

# SAFETY DATA SHEET



Revision date: 08-Aug-2023

Revision Number 7

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

<b>Product Name</b>	AMMONIA - AQUEOUS SOLUTIONS (10% - 35%)
<b>Product Code(s)</b>	000031026101
<b>Synonyms</b>	Aqua ammonia; Ammonium hydroxide solution; Ammonium hydrate; Aqua ammonia 12.5%; Ammonia aqueous solution 12.5%; Aqua ammonia 25%; Ammonia aqueous solution 25%; Aqua ammonia 32%; Ammonia aqueous solution 32%.
<b>Recommended use</b>	Textiles, manufacture of rayon, rubber, fertilizers, refrigeration, condensation polymerization, pharmaceuticals, ammonia soaps, lubricants, ink manufacture, explosives, ceramics, detergents, food additives, household cleaners.

### Supplier

Ixom Central Pacific Ltd  
Company Number: 1030  
Street Address: Lots 3&4 Wailada Industrial Estate  
Lami  
Fiji  
Telephone Number: +67 9 336 1144  
Facsimile: +67 9 336 1500

**Emergency telephone number +61 3 9663 2130 (International, Australia, All Hours)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

### GHS Classification

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

<b>Corrosive to metals</b>	Category 1
<b>Acute toxicity - Oral</b>	Category 4
<b>Skin corrosion/irritation</b>	Category 1 Sub-category C
<b>Serious eye damage/eye irritation</b>	Category 1
<b>Specific target organ toxicity (single exposure)</b>	Category 3
<b>Acute aquatic toxicity</b>	Category 1

### **SIGNAL WORD**

Danger

### Label elements

Corrosion  
Exclamation mark  
Environment



**Hazard statements**

H290 - May be corrosive to metals  
H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
H335 - May cause respiratory irritation  
H400 - Very toxic to aquatic life

**Precautionary Statements - Prevention**

Keep only in original container  
Do not breathe fume, gas, mist, vapours, spray  
Wash face, hands and any exposed skin thoroughly after handling  
Wash eyes thoroughly after handling.  
Do not eat, drink or smoke when using this product  
Use only outdoors or in a well-ventilated area  
Wear protective gloves / protective clothing / eye protection / face protection  
Avoid release to the environment

**Precautionary Statements - Response**

Specific treatment (see First aid on this SDS)  
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  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]  
Wash contaminated clothing before reuse  
Immediately call a POISON CENTER or doctor/physician  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth  
Do NOT induce vomiting  
Absorb spillage to prevent material damage  
Collect spillage

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up  
Store in corrosive resistant container with a resistant inner liner

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**Other hazards which do not result in classification**

AUH071 - Corrosive to the respiratory tract

**General Hazards**

Poisons Schedule (SUSMP) 6

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Mixture**

Chemical name	CAS No.	Weight-%
Water	7732-18-5	65-90
Ammonia, aqueous solution	1336-21-6	10-35

## 4. FIRST AID MEASURES

### Description of first aid measures

<b>General advice</b>	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. Show this safety data sheet to the doctor in attendance.
<b>Emergency telephone number</b>	
<b>Inhalation</b>	Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, (trained personnel should) give oxygen. If breathing is irregular or stopped, administer artificial respiration. Seek immediate medical attention/advice.
<b>Eye contact</b>	In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Immediate medical attention is required.
<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Immediately call a POISON CENTER or doctor/physician.
<b>Ingestion</b>	Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning. Coughing and/ or wheezing. Difficulty in breathing.
-----------------	--

### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Treat symptomatically. Can cause corneal burns. Following severe exposure, the patient should be kept under medical supervision for at least 48 hours. Effects may be delayed.
---------------------------	--

## 5. FIRE FIGHTING MEASURES

### Suitable Extinguishing Media

<b>Suitable Extinguishing Media</b>	Dry chemical, CO2, water spray or regular foam.
-------------------------------------	---

