



**BID PROPOSAL and
SPECIFICATIONS FOR:**

AQUA AMMONIA (AMMONIUM HYDROXIDE):

Purchase a minimum of 120 Tons annually and up to a total of 500 Tons of 29.4% or like type Aqua Ammonia during the initial contract period of March 1, 2020 through February 28, 2023, with two (2) optional one-year extensions upon agreement by both parties, to be dispensed at the City of Tulare Wastewater Treatment Plant.

CITY OF TULARE, CALIFORNIA

REQUEST FOR BID NO: 20-698

BID DUE DATE: February 6, 2020 at 2:00 PM

CONTACT PERSON:

Mario Orosco, Assistant Public Works Director

1875 S. West Street

Tulare, CA 93274-4257

(559) 684-3129 Phone – (559) 685-8688 Fax

CITY OF TULARE
GENERAL INSTRUCTIONS AND SPECIFICATIONS
AQUA AMMONIA (AMMONIUM HYDROXIDE)
REQUEST FOR BID # 20-698

INTENT

It is the intent of the City of Tulare to purchase 29.4% or like type Aqua Ammonia, a minimum of 120 Tons annually and up to a total of 500 Tons to be delivered in full (tanker) loads of approximately 7 Tons (6,400 gallons), for the initial contract period of March 1, 2020 through February 28, 2023, with two (2) optional one-year extensions upon agreement by both parties.

<u>Location</u>	<u>Quantity</u>	<u>Tanker Size</u>
Wastewater Treatment Plant	Minimum 120 Tons annually, 500 Tons Total	6,400 Gallons

INSTRUCTIONS TO BIDDERS

- A. All information requested of the contractor shall be entered in the appropriate space(s) on the form. Failure to do so may disqualify your offer.
- B. All information shall be typewritten or entered in ink. Mistakes may be crossed out and corrections inserted before submission of your bid. Corrections shall be initialed in ink by the person signing the bid.
- C. Corrections and/or modifications received after the closing time specified will not be accepted.
- D. Bids will not be accepted unless signed in ink (not typed) in the appropriate space(s) by an authorized officer or employee of the bidder.
- E. Bids must be submitted by the closing date, or prior to the time specified, to be considered. Telegraphic, telephone, or facsimile bids will not be accepted.
- F. It is the sole responsibility of the bidder to see that their bid is submitted in the proper time. Any bids received after the closing date shall be returned, unopened, to the bidder, provided the request number, opening date, and bidder's return address are on the envelope.

BID DUE DATE: February 6, 2020 at 2:00 PM

- G. Submit bid only in a sealed envelope with the bid number and closing date on the outside of the envelope.
- H. Prices submitted by contractor are considered accurate and cannot be withdrawn after the bid is closed.
- I. Upon submission of bid documents, all such documents shall become the property of the City of Tulare.

- J. Provide any other information not specifically requested which may be considered by the Public Works Department. However, the Purchasing Officer is not obligated to consider any information not specifically requested in this Invitation to Bid.
- K. The City shall not be responsible for any error or omission in the bid proposal.
- L. Bid prices shall remain open and valid, subject to acceptance for ninety (90) days after bid closing date.
- M. Time of delivery shall be stated as the number of calendar days following the receipt of order by the vendor, to the receipt of goods or services by the City of Tulare. Time of delivery may be a consideration in the award.
- N. The City of Tulare generally solicits bids from a wide variety of vendors which may include retailers, wholesalers, suppliers, distributors, etc.
- O. This Public Works Request for Bid is available for downloading at the City of Tulare website: <https://www.tulare.ca.gov/departments/public-works>.

Please monitor the website for all information regarding this RFB. The City will not be sending individual notifications of changes, updates, clarifications, and/or addenda.

- P. The words “Bidder”, “Vendor”, “Supplier”, and “Contractor”, are used interchangeably throughout this proposal, and are used in place of the person, firm, or corporation submitting a bid on these specifications, or any part thereof.

**GENERAL CONDITIONS
AQUA AMMONIA (AMMONIUM HYDROXIDE)
REQUEST FOR BID NO. 20-698**

REQUIREMENTS

The City of Tulare is requesting bids for the purchase of 29.4% or like type Aqua Ammonia, a minimum of 120 Tons annually and up to a total of 500 Tons to be delivered in full (tanker) loads of approximately 7 Tons (6,400 gallons), during the initial contract period of March 1, 2020 through February 28, 2023, with the possibility of two (2) optional one-year extensions upon agreement by both parties. Deliveries shall be made as needed.

