casualty under medical observation.
Skin contact. Immediately wash off with plenty of water, using a safety shower for large-area contact, for at least 15 minutes, removing contaminated clothing, shoes, gloves and jewellery while flushing. Do not attempt to neutralise the alkali. Call a physician immediately. Wash contaminated clothing and gloves, including the inside, before re-use.
Eye contact. Immediately rinse with plenty of water, also under the eyelids, for at least 15 minutes, keeping the eyes 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 and rinse the mouth thoroughly with water. Do not give acids or other neutralising agents. 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 by all exposure routes; may be harmful in contact with skin. Alkali burns can continue to penetrate after the initial contact.
- Eyes: severe pain, lacrimation, corneal burns and opacification; may cause blindness or permanent eye damage.
- Inhalation: burning of the nose and throat, cough, wheezing, chest tightness and dyspnoea; harmful by inhalation. High concentrations may cause chemical pneumonitis and delayed pulmonary oedema, which may be fatal.
- Ingestion: burns of the mouth, throat and the upper digestive and respiratory tracts; severe swelling, severe damage to delicate tissue and danger of perforation of the oesophagus or stomach; harmful if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat as a severe alkali burn. Treat symptomatically.
- Gastric lavage and emesis are contraindicated. Possible perforation of the stomach or oesophagus should be investigated.
- Monitor the airway closely after inhalation; laryngeal oedema and bronchospasm may require early intubation. Observe for delayed-onset pulmonary oedema.
- Following ingestion, endoscopy within 12 – 24 hours may be indicated to assess the extent of injury. 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 or fog may be used to cool fire-exposed containers and to knock down and absorb ammonia vapour.
- Unsuitable: no restriction is given by the manufacturer. Avoid a solid water jet, which may spread the product and splash corrosive liquid.

5.2 Special hazards arising from the substance or mixture

- The aqueous solution is not classified as a flammable liquid; no flash point or explosion limits are available for the solution. Ammonia vapour released from the solution is flammable in air between 15 and 28 vol % and can accumulate in enclosed spaces or container headspace.
- Containers may rupture violently when heated owing to pressure build-up from evolved ammonia.
- Thermal decomposition and combustion produce nitrogen oxides (NOx), ammonia and hydrogen, which are irritating and toxic gases and vapours.
- The product causes burns of the eyes, skin and mucous membranes; fire-fighting water run-off is alkaline, corrosive and very toxic to aquatic life.

5.3 Advice for fire-fighters

- Wear a pressure-demand, positive-pressure self-contained breathing apparatus (NIOSH-approved) and full chemical-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 vapour may collect.
- Use water spray to cool fire-exposed containers; 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 disposal.
- Refer to ERG 2024 Guide 154 (Substances — toxic and/or corrosive, non-combustible).

6 SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel. Evacuate personnel to safe areas and keep people away from and upwind of the spill or leak. Restrict access. Do not walk through spilled material. Avoid all contact with liquid, vapour and mist. Remove ignition sources where an ammonia atmosphere may be present. Ensure adequate ventilation. Alert the site emergency response team.

For emergency responders. Do not attempt response without suitable PPE: chemical splash goggles with full face shield, chemical-resistant suit and boots, butyl rubber gloves, and a NIOSH-approved respirator with ammonia/methylamine cartridges or SCBA where vapour concentrations are unknown or exceed exposure limits (IDLH 300 ppm). Initial isolation of at least 50 m (150 ft) in all directions for a spill or leak is recommended; increase the distance for large spills and consult ERG Guide 154.

6.2 Environmental precautions

- 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 product is very toxic to aquatic organisms; even small releases to a watercourse can be lethal to fish.
- Report releases as required by law. Under CERCLA and the Clean Water Act, a release of 1,000 lb (454 kg) or more of ammonium hydroxide in a 24-hour period must be reported immediately to the National Response Center (1-800-424-8802). The reportable quantity for ammonia itself is 100 lb (45.4 kg); confirm the applicable basis of calculation with the site environmental officer.

