HURST SCIENTIFIC

Safety Data Sheet
Ammonia in Ethanol

SECTION 1: Identification

GHS Product identifier

Product name	Ammonia in Ethanol
Product number	AH10-100M, 500M, 1L, 2.5L
Brand	Hurstchem

Other means of identification

Ammonia 10% in Ethanol 70%

Recommended use of the chemical and restrictions on use

Laboratory Reagent

Supplier's details

Name	Hurst Scientific
Address	2/36 Hensbrook Loop 6112 Forrestdale WA Australia
Telephone	1300 778 068
email	sales@hurstscientific.com.au

Emergency phone number

Australian Poisons Information Centre 131 126
Australian Emergency Services 000

SECTION 2: Hazard identification

General hazard statement

Classified as a Hazardous substance according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.
Classified as a Dangerous goods according to the ADG Code for the Transport of Dangerous Goods by Road and Rail (7th Edition).

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 8

- Flammable liquids, Cat. 2
- Skin corrosion/irritation, Cat. 2
- Eye damage/irritation, Cat. 1

- Hazardous to the aquatic environment, long-term (chronic), Cat. 2

GHS label elements, including precautionary statements

Pictograms

Signal word	**Danger**
Hazard statement(s)	
H225	Highly flammable liquid and vapor
H315	Causes skin irritation
H318	Causes serious eye damage
H411	Toxic to aquatic life with long lasting effects
Precautionary statement(s)	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/ ...
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378	In case of fire: Use … to extinguish.
P391	Collect spillage.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to …

SECTION 3: Composition/information on ingredients

Mixtures

Hazardous components

1. Ethanol	
Concentration	< 70 %
CAS no.	64-17-5
2. Water	
Concentration	Balance
CAS no.	7732-18-5
3. Ammonium hydroxide (28 -30% NH3)	
Concentration	< 10 %
CAS no.	1336-21-6

SECTION 4: First-aid measures

Description of necessary first-aid measures

If inhaled	Evacuate to fresh air immediately. If there are signs of intoxication, respiratory irritation, dizziness, nausea or headache seek medical attention immediately. Keep at rest until fully recovered. If unconscious place in recovery position, provide artificial respiration if breathing ceases.
In case of skin contact	Remove contaminated clothing and wash affected area with soap and water thoroughly. If irritation develops, seek medical attention.
In case of eye contact	Flush eyes with copious amounts of water for at least 15 minutes. Seek medical attention.
If swallowed	DO NOT induce vomiting. If a small amount has been swallowed, dilute the stomach by consuming water. For large volumes seek immediate medical attention.

Personal protective equipment for first-aid responders
Eye wash station, safety shower and First Aid kit.

Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically and based on individual reactions of patient and judgement of a Doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Water spray, alcohol-resistant foam, dry chemical or Carbon Dioxide.

Specific hazards arising from the chemical
Toxic gases may evolve (Oxides of Carbon).

Special protective actions for fire-fighters
Wear SCBA (Self-Contained Breathing Apparatus) and full protective equipment.

Further information
Hazchem code 2YE

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
If spill or leakage occurs eliminate all sources of ignition and take measures to prevent static discharge. Clear area of all persons not involved with the
clean-up and ensure all others wear suitable protective equipment and breathing apparatus. Contain the spill or absorb using a suitable inert material such as vermiculite or sand etc... Prevent run off into drains and if contamination of waterways has occurred notify the local emergency services. Use water spray to disperse vapour. Ventilate the area well and ensure the atmosphere is clear of contaminant prior to allowing personnel to return.

Methods and materials for containment and cleaning up
Wash the affected area with a large volume of water. De-gas any non-returnable containers prior to disposal and adhere to local government
guidelines for the disposal of any material or packaging.

SECTION 7: Handling and storage

Precautions for safe handling

Use in well ventilated areas away from all sources of ignition. Avoid eye contact and repeated or prolonged skin contact. Avoid inhalation of vapour, mist or aerosols. Do not use compressed gas to fill, discharge or mix due to the high vapour hazard of this product. Observe good personal hygiene practices. Ensure containers are earthed when agitating or transferring product to avoid static discharge.

Conditions for safe storage, including any incompatibilities
Store in tightly closed containers in a cool, dry environment away from sources of ignition and direct sunlight. Check regularly for leaks. Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 1336-21-6
Ammonium hydroxide (28 -30% NH3)
AU/SWA (Australia): 35ppm/ 24mg/m3 STEL inhalation; 25ppm/ 17mg/m3 TWA inhalation

CAS: 64-17-5
Ethanol
AU/SWA (Australia): 1000 ppm; 1880 mg/m3 TWA inhalation

Appropriate engineering controls
Ensure adequate ventilation to maintain airborne concentrations below national exposure standards.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Wear suitable protective clothing. Safety glasses or chemical resistant, splash-proof goggles.