INFORMATION

This Invitation to Bid is being issued by the City of Tulare, Public Works Department. Unless otherwise directed, all communication regarding this Bid should be directed to Mario Orosco, Assistant Public Works Director at (559) 684-3129.

Any revisions to the Bid will be issued and distributed as addenda. Bidders are specifically directed not to contact any other City personnel for meetings, conferences, or technical discussions related to this Bid. Failure to adhere to this policy may be grounds for rejection of bids.

PERMITS AND LICENSES

Possession of a City of Tulare Business Tax Certificate is not required to submit a bid in response to this invitation. However, contractor shall be required to possess, at his/her own expense, a valid and current City of Tulare Business Tax Certificate, prior to commencing work. Fee is based on gross receipts for all business transactions in the City of Tulare. For additional information, contact the City of Tulare at (559) 684-4232.

EXAMINATION OF SPECIFICATIONS

Before submitting a bid, bidders must satisfy themselves by personal examination of the specification and other contract documents, and by any other means as they may believe necessary, as to the actual requirements of the City. The submission of a bid shall be conclusive evidence that the bidder has investigated, and is satisfied as to the character, quality, and quantities of equipment and materials to be furnished, and as to the requirements of the proposal.

No bidder shall at any time after submission of a proposal make any claim or assertion that there was any misunderstanding or lack of information regarding the nature or amount of work necessary for the satisfactory completion of the job. Any errors, omissions, or discrepancies found in the specifications or other contract documents shall be called to the attention of the City and clarified prior to the submission of proposals.

Should the contractor feel there has been a supplemental or oral modification, it shall be his responsibility to verify said modification in writing prior to submission of the proposal.

WITHDRAWAL OF PROPOSALS

Any bid may be withdrawn at any time prior to the time fixed in the public notice for the opening of bids, only by written request for the withdrawal of the bid filed with the City Clerk. The request shall be executed by the bidder or his duly authorized representative. The withdrawal of a bid does not prejudice the right of the bidder to file a new bid. No bid may be withdrawn after the time fixed in the public notice for the opening of bids.

MATERIAL GUARANTY

To protect the interests of the City, the bidder guarantees that all equipment/material provided under this contract is new and of the highest standard quality and conforms to the specifications and plans herewith.

LEGAL RESPONSIBILITIES

All proposals must be submitted, filed, made, and executed in accordance with State and Federal laws relating to bids for contracts of this nature whether the same or expressly referred to herein or not.

TAXES, DELIVERY AND APPLICABLE CHARGES

Required taxes, delivery cost, and any and all other applicable charges, such as destination and documentation fees, must be included in the bid. The City is **not exempt** from California State Sales Tax. The City is **not exempt** from Mill Tax (2.175%). The City is **exempt** from Federal Excise Taxes. Do not include Federal Excise Taxes in the prices quoted in this bid. The City will furnish exemption certificates upon request.

COMPLIANCE AND EXCEPTIONS

Failure on the part of the bidder to comply with all requirements and conditions of the Invitation to Bid and this specification may subject his bid to rejection. No exceptions to or deviations from this specification will be considered unless each exception or deviation is specifically stated by the bidder as an exception with a detailed statement completely defining the exception(s). The manufacturer's name, product brand name, and catalog, part or model number must be shown on the bid in the designated places. However, that information in itself is not sufficient evidence that the bidder is making an exception. If no exceptions or deviations are shown, the bidder will be required to furnish equipment/material exactly as specified herein. The burden of compliance with this specification will be the responsibility of the bidder. Any exceptions or additional conditions requested after the bid closing, which are not detailed within the bid response, will automatically be denied.

EVALUATION/AWARD OF CONTRACT

The City of Tulare reserves the right to reject any or all bids; to waive any specifications, both the City's and written proposed specification from the bidder; to waive any irregularities or informalities in any bid or the bidding process; to sit and act as sole judge of the merit and qualifications of the equipment and service offered and; to evaluate in its absolute discretion, the total bid of each vendor so as to select the vendor which best serves the requirements of the City, thus insuring that the best interest of the City will be served. The City also retains the right to combine various bid items, or to purchase separate items from any bid when price and terms quoted are more favorable to the City. Bidder's past performance and the City's assurance that each bidder will provide equipment/material and service as bid, will be taken into consideration when bids are being evaluated.