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, alkali-resistant container. Release pressure slowly from warm containers.
- Soak up with inert absorbent material — dry sand, earth, vermiculite or a proprietary alkali absorbent. Do not use combustible absorbents such as sawdust, paper or cloth.
- Reduce ammonia vapour by applying water spray or fog from upwind; collect the run-off, which is corrosive and very toxic to aquatic life.
- Small residues may be carefully neutralised with a dilute weak acid (such as citric acid) added slowly from a distance by trained personnel; neutralisation is exothermic. Never use hypochlorite (bleach) for clean-up — it forms toxic chloramines.
- Collect the absorbed material into labelled, closed, corrosion-resistant containers for disposal.
- Ventilate the area thoroughly and monitor for ammonia vapour 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

- Use only under a chemical fume hood or under local exhaust ventilation. Open and dispense with the sash lowered.
- Containers develop pressure on warming: open slowly, with the opening pointed away from the face and body. Cool the container before opening if it has been exposed to heat.
- Use only alkali-resistant transfer equipment (PTFE, PP, HDPE, PVDF, glass, 316 stainless steel). Do not use copper, brass, zinc or aluminium fittings.
- Wear the personal protective equipment specified in Section 8 at all times when handling. Do not breathe mist, vapours or spray; avoid contact with skin, eyes and clothing. Do not ingest — if swallowed, seek immediate medical assistance.
- Never mix with hypochlorite, other halogens, acids or oxidising agents. Keep away from mercury, silver and gold compounds.
- 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. 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 — 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 direct sunlight and sources of heat. Keep locked up or in an area accessible only to authorised, trained personnel.
Recommended temperature	At or below 25 °C (77 °F). Containers develop pressure on warming; do not expose to heat or direct sunlight.
Containment	Store on an alkali-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: HDPE, PP, PTFE and PVDF with vented or pressure-relief closures where specified; borosilicate glass for laboratory quantities; 316 stainless steel.
Unsuitable materials	Copper, brass, bronze, zinc, galvanised surfaces and aluminium; certain silver, gold and mercury compounds.
Incompatible storage	Segregate from strong oxidising agents (including hypochlorites), acids and strong acids, halogens, metals, and mercury, silver and gold compounds.
Shelf life	Stable when stored as specified in unopened original packaging; ammonia content decreases once opened. 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, wet-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 — ammonia (CAS 7664-41-7)

Source	Type	Value
OSHA PEL (29 CFR 1910.1000, Table Z-1)	8-hour TWA	50 ppm (35 mg/m³)
NIOSH REL	TWA / STEL	25 ppm (18 mg/m³) / 35 ppm (27 mg/m³)
ACGIH TLV	8-hour TWA / STEL	25 ppm / 35 ppm
NIOSH IDLH	Immediately dangerous to life or health	300 ppm
Cal/OSHA PEL (8 CCR 5155)	8-hour TWA / STEL	25 ppm / 35 ppm
Mexico OEL (NOM-010-STPS)	TWA / STEL	25 ppm / 35 ppm
EU IOELV (Directive 2000/39/EC)	8-hour TWA / STEL	14 mg/m³ (20 ppm) / 36 mg/m³ (50 ppm)

8.2 Exposure controls

Appropriate engineering controls

- Use only under 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.
- Provide general dilution ventilation sufficient to keep airborne ammonia concentrations below the exposure limits. Exhaust ducting and fans must be corrosion-resistant.
- Safety shower and eyewash station must be immediately available (ANSI/ISEA Z358.1) and close to the workstation.

Eye and face protection

- Tight-sealing chemical splash goggles conforming to ANSI/ISEA Z87.1 or EN 166 (29 CFR 1910.133), 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 or neoprene is the preferred material for extended contact; nitrile is suitable for incidental splash only and must be changed immediately on contact. Leather, cotton and other absorbent gloves are not suitable. Confirm breakthrough performance with the glove manufacturer for the specific task and concentration.
- Body: alkali-resistant apron or coveralls over a laboratory coat for small-scale work; a full chemically resistant suit with hood for bulk transfer, drumming and spill response. Wear appropriate protective clothing to prevent any skin exposure.
- 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. Where the exposure limits may be exceeded, or if irritation or other symptoms are experienced, use a NIOSH-approved air-purifying respirator with an ammonia/methylamine cartridge (EN 14387 type K, green; type B, grey, for inorganic gases and vapours) within its assigned protection factor; add a P100/P3 particulate filter (EN 143) where mist is present.

- For unknown concentrations, oxygen-deficient atmospheres, emergency response or concentrations at or above 300 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 (or EN 149 equivalent), including medical evaluation, fit testing and training.

Environmental exposure controls

- Do not discharge to the environment. Route vent gases through an acid scrubber where necessary. Neutralise aqueous effluent and control its ammonia (nitrogen) content to the limits permitted by the receiving authority before discharge. Handle in accordance with good industrial hygiene and safety practice.

