UN GHS REVISION 7

Safety Data Sheet

Acid Alcohol 0.125% - 5%

Version 1.0, Date of issue: 2026-08-17

SECTION 1: Identification

1.1 GHS Product identifier

Product name	Acid Alcohol 0.125% - 5%
Product number	ACDL-0.125% to 5%
Brand	Hurstchem

1.3 Recommended use of the chemical and restrictions on use

Laboratory use. This SDS covers 70% to 100% ethanol and hydrochloric acid 0.125% to 5%.

1.4 Supplier's details

Name	Hurst Scientific
Address	2 Transit Place, 6112 Forrestdale WA, Australia
Telephone	1300 778 068
email	sales@hurstscientific.com.au

1.5 Emergency phone number

Australian Poisons Information Centre 13 11 26

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 Dangerous goods according to the ADG Code for the Transport of Dangerous Goods by Road and Rail (7th Edition).

2.1 Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Flammable Liquid, Cat. 2
- Skin Corrosion/Irritation, Cat. 1

2.2 GHS label elements, including precautionary statements

Pictograms

1. Flame; 2. Corrosion

Signal word

Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE/doctor.
P321	Specific treatment (see supplemental first-aid instructions on this label).
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use appropriate extinguishing media for the surrounding fire.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

2.3 Other hazards

No information available on PBT / vPvB status or endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Component	Concentration
Ethanol (CAS: 64-17-5)	**≥ 70 – < 100%**
CLASSIFICATIONS: Flammable Liquid, Cat. 2; Serious Eye Damage/Irritation, Cat. 2A. **HAZARDS:** H225 - Highly flammable liquid and vapour; H319 - Causes serious eye irritation.	
Hydrochloric acid (CAS: 7647-01-0)	**≥ 0.125 – < 5%**
Water (CAS: 7732-18-5)	**< 30%**

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

Eye contact

Flush eyes with copious amounts of water for at least 15 minutes. Seek immediate medical attention.

Skin contact

Immediately remove all contaminated clothing, footwear and jewellery. Flush the affected area with copious amounts of water for at least 15 minutes. Seek immediate medical attention. Wash contaminated clothing before re-use.

Inhalation

Evacuate to fresh air immediately. If unconscious, place in recovery position and provide artificial respiration if breathing ceases. Seek medical attention.

Ingestion

DO NOT induce vomiting. Wash mouth out with copious amounts of water and seek medical attention.

First-aid facilities

Eye wash station, safety shower and First Aid kit.

4.2 Most important symptoms and effects, both acute and delayed

The most important symptoms and effects are described in Section 2 (hazard statements) and Section 11 (toxicological information).

4.3 Indication of immediate medical attention and special treatment needed

Treat symptomatically. For advice, contact the Poisons Information Centre (Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Alcohol-resistant foam, dry chemical powder, carbon dioxide or water spray. Do not use water jets. Keep containers cool with water spray.

5.2 Specific hazards arising from the chemical

Vapour is heavier than air and may travel along the ground to distant ignition sources and flash back. Vapours may form explosive mixtures with air. Combustion may produce toxic and irritating gases, including oxides of carbon.

5.3 Special protective actions for fire-fighters

Fire fighters should wear self-contained breathing apparatus (SCBA) operated in positive-pressure mode and a chemical splash suit; a structural firefighter's uniform provides only limited protection against these materials. Fight the fire from a safe location. Use of water spray may be inefficient. If safe to do so, move containers from the fire area and cool them with flooding quantities of water until well after the fire is out. Prevent firefighting runoff from entering waterways, drains and sewers. Contain and collect fire-control water for later disposal.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Avoid contact with skin and eyes. Wear suitable protective equipment (see Section 8). Evacuate non-essential personnel from the area. Remove all sources of ignition. Vapours may accumulate in low-lying areas and form explosive concentrations.

6.2 Environmental precautions

Prevent the spill from entering drains, sewers and waterways. In the event of a major spill, contain the material and notify the relevant authorities.

6.3 Methods and materials for containment and cleaning up

Contain the spill and prevent entry into drains, sewers and waterways. Absorb with inert absorbent material (e.g. sand, vermiculite or earth) and transfer to a suitable, labelled container for disposal. Rinse the affected area with water. Dispose of in accordance with Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Keep away from heat, sparks, open flame and other ignition sources — No smoking. Use flameproof electrical equipment and non-sparking tools. Bond and ground containers during transfer to prevent static discharge. Empty containers retain flammable residue — do not cut, weld or drill. Do not breathe mists or vapours. Wear appropriate protective clothing to avoid any contact.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area. Keep containers tightly closed and upright when not in use. Store away from incompatible materials (see Section 10). Inspect containers regularly for damage or leaks. Store in an area approved for flammable liquids (cabinet or purpose-built store), away from heat, ignition sources and direct sunlight; storage areas must be No Smoking. Vapour is heavier than air — beware accumulation in pits and confined spaces.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Hydrochloric acid (CAS: 7647-01-0)
AU/SWA (AU): TWA: 5 ppm (7.5 mg/m³)

Water (CAS: 7732-18-5)
AU/SWA (AU): No occupational exposure limit established.

8.2 Appropriate engineering controls

Ensure an adequate ventilation or exhaust system is in place.

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

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standard AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand protection

Use occupational protective gloves complying with AS 2161 (Selection, Use and Maintenance).