The City may make such investigation as it deems necessary to determine the ability of a proposer to furnish the required services, and the proposer will furnish to the City all such information and data for this purpose as the City may request. The City reserves the right to reject any bid if the evidence submitted by or investigation of such proposer fails to satisfy the City that such proposer is properly qualified to carry out the obligations of a contract and to deliver the services contemplated herein or; the bid of any bidder who has previously failed to perform properly, or complete on time, contracts of a similar nature. The City expressly reserves the right to reject the bid of any bidder who is in default on the payment of taxes, licenses, or other moneys due to the City of Tulare.

The award, if made, will be made within ninety (90) days from bid closing date. Bidder agrees and so stipulates in submitting this bid, as though stated therein, and in any subsequent award of contract that:

- A. Contractor is an independent contractor, not any employee, agent, or officer of the City.
- B. Contract, should it be awarded, shall be interpreted, construed, and given effect in all respects according to the laws of the State of California.
- C. Should contractor be awarded contract, contractor shall not assign contract, or any part thereof, or any moneys due or to become due thereunder, without prior consent of the City.
- D. Vendor shall indemnify and hold harmless the City, its officers, officials, employees, and agents from and against all claims, damages, losses, and expenses caused in whole or in part by any negligent act or omission of the vendor, its consultants, subcontractors, anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable, except where caused by the active negligence, sole negligence, or willful misconduct by the City.
- E. Contractor shall hold the City harmless from liability of any nature or kind, including cost and expenses for infringement or use of any copyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in connection with the contract.
- F. Contractor warrants that no gratuities, in the form of gifts, entertainment, or otherwise, were offered or given by the contractor, to any officer or employee of the City with a view toward securing the contract or securing favorable treatment with respect to any determination concerning the performance of the contract. For breach or violation of this warranty, the City shall have the right to terminate the contract, either in whole or in part, and any loss or damage sustained by the City in procuring on the open market, any items which the contractor agreed to supply, shall be borne and paid for by the contractor. The rights and remedies of the City provided in this clause shall not be exclusive, and are in addition to any other rights and remedies provided by law or under the contract.
- G. Contract shall be in the form of a City of Tulare Purchase Order.

BASIS OF BID AWARD

Award, if made, shall be to the responsive, responsible bidder meeting the specifications and requirements of the bid and having the lowest possible cost consistent with quality and service. The City reserves the right to award to the bidder who offers the equipment/material best suited to the needs of the City of Tulare. As such, this bidder may or may not be the low bidder. Evaluation criteria of the

equipment/material includes equipment/material performance and capabilities, parts availability, satisfactory service referenced from other users, serviceability and ease of maintenance, delivery and price.

LOCAL PREFERENCE

A five percent (5%) local preference will be extended to those businesses located within the City of Tulare. "Preference" shall mean an amount expressed in terms of a percentage, by which a bid or price may exceed the next lower submitted bid or price.

This percentage shall not apply to transactions required by State or Federal statutes or regulations to be awarded to the "lowest responsible bidder", or otherwise exempted from local preference.

Any person or business falsely claiming a local preference shall be ineligible to bid on City purchases or contracts for a period no less than one (1) year from the date of discovery of the false representation.

COOPERATIVE AGREEMENTS

The City of Tulare reserves the right to purchase from other agency contracts in the event the pricing better serves the interests of the City.

Other municipalities or public agencies may be interested in purchasing equipment/material as procured through this solicitation. Seller is to indicate if the pricing offered in this bid will be extended to other public agencies. Any such "piggy-back" awards will be made independently by each agency. It is understood that the City of Tulare is not an agent, partner, or representative of these agencies and is not obligated or liable for any action of debts that may arise out of such independently negotiated procurement.

INSPECTION

The City will have ten (10) days from date of delivery to inspect the product or equipment for workmanship, appearance, proper functioning of all equipment and systems, and conformance to all other requirements of this specification. If deficiencies are detected, the product or equipment will be rejected and the contractor will be required to make necessary repairs, adjustments, or replacements. Payment and/or commencement of a discount period, if applicable, will not be made until the defects are corrected and the product or equipment is re-inspected and accepted.