Skin protection
Nitrile/neoprene gloves, lab coat or overalls.

Respiratory protection
If working within a confined area use a suitable respirator at all times.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Clear Colourless liquid
Color	Clear
Odor	Distinct Alcohol odour
Melting point/freezing point	-117°C
Boiling point or initial boiling point and boiling range	78°C
Lower and upper explosion limit/flammability limit	Ethanol 3.5% - 19%
Flash point	Ethanol 13°C (closed cup)
pH	Not available
Solubility	Soluble
Vapor pressure	Not available

SECTION 10: Stability and reactivity

Reactivity
None known.

Chemical stability
Stable under recommended conditions for use and storage.

Conditions to avoid
Heat, direct sunlight, moisture, sparks, flame and build-up of static electricity.

Incompatible materials
Oxidising agents.

Hazardous decomposition products
Oxides of carbon and nitrogen, smoke and other toxic fumes.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
HEALTH EFFECTS:
Eye Contact Irritating to eyes. Exposure may result in lacrimation, irritation, pain and redness.
Skin Contact Prolonged contact may result in drying and defatting of the skin, rash and dermatitis.
Ingestion Ingestion may result in gastrointestinal irritation, nausea, vomiting, abdominal pain, diarrhoea, headache, dizziness and drowsiness with large doses. Chronic ingestion may result in cirrhosis of the liver. Liver damage may occur with high level of chronic ingestion.
Inhalation Vapour is moderately irritating to the mucous membranes and respiratory tract.

Skin corrosion/irritation
No classification.

Serious eye damage/irritation
Reversible effects to eyes.

Respiratory or skin sensitization
No classification.

Germ cell mutagenicity
No classification.

Carcinogenicity
No classification.

Reproductive toxicity
No classification.

Specific target organ toxicity (STOT) - single exposure
No classification.

Specific target organ toxicity (STOT) - repeated exposure
No classification.

Aspiration hazard
No classification.

Additional information
TOXICITY DATA:
Ethanol (100%) : Inhalation LC50 Rat: 2000 ppm/10h
Oral LD50 Rat: 7060 mg/kg
Ingestion LD50 Mouse: 3450 mg/kg

Ammonia (Anhydrous): Inhalation LC50 Rat: 1.4mg/l/4hr
Oral LD50 Rat: 350 mg/kg

SECTION 12: Ecological information

Toxicity
No data available.

Persistence and degradability
No data available.

Bioaccumulative potential
Not expected to bio-accumulate.

Mobility in soil
No data available.

Other adverse effects
Do not contaminate drains and waterways.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Dispose of in accordance with local authority guidelines.

Packaging disposal
Dispose of in accordance with local authority guidelines.

Other disposal recommendations
Product must not be disposed of in sewerage systems, drains or allowed to enter the waterways. Empty containers retain liquid and/or vapour residue and are not to be pressure cut, welded, brazed, soldered, drilled or exposed to heat, flame, sparks electricity or any other source of ignition. Rinse
containers thoroughly with cold water when empty.

SECTION 14: Transport information

UN Number	1170
Hazchem emergency action code (EAC)	2YE
UN Proper Shipping Name	Ethanol (Ethyl Alcohol)
Transport hazard class(es)	3
Packing group	II

Special precautions for user
Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), if both are in bulk, toxic gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidising agents (Class 5.1), organic peroxides (Class 5.2), toxic substances (Class 6.1), infectious substances (Class 6.2) or radioactive substances (Class 7). Exemptions may apply.

SECTION 15: Regulatory information

Chemical Safety Assessment
• Poison Schedule: Not applicable.
• TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight hour working day, for a five-day week.

SECTION 16: Other information

Further information/disclaimer

This SDS is prepared in accordance with the Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (2011). The information contained within is believed to be accurate at the date of preparation/review. Hurst Scientific makes no claims of the accuracy or completeness of the information and excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. It is recommended the user make their own determinations as to the suitability of the information provided to the application in which the product is to be used.

Preparation information

References

1. Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (2011).
2. Safe Work Australia, National Code of Practice for the Labelling of Workplace Hazardous Chemicals (2015).
3. Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants (2013)
4. National Transport Commission Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code); Canprint: Canberra (2007), Volume 1, 7th Edition.
5. Standards Australia, Dangerous Goods Initial Emergency Response Guide: Australian Handbook (SAA/SNZ HB76); Homebush (2004).