9 SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Property	Value
Physical state	Liquid
Colour	Colourless
Odour	Ammonia-like, pungent
Odour threshold	No information available
Melting point / freezing point	No data available
Boiling point / initial boiling point	No information available
Flammability	Solution not classified as flammable. Ammonia vapour released from the solution is flammable in air.
Lower / upper explosion limit	No data available for the solution; ammonia vapour in air: 15 – 28 vol %
Flash point	No information available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	13.6 (manufacturer data for the 20 – 22 % solution)
Kinematic / dynamic viscosity	No data available
Solubility (water)	Soluble; miscible with water in all proportions
Solubility (other)	No information available
Partition coefficient n-octanol/water (log Kow)	No data available
Vapour pressure	500 hPa at 50 °C
Density / relative density	0.920 g/cm³ (manufacturer data for the 20 – 22 % solution); the density falls as the ammonia concentration rises. Within the relative density range 0.880 – 0.957 at 15 °C used to define UN 2672.
Relative vapour density	0.59 (air = 1) — ammonia vapour is lighter than air
Particle characteristics	Not applicable (liquid)
Molecular weight	17.03 g/mol (NH_3); 35.05 g/mol (NH_4OH)
Evaporation rate	No information available
Oxidising properties	None
Explosive properties	Not explosive; ammonia–air mixtures within the explosion limits above may be ignited
Surface tension	No data available
Concentration	24.0 – 26.0 % w/w NH_3 (Laboratory Reagent, PV Pure); 25.0 – 26.0 % w/w NH_3 (Analytical Reagent); 20.0 – 22.0 % w/w NH_3 (Ultrapure PPB)

9.2 Other information

No additional physical or chemical hazard information. The test values above are those reported by the manufacturer for a 20 – 22 % solution and vary with the ammonia concentration and temperature.

10 SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

A strongly alkaline solution that releases ammonia vapour continuously and more rapidly on warming. Reacts exothermically with acids, and with oxidising agents, halogens and certain heavy-metal compounds as detailed below. Reactive hazard: none known under normal conditions of use.

10.2 Chemical stability

Stable under normal conditions and under the recommended storage and handling conditions. Ammonia is lost from the solution on standing in open or warm containers. Hazardous polymerisation does not occur.

10.3 Possibility of hazardous reactions

- Violent, heat-generating reaction with strong acids; can cause boiling and spattering.
- Reaction with hypochlorite (bleach) and other halogen-releasing agents forms toxic chloramines; reaction with elemental halogens is vigorous.
- Contact with strong oxidising agents — peroxides, permanganates, chromates, nitric acid and perchlorates — may cause violent reaction.
- Contact with mercury, silver or gold compounds may form shock-sensitive explosive compounds (amides) which can detonate when dry.
- Corrodes copper, zinc, brass, bronze and aluminium; contact with metals can liberate hydrogen.
- Warming drives ammonia out of solution and can pressurise closed containers.

10.4 Conditions to avoid

Excess heat and direct sunlight; incompatible products; open containers in unventilated spaces; confinement of evolved ammonia in closed systems; ignition sources where ammonia vapour may accumulate.

10.5 Incompatible materials

Class	Examples
Oxidising agents	Hypochlorites (bleach), chlorates, perchlorates, permanganates, peroxides, nitric acid, chromates
Acids	Strong acids and acid-forming materials — hydrochloric, sulfuric, nitric and phosphoric acids, acid chlorides and anhydrides
Halogens	Chlorine, bromine, iodine, fluorine and halogenating agents
Metals and alloys	Copper, brass, bronze, zinc, aluminium, galvanised surfaces
Heavy-metal compounds	Mercury, silver and gold compounds (explosive amides)

10.6 Hazardous decomposition products

Nitrogen oxides (NOx), ammonia (NH_3) and hydrogen on heating or in a fire.

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 vapour or mist, and accidental ingestion.