PAYMENT

Payment will be made within thirty (30) days of acceptance of the product or equipment. In connection with any cash discount offered, time will be computed from the date of complete delivery of the material or equipment as specified, or from the date correct invoices are received if that date is later than the date of delivery. For the purposes of earning the discount, payment is deemed to be made on the date of the mailing of the City check.

WARRANTY

Vendor shall provide as a part of the bid proposal, a copy of the manufacturer's standard warranty.

EQUAL EMPLOYMENT OPPORTUNITY

It is understood and agreed that the contractor shall comply with all requirements, when applicable, of the California Fair Employment Practice Commission and provisions, when applicable, of and/or all Federal, State of California, County of Tulare, and City of Tulare laws and ordinances, in performance of fulfilling this agreement.

INSURANCE REQUIREMENTS

A. Third Party Claims

- a. Indemnification and Defense. VENDOR shall indemnify, defend, and hold harmless the City, and its officers, employees, and agents (“City indemnitees”), from and against any and all causes of action, claims, liabilities, obligations, judgments, or damages, including reasonable legal counsels’ fees and costs of litigation (“claims”), arising out of the VENDOR’S performance of its obligations under this agreement or out of the operations conducted by VENDOR, including the City’s active or passive negligence, except for such loss or damage arising from the sole negligence or willful misconduct of the City. In the event the City indemnitees are made a party to any action, lawsuit, or other adversarial proceeding arising from VENDOR’S performance of this agreement, the VENDOR shall provide a defense to the City indemnitees, or at the City’s option, reimburse the City indemnitees their costs of defense, including reasonable legal counsels’ fees, incurred in defense of such claims.

B. Insurance Provisions

i. Commercial General Liability

- a. Vendor shall maintain commercial general liability insurance with coverage at least as broad as Insurance Services Office form CG 00 01, in an amount not less than two million dollars (\$2,000,000) per occurrence for bodily injury, personal injury, and property damage, including without limitation, blanket contractual liability. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. Vendor’s general liability policies shall be primary and shall not seek contribution from the City’s coverage, and be endorsed using Insurance Services Office form CG 20 10 (or equivalent) to provide that City and its officers, officials, employees, and agents shall be additional insureds under such policies. For construction projects, an endorsement providing completed operations coverage for the additional insured, ISO form CG 20 37 (or equivalent), is also required.
- b. Any failure to comply with reporting provisions of the policies by Vendor shall not affect coverage provided the City.
- c. Coverage shall state that Vendor insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer’s liability.
- d. Coverage shall contain a waiver of subrogation in favor of the City.

ii. Business Automobile Liability

- a. Vendor shall provide auto liability coverage for owned, non-owned, and hired autos using ISO Business Auto Coverage form CA 00 01 (or equivalent) with a limit of no less than two million dollars (\$2,000,000) per accident.

iii. Workers' Compensation and Employers' Liability

- a. Vendor shall maintain Workers' Compensation Insurance and Employer's Liability Insurance with limits of at least one million dollars (\$1,000,000). Vendor shall submit to City, along with the certificate of insurance, a waiver of subrogation endorsement in favor of City, its officers, agents, employees, and volunteers.

iv. All Coverages

- a. Each insurance policy required by the agreement shall be endorsed to state that coverage shall not be suspended, voided, cancelled, or reduced in limits except after thirty (30) days' prior written notice has been given to the City, except that ten (10) days' prior written notice shall apply in the event of cancellation for nonpayment of premium.
- b. All self-insurance, self-insured retentions, and deductibles must be declared and approved by the City.
- c. Evidence of Insurance - Prior to commencement of work, the Vendor shall furnish the City with certificates, additional insured endorsements, and waivers of subrogation evidencing compliance with the insurance requirements above. The Vendor must agree to provide complete, certified copies of all required insurance policies if requested by the City.
- d. Acceptability of Insurers - Insurance shall be placed with insurers admitted in the State of California and with an AM Best rating of A- VII or higher.
- e. Subcontractors and Consultants - A category of risk and the applicable insurance requirements will be determined on a "per subcontractor" or "per consultant" basis, considering the particular work to be done by the subcontractor or consultant and the interrelationship of that work to other work being conducted by the Vendor.