<b>Unsuitable extinguishing media</b>	No information available.
---------------------------------------	---------------------------

### Specific hazards arising from the chemical

<b>Specific hazards arising from the chemical</b>	Corrosive hazard. Wear protective gloves/clothing and eye/face protection. May form explosive mixtures with air. Caution should be exercised when opening storage containers or vessels. Flammable concentrations of ammonia can accumulate in the vapour space of storage containers/vessels.
---	--

### Special protective actions for fire-fighters

<b>Special protective equipment for fire-fighters</b>	Ammonia: The main products of combustion in air, at or above 780 °C, are nitrogen and water with small amounts of nitrogen dioxide and ammonium nitrate. Ammonia decomposes into flammable hydrogen gas at approximately 450°C. May form flammable mixtures in air. The presence of oil or other combustible material will increase the fire hazard. Fatalities have occurred as a result of the explosive nature of the ammonia gas. If involved in a fire, keep containers cool with water spray. If safe to do so, remove containers from path of fire. Fire-fighters to wear full body protective clothing and self-contained
---	---

breathing apparatus. Consider evacuation.

Hazchem code 2X

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin and eyes. Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Stop leak if you can do it without risk. Ensure adequate ventilation. Evacuate personnel to safe areas. Do not touch or walk through spilled material. Remove all sources of ignition. Use personal protective equipment as required. Wash thoroughly after handling.

**For emergency responders** Clear area of all unprotected personnel. Use personal protection recommended in Section 8.

### Environmental precautions

**Environmental precautions** See Section 12 for additional Ecological Information.

### Methods and material for containment and cleaning up

**Methods for containment** Dike to collect large liquid spills.

**Methods for cleaning up** Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Avoid contact with skin, eyes, and clothing. Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Do not ingest. If swallowed then seek immediate medical assistance. Ensure adequate ventilation. Use personal protection equipment. Wash thoroughly after handling. Keep out of reach of children.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from foodstuffs. Keep container closed when not in use.

This material is a Scheduled Poison and must be stored, maintained and used in accordance with the relevant regulations.

**Incompatible materials** Acids. Metal salts. Peroxides. Reducing agents. Some. Metals.

**Poisons Schedule (SUSMP)** 6

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Limits** No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Ammonia: 8hr TWA = 17 mg/m<sup>3</sup> (25 ppm), 15 min STEL = 24 mg/m<sup>3</sup> (35 ppm)

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

**Appropriate engineering controls**

**Engineering controls**

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

**Individual protection measures, such as personal protective equipment**

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, RUBBER BOOTS, AIR MASK , GLOVES (Long), APRON.

NOTE: Chemical goggles and face shield are not required if wearing an air-supplied mask.



**Eye/face protection**

Tight sealing safety goggles. If splashes are likely to occur: Face protection shield.

**Skin and body protection**

Chemical resistant apron. Rubber boots. Impervious clothing.

**Hand protection**

Elbow-length impervious gloves.

**Respiratory protection**

If determined by a risk assessment an inhalation risk exists, wear an air supplied respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

**Environmental exposure controls**

Local authorities should be advised if significant spillages cannot be contained.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state	Liquid
Appearance	No information available
Color	Colourless
Odor	Sharp , Irritating
Odor threshold	0.6-53 ppm (detection); 0.7-55 ppm (recognition).

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	11.7 (1% aqueous solution)	None known
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	18-37°C	None known
Flash point	Not applicable	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	25%	
Lower flammability or explosive limits	16%	
Vapor pressure	6.9-10.5 psi @20°C	None known
Vapor density	0.6 (air=1)	None known
Relative density	0.88-0.92 @20°C	None known
Water solubility	Miscible in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	Not applicable	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

### Other information

## 10. STABILITY AND REACTIVITY

### Reactivity

**Reactivity** Reacts violently with acids. May form explosive compounds with mercury, halogens, hypochlorites. Reacts exothermically with strong mineral acids.