Endpoint	Data and conclusion
Acute toxicity — oral	LD_{50} (rat): > 350 mg/kg bw (ammonium hydroxide); LD_{50} (rat): 350 mg/kg bw (ammonia). The manufacturer states that the product is harmful if swallowed; effects are principally local corrosion of the upper digestive and respiratory tracts. Not classified for acute oral toxicity; corrosivity governs.
Acute toxicity — dermal	No data available. The manufacturer notes the product may be harmful in contact with skin; local corrosion dominates. Not classified.
Acute toxicity — inhalation	LC_{50} (rat, 1 h): 9,850 mg/m³ and 13,770 mg/m³ (ammonia). The manufacturer states that the product is harmful by inhalation and that delayed pulmonary oedema may result, which may be fatal. Not classified for acute inhalation toxicity; respiratory irritation (STOT SE 3) and corrosivity govern.
Skin corrosion / irritation	Corrosive. Causes severe skin burns. Classified Skin Corrosion Category 1B.
Serious eye damage / irritation	Causes serious, irreversible eye damage and may cause blindness. Classified Eye Damage Category 1.
Respiratory or skin sensitisation	No data available. Not classified.
Germ cell mutagenicity	No data available. Not classified.

Endpoint	Data and conclusion
Carcinogenicity	Not listed by IARC, NTP, ACGIH or OSHA as a carcinogen. Not classified.
Reproductive toxicity	No data available. Not classified.
STOT — single exposure	Category 3 — may cause respiratory irritation. Target organ: respiratory system.
STOT — repeated exposure	No data available. Not classified.
Aspiration hazard	No data available. Not classified.

11.2 Other information

Target organs: eyes, skin, mucous membranes, respiratory system and gastrointestinal tract. Persons with pre-existing skin disorders, eye disease or chronic respiratory disease (asthma, chronic bronchitis, emphysema) may be at increased risk from exposure. Endocrine disrupting properties: this product does not contain any known or suspected endocrine disruptors.

Toxicological data for the product as supplied are limited; the assessment above is based on the manufacturer's data for ammonium hydroxide and ammonia and on the corrosivity and pH of the solution, which is the determining factor for local effects. See the RTECS entry for further information.

12 SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Endpoint	Value
Fish — acute	LC_{50} (96 h) ammonium hydroxide: 0.53 mg/L; 0.75 – 3.4 mg/L; 8.2 mg/L. LC_{50} (96 h) ammonia: 0.26 – 4.6 mg/L (Lepomis macrochirus, bluegill); 0.73 – 2.35 mg/L (Pimephales promelas, fathead minnow); 0.44 mg/L (Cyprinus carpio, carp); 1.19 mg/L (Poecilia reticulata, guppy).
Aquatic invertebrates — acute	EC_{50} (48 h) ammonium hydroxide: 0.66 mg/L. EC_{50} (Daphnia magna, water flea, 48 h) ammonia: 25.4 mg/L; NOEC 0.79 mg/L.
Algae	No data available (not listed by the manufacturer).
Microorganisms	EC_{50} (Microtox, 5 min) ammonia: 2.0 mg/L.

The product contains a substance that is very toxic to aquatic organisms (Aquatic Acute 1, H400). The toxicity of ammonia to aquatic life is governed by the un-ionised ammonia (NH_3) fraction, which increases with rising pH and temperature; the corresponding ionised ammonium (NH_4^+) form is considerably less toxic.

12.2 Persistence and degradability

Soluble in water. Persistence is unlikely based on information available: ammonia is an inorganic nutrient and is oxidised to nitrite and nitrate by nitrifying bacteria in water, soil and sewage treatment plants, exerting an oxygen demand during nitrification.

12.3 Bioaccumulative potential

No information available. Bioaccumulation is not expected for this small, highly water-soluble inorganic substance.

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility. Ammonia is also volatile and partitions to air from open water surfaces, especially at high pH; in soil, the ammonium ion is adsorbed by cation exchange and subsequently nitrified.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

Germany water hazard class WGK 2 (obviously hazardous to water). Not an ozone-depleting substance. Release of nitrogen-containing effluent may contribute to eutrophication.

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 to an approved waste disposal plant. Do not discharge to sewers, drains or watercourses; the product is very toxic to aquatic life.
- Small laboratory quantities may be diluted with a large excess of water and neutralised with a dilute weak acid by trained personnel before disposal in accordance with the receiving authority's permit; neutralisation is exothermic and ammonia vapour is released — carry it out in a