**PROCUREMENT PROCESS AND MATERIAL SPECIFICATIONS
AQUA AMMONIA (AMMONIUM HYDROXIDE)
REQUEST FOR BID NO. 20-698**

The following specifications detail the City of Tulare’s requirements for Aqua Ammonia 29.4% or like type Aqua Ammonia, a minimum of 120 Tons annually and up to a total of 500 Tons to be furnished and delivered in full (tanker) loads of approximately 7 Tons (6,400 gallons).

PROCUREMENT PROCESS

This bid process is intended to be a two-step bid process. Bids are due no later than **2:00 PM, February 6, 2020**.

The City will award the contract for the material best serving the City’s interests and needs. As such, award will not be based on price alone, but rather a combination of price and suitability for required use. Material evaluation factors include performance and ease of use, safety, delivery time, references, and cost.

The evaluation criteria process is not negotiable.

GENERAL TERMS

All equipment/material furnished under this contract shall be the property of the supplier. Aqua Ammonia shall be bid on a per ton basis. Quantity is based on an estimated minimum usage of 120 Tons per year and may change as requirements necessitate.

<u>Location</u>	<u>Quantity</u>	<u>Tanker Size</u>
Wastewater Treatment Plant	Minimum 120 Tons annually, 500 Tons Total	6,400 Gallons

AWARD OF BID

Award of bid will be based on the total of the base bid plus those additive items specifically identified.

TERMS

The City of Tulare agrees to pay within thirty (30) days after delivery and acceptance of equipment or product or any portion thereof. The City of Tulare reserves the right to reject any or all bids or any part thereof. Final approval to be made by the Board of Public Utilities.

**BID SPECIFICATIONS
AQUA AMMONIA (AMMONIUM HYDROXIDE)
REQUEST FOR BID NO. 20-698**

Aqua Ammonia 29.4% (Ammonium Hydroxide) (NH₃ (aq))

Prices to be quoted on Per Ton of Contained Ammonium Hydroxide – Delivered and Unloaded

Invoicing to be on Per Ton of Contained Aqua Ammonia (Ammonium Hydroxide) basis

Ammonium Hydroxide is used to maintain a consistent PH in the Bulk Volume Fermentation (BVF) system at the City of Tulare Wastewater Treatment Plant located at 1875 South West Street, Tulare, CA 93274. Deliveries are to be made between the hours of 7:00 AM and 3:00 PM, Monday through Friday, excluding holidays or as specified.

**State COMPLY
or SPECIFICATIONS**

PRODUCT SPECIFICATIONS

The material meets the specifications of the National Formulary (NF) for Strong Ammonia Solutions, Federal Specification A-A-59370 (except for packaging) and the Food Chemical Codex. In addition, Reagent Grade material meets the specifications for USP Reagent Grade and the American Chemical Society (ACS) Reagent chemicals.

Bids shall include a certified analysis of content of a typical (recent) production lot.

Bids shall include a Material Safety Data Sheet, equivalent to “**Attachment A, Sample Material Safety Data Sheet – Ammonium Hydroxide 19.0% - 30.0%,”** with language mentioning herein of equipment or material serving to specify the quality or general type which is required and unless otherwise specified does not require a specific make or manufacturer’s product.

Quantity to be delivered and unloaded at the City of Tulare Wastewater Treatment Plant is a minimum of 120 Tons annually and up to a total of 500 Tons of Contained Aqua Ammonia. Please note that we ask for pricing of full tanker loads for safety purposes.

PROVIDER REQUIREMENTS

This product will be used in a highly regulated process. Chemicals must be delivered within 3 days of order confirmation.

Drivers and/or all delivery personnel shall be trained about the specific properties and hazards of the product, and must demonstrate safe work practices appropriate to the product they are delivering and are expected to provide their own personal protective equipment (PPE).

Contractor must have the ability to inspect the tank before and after delivery in order to detect any problems with the tank. Supplier must replace any worn or broken equipment used for delivery or distribution of chemical to on site holding tank. If delivery vehicle is leaking or fill hose is not in proper working condition, supplier will be responsible for cleanup of any spilled chemical at their own expense.

The supplier shall provide each delivery location a current Safety Data Sheet (SDS) prior to or concurrent with the first delivery of product. Must also be able to provide Technical Assistance as requested.

Delivery site for the City of Tulare Wastewater Treatment Plant is 1875 South West Street, Tulare, CA 93274.

