



**chemical**

COMMODITY CHEMICALS - CHEMICAL CLEANERS - FOOD PROCESSING CHEMICALS - WATER TREATMENT CHEMICALS

**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: Argo Chemical, Inc.  
Company Address: 30933 Imperial Street  
Bakersfield, Ca. 93263  
United States of America  
Phone Number: (661) 322-2222

**Emergency Response Telephone Number**

Chemtec (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):**





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**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



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**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.



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**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:**

Nitrogen oxides. Ammonia 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).



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**Section 8 – Exposure Controls/Personal Protection;**

**Control parameters**

**Components with workplace control parameters:**

Component	CAS-No.	Value	Control Parameters	Basis		
Ammonium Hydroxide	Remarks	1336-21-6	TWA	25.000000 ppm	USA, ACGIH Threshold Limit Values (TLV)	
		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				
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**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:** Where 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;**

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



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

— SINCE 1980



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**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  $\leq 2$  or  $\geq 12.5$ ). 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

— SINCE 1980 —



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**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





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**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: 1 Instability: 0

Date of Preparation	Date of Revision	Revision Number	Date of Issue
5/6/2015	8/14/2018	004	6/1/2020

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.

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