fume hood and never in a closed container. Do not neutralise with, or mix waste with, hypochlorite or other halogen-releasing agents.
- Empty containers retain product residue and vapour and remain hazardous. Do not cut, weld, braze, drill, grind or reuse them.
- 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 corrosivity characteristic (aqueous solutions of pH ≥ 12.5) — EPA hazardous waste number D002. Not a P- or U-listed commercial chemical product. European waste catalogue: EWC code 06 02 03* (ammonium hydroxide) or 16 05 06* (laboratory chemicals consisting of or containing hazardous substances). 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 2672
UN proper shipping name	Ammonia solution, relative density between 0.880 and 0.957 at 15 degrees C in water, with more than 10 percent but not more than 35 percent ammonia (also "Ammonia solutions")
Transport hazard class	Class 8 — Corrosive substances
Subsidiary hazard	None
Packing group	III
Label(s) required	Class 8 "Corrosive" (white upper half / black lower half)
Environmental hazards	Marine pollutant: YES. The manufacturer's sheet flags the product as a DOT marine pollutant and UN 2672 ammonia solution carries the "P" marine-pollutant indication in the IMDG Dangerous Goods List (ammonia is very toxic to aquatic life). Display the marine-pollutant mark and declare "MARINE POLLUTANT" on sea shipments; under 49 CFR 172.322 the mark is required for vessel transport (not required for non-bulk packagings by road/rail). Verify against the IMDG edition in force before each sea shipment.
Special precautions for user	Transport upright, secured against movement, away from foodstuffs. Segregate from acids, oxidisers (especially hypochlorites), halogens and metals. Keep cool and away from heat; containers develop pressure on warming. Vehicles and containers must be of, or lined with, alkali-resistant material.
Transport in bulk (MARPOL Annex II / IBC Code)	Ammonia aqueous (28 % or less) is listed in Chapter 17 of the IBC Code. Not applicable to packaged goods; consult the ship's Certificate of Fitness and the current MARPOL Annex II categorisation 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	Ammonia solution, relative density between 0.880 and 0.957 at 15 degrees C in water, with more than 10 percent but not more than 35 percent ammonia — 8, UN2672, PG III
Label codes	8
Special provisions (49 CFR 172.102)	IB3, IP8, T7, TP1
Packaging — exceptions	49 CFR 173.154
Packaging — non-bulk	49 CFR 173.203
Packaging — bulk	49 CFR 173.241

Quantity limitation — passenger aircraft/rail	5 L
Quantity limitation — cargo aircraft only	60 L
Vessel stowage	Location A
Limited quantity	Authorised under 49 CFR 173.154(b): PG III inner packagings not exceeding 5.0 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 ammonium hydroxide (the listing is for the solution). Ammonia itself (CAS 7664-41-7) has a separate RQ of 100 lb (45.4 kg). 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	154 — 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.

14.3 IMDG Code (sea)

UN number / class / PG	UN 2672, Class 8, PG III
Proper shipping name	AMMONIA SOLUTION, relative density between 0.880 and 0.957 at 15 °C in water, with more than 10 % but not more than 35 % ammonia
EmS (emergency schedules)	F-A (fire) and S-B (spillage)
Segregation group	Group 18 — Alkalis
Marine pollutant	Yes — see 14.1
Limited quantity	5 L
Excepted quantity	E1
Stowage and segregation	Stowage category A. Segregate from acids and from other incompatible materials as required by the segregation table; refer to the IMDG Code edition in force for the stowage category and segregation provisions.

14.4 IATA DGR / ICAO Technical Instructions (air)

UN number / class / PG	UN 2672, Class 8, PG III
Proper shipping name	Ammonia solution
Passenger and cargo aircraft	Packing Instruction 852 — maximum net quantity 5 L per package
Cargo aircraft only	Packing Instruction 856 — maximum net quantity 60 L per package
Limited quantity (passenger aircraft)	Packing Instruction Y841 — maximum net quantity 1 L per package
Excepted quantity code	E1
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 2672, Class 8, PG III
Classification code	C5 — corrosive substances, basic, inorganic, liquid
Labels	8
Tunnel restriction code	(E)
Hazard identification number (Kemler)	80

Transport category / limited quantity	Transport category 3; limited quantity 5 L
Packing instructions	P001, IBC03, LP01
Note	Verify against the ADR/RID edition in force before shipment.