Product shall be delivered to the City of Tulare Wastewater Treatment Plant in full (tanker) loads of approximately 7 Tons (6,400 gallons) per delivery.

Delivery will be as needed on a specified date to be received between the hours of 7:00 AM and 3:00 PM, Monday through Friday, excluding holidays or as specified.

Delivery tickets shall show the actual number of tons delivered, weight tickets for the truck tare weight and fully loaded weight, the dry weight of the chemical delivered, and the percent of the active ingredients (Certificate of Analysis) of the delivered product. A unique identifying shipment number shall appear on the delivery ticket and the invoice. All other conditions apply.

All shipments of ammonium hydroxide shall conform to US Department of Transportation (DOT) and Occupational Safety and Health Administration (OSHA) regulations for marking and handling.

Supplier must be able to provide annual tank inspection at no extra charge and be able to provide parts for the tank as requested.

Supplier must be able to provide annual training on chemical hygiene and safety of chemical to City of Tulare personnel at no extra charge.

**BID FORM
AQUA AMMONIA (AMMONIUM HYDROXIDE)
REQUEST FOR BID NO. 20-698**

THE UNDERSIGNED BIDS AS FOLLOWS:

Furnish and deliver 29.4% or like type Aqua Ammonia, a minimum of 120 Tons annually and up to a total of 500 Tons to be delivered in full (tanker) loads of approximately 7 Tons (6,400 gallons), during the initial contract period of March 1, 2020 through February 28, 2023, with two (2) optional one-year extensions upon agreement of both parties.

Cost per contained ton	\$ _____
Freight Equalization (per contained ton)	\$ _____
BID PER CONTAINED TON (F.O.B. TULARE)	\$ _____
Surcharge Per Delivery	\$ _____

-OR-

Quarterly price protection with the ability to increase pricing with manufactures letter of increase on presentation of price increase letter from manufacturer with 30 days notice.

Cost per contained ton	\$ _____
Freight Equalization (per contained ton)	\$ _____
BID PER CONTAINED TON (F.O.B. TULARE)	\$ _____
Surcharge Per Delivery	\$ _____

BIDDING FIRM

BUSINESS ADDRESS

CITY, STATE & ZIP CODE

BY: _____
Signature of Representative

TITLE

PHONE NUMBER

Instructions Regarding Signature: If bidder is an individual, state "Sole Owner" after signature. If bidder is a partnership, signature must be by General Partner, so stated after "Title". If bidder is a Corporation, signature must be an authorized officer, so stated after "Title".

Attachment A
Sample Material Safety Data
Sheet Ammonium Hydroxide
19.0% – 30.0%

Section 1 – Identification;

Product Name: Ammonium Hydroxide, 19.0 - 30.0%
Product Identifier: Ammonium Hydroxide, Aqua Ammonia
Chemical Family: Mixture/Dilution
Recommended Use: Corrosion Inhibitor, NOx Control, Chloramine Production

Manufacturer or Suppliers Details

Company Name:
Company Address:

Phone Number:

Emergency Response Telephone Number

Chemtrec (800) 424-9300

Section 2 – Hazard(s) Identification;

Hazard Classification: Serious eye irritation,	Category 1
Skin corrosion/irritation,	Category 1
Acute toxicity, Oral	Category 4
Acute Aquatic Toxicity	Category 1
Acute Inhalation	Category 1

Hazard Statement(s): H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H332 Harmful if inhaled
H400 Very toxic to aquatic life.

Signal Word: DANGER

Pictogram(s):



Attachment A
Sample Material Safety Data
Sheet Ammonium Hydroxide
19.0% – 30.0%

Precautionary Statements:

Prevention

- P233 Keep container tightly closed
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors in a well-ventilated area.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

- P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
- P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
- P391 Collect spillage.

Storage

- P405 Store locked up.

Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

Description of Hazards Not Otherwise Classified: No Additional Information

Attachment A
Sample Material Safety Data
Sheet Ammonium Hydroxide
19.0% – 30.0%

Section 3 – Composition/Information on Ingredients;

CAS #	Hazardous Components (Chemical Name)	Concentration	GHS Classification
1336-21-6	Ammonium Hydroxide	19.0% - 30.0%	Serious eye irritation, Category 1 Skin corrosion/irritation, Category 1 Acute toxicity, Oral Category 4 Acute Aquatic Toxicity Category 1 Acute Inhalation Category 1

All/other ingredients are non-hazardous and are not required to be listed per OSHA regulations or are below, or present a health risk below, cut-off/concentration limits per UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS), table 1.5.1

Section 4 – First-Aid Measures;

General: Take off contaminated clothing and shoes immediately. IF exposed or concerned, get medical advice/attention.