Respiratory protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapour/mist filter should be used. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Highly flammable liquid; Mixes with water
Colour	No data available
Odour	Distinct Alcohol Odour
Odour threshold	No data available
Melting point/freezing point	-117 °C (Ethanol)
Boiling point or initial boiling point and boiling range	78 °C (Ethanol)
Flammability	No data available
Lower and upper explosion limit/flammability limit	No data available
Flash point	13 °C (closed cup, ethanol)
Explosive properties	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Oxidising properties	No data available
pH	< 2 (acidic solution)
Kinematic viscosity	No data available
Solubility	Completely soluble in water
Partition coefficient n-octanol/water (log value)	No data available
Vapour pressure	~5.9 kPa (ethanol)
Evaporation rate	No data available
Density and/or relative density	0.89 (approx.)
Relative vapour density	No data available
Particle characteristics	No data available
Supplemental information regarding physical hazard classes	No data available
Further safety characteristics (supplemental)	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Reacts vigorously with strong oxidising agents. Acidic solution may react with metals to produce hydrogen gas. Stable at room temperature in closed containers, away from ignition sources.

10.2 Chemical stability

Stable at room temperature in closed containers, away from ignition sources.

10.3 Possibility of hazardous reactions

No dangerous polymerisation occurs. May react with: Strong oxidising agents (risk of fire/explosion). Metals, forming flammable hydrogen gas. Bases, generating heat and splashing risk.

10.4 Conditions to avoid

Heat, sparks, open flames, hot surfaces. Static discharge. Elevated temperatures. Poorly ventilated areas. Contact with incompatible materials (oxidisers, bases, metals). Evaporation leading to vapour accumulation.

10.5 Incompatible materials

Strong oxidising agents (e.g., chromic acid, peroxides, nitrates). Bases/alkalis (may cause violent neutralisation). Metals such as aluminium, zinc, magnesium (releases hydrogen gas). Reducing agents. Chlorinating agents. Strong dehydrating agents (e.g., sulfuric acid).

10.6 Hazardous decomposition products

Carbon monoxide (CO) Carbon dioxide (CO_2) Hydrogen chloride gas (HCl vapour) Chlorine compounds (trace amounts under severe decomposition) Acid Alcohol 0.25% - 3% Flammable vapours

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

7060 mg/kg (rat, LD50 oral) (Ethanol); 20000 ppm/10H (rat, LC50 inhalation) (Ethanol)

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Not expected to be a respiratory or skin sensitiser.

Germ cell mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

Not considered to be a carcinogenic hazard.

Reproductive toxicity

Not considered to be toxic to reproduction.

Specific target organ toxicity (STOT) - single exposure

Not expected to cause toxicity to a specific target organ.

Specific target organ toxicity (STOT) - repeated exposure

Not expected to cause toxicity to a specific target organ through repeated exposure.

Aspiration hazard

Not expected to be an aspiration hazard.

SECTION 12: Ecological information

Toxicity

This product is not expected to be acutely hazardous to aquatic life at the concentrations present. Ethanol is of low aquatic toxicity (LC_{50} values typically > 10,000 mg/L). Dilute hydrochloric acid may lower pH locally but is rapidly neutralised in the environment

Persistence and degradability

Ethanol is readily biodegradable. Hydrochloric acid dissociates completely in water and does not persist as an organic pollutant

Bioaccumulative potential

Bioaccumulation is not expected. Ethanol has a low partition coefficient (log Kow –0.3) and does not bioaccumulate. Hydrochloric acid does not bioaccumulate

Mobility in soil

High mobility expected. Ethanol is fully miscible with water and readily moves through soil. Hydrochloric acid becomes neutralised by minerals present in soil

Results of PBT and vPvB assessment

No data available

Endocrine disrupting properties

No data available

Other adverse effects

No data available

SECTION 13: Disposal considerations

Product disposal

Dispose of in accordance with local authority guidelines. Empty containers may still represent a hazard.

Packaging disposal

Dispose of in accordance with local authority guidelines. Empty containers may retain product residue and vapour. Do not cut, weld, braze, solder, drill or reuse containers.

Waste treatment

Dispose of in accordance with local authority guidelines.

Sewage disposal

Do not contaminate drains and waterways.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers. 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

ADG (Australian Dangerous Goods Code, 7th Edition)

UN Number	UN1170
Proper shipping name	ETHANOL (ETHYL ALCOHOL) or, ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Transport hazard class	3
Packing group	II
Special provisions	144
Hazchem code	●2YE
Environmental hazards	Not classified

IMDG (International Maritime Dangerous Goods Code)

UN Number	UN1170
Proper shipping name	ETHANOL (ETHYL ALCOHOL) or, ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Transport hazard class	3
Packing group	II
Marine pollutant	No

IATA (International Air Transport Association Dangerous Goods Regulations)

UN Number	UN1170
Proper shipping name	ETHANOL (ETHYL ALCOHOL) or, ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Transport hazard class	3
Packing group	II

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Ethanol (CAS: 64-17-5)

Australia SUSMP — Poison Schedule: Not Scheduled (NS)

Hydrochloric acid (CAS: 7647-01-0)

Australia SUSMP — Poison Schedule: Schedule 5

Water (CAS: 7732-18-5)

Australia SUSMP — Poison Schedule: Not Scheduled (NS)

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this product.

SECTION 16: Other information

16.1 Further information/disclaimer

References

1. Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (June 2023).
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), Volume 1, Edition 7.9 (2023).
5. Standards Australia, Dangerous Goods Initial Emergency Response Guide: Australian Handbook (SAA/SNZ HB76); Homebush (2004).

16.2 Preparation information

This SDS is prepared in accordance with the Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (June 2023). 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 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. Copyright © 2026 Hurst Scientific