### Chemical stability

**Stability** Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### Explosion data

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

### Possibility of hazardous reactions

**Possibility of hazardous reactions** Corrosive to copper, nickel, tin, zinc, and their alloys, iron.

### Conditions to avoid

**Conditions to avoid** Heat. Exposure to light. Do not contaminate food or feed stuffs.

**Incompatible materials**

**Incompatible materials** Acids. Metal salts. Peroxides. Reducing agents. Some. Metals.

**Hazardous decomposition products**

**Hazardous decomposition products** Hydrogen. Nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Information on likely routes of exposure**

<b>Product Information</b>	No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:
<b>Inhalation</b>	Breathing in mists or aerosols will produce respiratory irritation. Inhalation of high concentrations may result in shortness of breath, chest pain, severe headache and lung damage including pulmonary oedema. Effects may be delayed.
<b>Eye contact</b>	Causes serious eye damage.
<b>Skin contact</b>	Causes severe burns.
<b>Ingestion</b>	Can burn mouth, throat, and stomach. Harmful if swallowed.
<b>Symptoms</b>	Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning. Coughing and/ or wheezing. Difficulty in breathing.

**Numerical measures of toxicity - Product Information**

Refer to component information below.

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ammonia, aqueous solution	= 350 mg/kg ( Rat )	-	-

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Causes severe burns. Classification is based on mixture calculation methods based on component data.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage. Classification is based on mixture calculation methods based on component data.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	Not listed as carcinogenic according to IARC. (IARC - International Agency for Research on Cancer).

<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	May cause respiratory irritation. Classification is based on mixture calculation methods based on component data.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.
<b>Chronic effects:</b>	Chronic exposure to ammonia may cause chemical pneumonitis and kidney damage.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity** Avoid contaminating waterways. Very toxic to aquatic life.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ammonia, aqueous solution	-	LC50: =8.2mg/L (96h, Pimephales promelas)	-	EC50: =0.66mg/L (48h, water flea) EC50: =0.66mg/L (48h, Daphnia pulex)

### Persistence and degradability

**Persistence and degradability** Biodegradable.

### Bioaccumulative potential

**Bioaccumulation** Material does not bioaccumulate.

### Mobility

**Mobility in soil** No information available.

### Other adverse effects

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. TRANSPORT INFORMATION

### ADG

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

**UN number** 2672



---

<b>Proper shipping name</b>	AMMONIA SOLUTION
<b>Hazard class</b>	8
<b>Packing group</b>	III
<b>Hazchem code</b>	2X

**IATA**

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

<b>UN number</b>	2672
<b>UN proper shipping name</b>	AMMONIA SOLUTION
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	III

**IMDG**

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

<b>UN number</b>	2672
<b>UN proper shipping name</b>	AMMONIA SOLUTION
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	III
<b>IMDG EMS Fire</b>	F-A
<b>IMDG EMS Spill</b>	S-B

## 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National regulations

##### Australia

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

##### **Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

<b>Poisons Schedule (SUSMP)</b>	6
---------------------------------	---

#### International Inventories

<b>AIIC</b>	All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals.
-------------	---

<b>NZIoC</b>	All the constituents of this material are listed on the New Zealand Inventory of Chemicals or are exempt.
--------------	---

#### **Legend:**

**AIIC-** Australian Inventory of Industrial Chemicals

**NZIoC** - New Zealand Inventory of Chemicals

### International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

## 16. OTHER INFORMATION

**Reason(s) For Issue:** 5 Yearly Revised Primary SDS

**Issuing Date:** 08-Aug-2023

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

### **Revision Note:**

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

### **Key or legend to abbreviations and acronyms used in the safety data sheet**

#### Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

### **Key literature references and sources for data used to compile the SDS**

EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australian Industrial Chemicals Introduction Scheme (AICIS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

### **Disclaimer**

**This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.**

**If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.**

**Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.**

**End of Safety Data Sheet**