P301 + P312 + P330 **IF SWALLOWED:** Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

P301 + P330 + P331 **IF SWALLOWED:** Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 **IF ON SKIN (or hair):** Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P310 **IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

P305 + P351 + P338 + P310 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

Protection of first aid responders: Wear proper personal protective clothing and equipment.

Most important symptoms and effects, both acute and delayed: Burning pain and severe corrosive skin damage. Harmful if inhaled. Symptoms may include stinging, tearing, redness, swelling and burning vision.

Indication of any immediate medical attention and special treatment needed, if necessary: Treat symptomatically.

Attachment A
Sample Material Safety Data Sheet
Ammonium Hydroxide
19.0% – 30.0%

Section 5 – Fire-Fighting Measures;

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

Unsuitable Extinguishing Media

None known

Fire Fighting Methods

Evacuate area of unprotected personnel. Wear protective clothing including NIOSH approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers. Run-off from fire control may cause pollution.

Fire and Explosion Hazards

None known.

Hazardous Combustion Products:

Toxic vapors. Sulfur oxides. Ammonia. Sulfur Dioxide gas will be released at a rate increasing with temperature. **Special**

Protective Equipment and Precautions for firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6 – Accidental Release Measures;

Personal precautions, protective equipment and emergency procedures

Keep people away from and upwind of spill/leak. Do not touch or walk through spilled material.

Wear appropriate personal protective equipment. See section 8

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 7 – Handling and Storage;

Handling: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Non-combustible, corrosive hazardous materials. Store away from incompatible materials (see section 10 of the SDS).

Attachment A
Sample Material Safety Data
Sheet Ammonium Hydroxide
19.0% – 30.0%

Section 8 – Exposure Controls/Personal Protection;
Control parameters

Components with workplace control parameters:

Component	CAS-No.	Value	Control Parameters	Basis
Ammonium Hydroxide	1336-21-6	TWA	25.000000 ppm	USA, ACGIH Threshold Limit Values (TLV)
	Remarks	Upper respiratory tract irritation Eye damage		
		TWA	25.000000 ppm	USA, ACGIH Threshold Limit Values (TLV)
		Upper respiratory tract irritation Eye damage		
		STEL	35.000000 ppm	USA, ACGIH Threshold Limit Values (TLV)
		Upper respiratory tract irritation Eye damage		
		STEL	35.000000 ppm	USA, ACGIH Threshold Limit Values (TLV)
		Upper respiratory tract irritation Eye damage		
		TWA	25.000000 ppm 18.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Often used in an aqueous solution		
		TWA	25.000000 ppm 18.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Often used in an aqueous solution		
		ST	35.000000 ppm 27.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Often used in an aqueous solution		
		ST	35.000000 ppm 27.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
Often used in an aqueous solution				

Attachment A
Sample Material Safety Data Sheet
Ammonium Hydroxide
19.0% – 30.0%

Exposure controls

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protection: Avoid all unnecessary exposure

Hand protection: Wear protective gloves (Butyl, Nitrile, Neoprene and Viton)

Body protection: Wear protective coveralls (Tychem SL,F, Responder and TK)

Eye protection: Do not wear contact lenses if splashes are likely to occur, wear: goggles and/or face shield, giving complete protection to eyes. Wear eye/face protection.

Skin and body protection: Chemical resistant gloves, coveralls and safety eyewear.

Respiratory protection: Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

Control of environmental exposure Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Engineering controls (Ventilation etc.)