14.6 Shipping documentation example

UN2672, Ammonia solution, 8, PG III — 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.)	Ammonium hydroxide (CAS 1336-21-6) and ammonia (CAS 7664-41-7) 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 classified as a flammable or combustible liquid; no flash point is available for the solution. Ammonia vapour is flammable in air at 15 – 28 vol %.
OSHA PSM (29 CFR 1910.119, App. A)	Not applicable at 20 – 26 %. The listed highly hazardous chemical is "Ammonia solutions (> 44 % ammonia by weight)", threshold quantity 15,000 lb (anhydrous ammonia: 10,000 lb).
CERCLA section 103 (40 CFR 302.4)	Hazardous substance. Reportable quantity 1,000 lb (454 kg) of ammonium hydroxide; 100 lb (45.4 kg) for ammonia. 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. Ammonia (includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources, 10 % or greater) is an extremely hazardous substance: threshold planning quantity 500 lb; reportable quantity 100 lb. Facilities holding 500 lb or more of ammonia content must notify the State Emergency Response Commission (SERC) and the Local Emergency Planning Committee (LEPC).
EPCRA sections 311 / 312 (40 CFR 370)	Reportable. Applicable hazard classes: skin corrosion or irritation (Category 1B), serious eye damage or eye irritation (Category 1), specific target organ toxicity — single exposure (Category 3), and hazardous to the aquatic environment. Reporting threshold 500 lb (extremely hazardous substance threshold) on site at any one time.
EPCRA section 313 (TRI, 40 CFR 372)	LISTED. Ammonia — aqueous ammonia of 10 % or greater is reportable. Reporting thresholds 25,000 lb (manufactured or processed) and 10,000 lb (otherwise used) per year; de minimis concentration 1.0 %.
Clean Air Act section 112 / 112(r)	APPLIES under section 112(r): "Ammonia (conc 20 % or greater)" is a regulated toxic substance under 40 CFR 68.130, threshold quantity 20,000 lb (total weight of solution) for a Risk Management Program. Not a listed hazardous air pollutant under section 112(b).
Clean Water Act section 311 (40 CFR 116/117)	Designated hazardous substance; reportable quantity 1,000 lb (ammonium hydroxide). 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)	Not a List I or List II regulated chemical.
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)	APPLIES. Ammonia (conc 20 % or greater) is a release-toxic chemical of interest, screening threshold quantity 20,000 lb.

15.2 United States state regulations

State list	Status
California Proposition 65	Ammonia and ammonium hydroxide are not listed under the Safe Drinking Water and Toxic Enforcement Act of 1986. No Proposition 65 warning is required for this product.
California — other	Cal/OSHA PEL 25 ppm TWA / 35 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 — corrosive.
Pennsylvania Right-to-Know	Listed (Hazardous Substance List; environmental hazard).
Rhode Island, Minnesota, Texas	Listed on the Rhode Island and Minnesota hazardous substance / right-to-know lists. Not listed: Illinois. Texas hazardous chemical reporting has not been separately assessed for this 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 (ammonia, total).
European Union — CLP	Harmonised classification, Annex VI to Regulation (EC) No 1272/2008, Index No. 007-001-01-2: Skin Corr. 1B, H314; STOT SE 3, H335; Aquatic Acute 1, H400 (M = 1), 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 use restrictions (entries 75 and 65 according to the manufacturer's sheet) apply to specified uses only. Supplier REACH registration number to be inserted before EU/EEA placement.
Seveso III (Directive 2012/18/EU)	Captured under hazard category E1 (hazardous to the aquatic environment, acute category 1): lower tier 100 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 — Y35 (basic solutions or bases 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.
Mexico	OEL (NOM-010-STPS): TWA 25 ppm; STEL 35 ppm. Hazard grade not assigned by the manufacturer.
Germany	Water Hazard Class WGK 2 (obviously hazardous to water).

15.4 Chemical safety assessment

A chemical safety assessment has been carried out for ammonia and ammonium hydroxide 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 0 · Special: none	Corrosive; commonly also marked ALK or COR
HMIS® III	Health 3 · Flammability 0 · Physical hazard 0 · 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

- 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.
- H400 — Very toxic to aquatic life.

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
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 154.
- 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, 6 CFR Part 27 Appendix A and 40 CFR 261.
- Regulation (EC) No 1272/2008 Annex VI, Index No. 007-001-01-2; Regulation (EC) No 1907/2006 Annex II; Directive 2000/39/EC.

- NIOSH Pocket Guide to Chemical Hazards, ammonia; ACGIH TLVs and BEIs, current edition.
- Manufacturer safety data sheet for ammonium hydroxide solution, 20 – 22 % (US OSHA HCS 2024 format, revision 10, 18 December 2025) — source of the physical, toxicological and ecotoxicological test values reproduced here.
- ECHA registered substance dossier and PubChem CID 14923, ammonium hydroxide.

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 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 ammonia solution (20–26 % nh_3) 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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