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Section 9 – Physical and Chemical Properties;

Physical state:	Liquid
Appearance:	Clear
Color:	Colorless
Odor:	Strong, pungent
Odor threshold:	No data available
pH:	11.7 at 20 °C (68 °F)
Melting point/freezing point:	-72 °C (-98 °F)
Initial boiling point:	28°C (83°F) 30% Solution
Boiling range:	No data available
Flash point:	No data available
Evaporation rate	No data available
Flammability (solid, gas):	No data available
Upper explosion limit:	27 %(V)
Lower explosion limit:	16 %(V)
Vapor pressure:	153 hPa (115 mmHg) at 20 °C (68 °F)

Attachment A
Sample Material Safety Data
Sheet Ammonium Hydroxide
19.0% – 30.0%

Vapor density at 20°C:	1.21 - (Air = 1.0)
Relative density @ 60°F:	0.9295 – 0.8953 g/mL
Solubility:	Dispersible
Log Pow:	No data available
Log Kow	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Dynamic viscosity:	No data available

Section 10 – Stability and Reactivity;

Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability

Material is stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization does not occur.

Conditions to avoid

Direct sources of heat.

Incompatible Materials: Copper, Brass, Zinc

Hazardous decomposition products

Other decomposition products - No data available In the event of fire: see section 5

Section 11 – Toxicological Information;

Information on toxicological effects

Acute toxicity Inhalation: No data available

Skin corrosion/irritation: No data available

Serious eye damage/eye irritation: Respiratory or skin sensitization Germ cell mutagenicity

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

Specific target organ toxicity - single exposure

Attachment A
Sample Material Safety
Data Sheet Ammonium
Hydroxide 19.0% – 30.0%

Specific target organ toxicity: repeated exposure Aspiration hazard
Additional Information RTECS: Not available

Section 12 – Ecological Information;

Ecotoxicity (aquatic and terrestrial, where available)

(LC50): 0.1 ppm 24 hours [Rainbow trout]. 8.2mg/l 96 hours [Fathead minnow]. 0.1 ppm 48 hours [Bluegill].

Persistence and degradability

The products of degradation are less toxic than the product itself.

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Section 13 – Disposal Considerations;

Disposal instructions: Dispose of contents/container in accordance with local/regional/national/international regulation.

Hazardous waste code: D002: Waste corrosive material (pH ≤ 2 or ≥ 12.5). This waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products: Dispose of in accordance with local regulations.

Contaminated packaging: Dispose of contents/container in accordance with local/regional/national/international regulation.

Section 14 – Transport Information;

DOT

UN number UN2672

UN proper shipping name ammonia solution

Transport hazard class(es) Class 8

Subsidiary risk -

Packing group III

Special precautions for user Not available.

DOT BULK

UN number UN2672

BULK

UN proper shipping name ammonia solution

Class 8

Attachment A
Sample Material Safety Data
Sheet Ammonium Hydroxide
19.0% – 30.0%

Transport hazard class(es)
Packing group III

IATA

UN number UN2672

UN proper shipping name Ammonia solution

Class 8

Transport hazard class(es)

Subsidiary risk -

Packing group III

Environmental hazards No.

Special precautions for user Not available.

Other information

Passenger and cargo aircraft Forbidden.

Cargo aircraft only Forbidden.

IMDG

UN number UN2672

UN proper shipping name ammonia solution

Class 8

Transport hazard class(es)

Subsidiary risk -

Packing group III

Marine pollutant No.

Environmental hazards

EmS Not available.

Special precautions for user Not available.

Transport in bulk according to Not available.

Annex II of MARPOL 73/78 and the IBC Code

DOT; DOT Bulk packaging type

IATA IMDG



Attachment A
Sample Material Safety Data Sheet
Ammonium Hydroxide
19.0% – 30.0%

Section 15 – Regulatory Information;

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313: Ammonium hydroxide CAS-No. 1336-21-6 Revision Date 2007-03-01

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

Ammonium hydroxide CAS-No. 1336-21-6 Revision Date 2007-03-01

Pennsylvania Right To Know Components Ammonium hydroxide CAS-No. 1336-21-6 Revision Date 2007-03-01

Water 7732-18-5

New Jersey Right To Know Components Ammonium hydroxide CAS-No. 1336-21-6 Revision Date 2007-03-01 Water 7732-18-5

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

Section 16 – Other Information;

NFPA ratings Health: 3 Flammability: 0 Instability: 0

Date of Preparation	Date of Revision	Revision Number	Date of Issue
5/6/2015	5/8/2015	002	5/8/2015

This SDS has been prepared in accordance with the hazard criteria of the OSHA Hazard Communication Standard, 29 CFR 1910.1200 including utilizing pertinent data associated with the mixtures' components.