# Safety Data Sheet

Date of Issue: 1.04.2021 Date of Expiry: 1.04.2026

## 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Distributor Name : **ECP Limited**
Address : PO Box 34125, Birkenhead, Auckland 0746
Telephone : +64 9 480 4386
Facsimile : +64 9 480 4385
Emergency phone number : 0800 243 622 (24 hours)

| **Product** | **Acid Alcohol** | | **Code** | **11060** |
|---|---|---|---|---|
| **CAS#** | **UN #** | **DG Class/es** | **Packing group #** | |
| 64-17-5<br>7647-01-0 | 1993 | 3 | II | |

**Recommended use** : Laboratory Investigations

## 2: Hazards identification

**HSNO Hazard Classification: 3.1B (Highly Flammable Liquid & Vapour)**
6.1E (Harmful if swallowed)
6.4A (Causes Serious Eye Irritation)
6.8C (Reproductive Developmental)
6.9A (Target organ system)

**Pictogram**

**Signal Word : Danger**

**Hazard statement(s)**

- Highly Flammable liquid and vapour.
- May be Harmful if swallowed.
- Causes serious eye irritation.
- May cause harm to breast feed children.
- Causes damage to organs through prolonged or repeated exposure.

**Prevention statement(s)**

- Read Safety Data Sheet before use.
- Keep away from heat. No smoking.
- Do not eat drink or smoke when using this product.
- Ground container and receiving equipment.
- Use only non sparking tools.
- Use explosion-proof electrical equipment
- Take precautionary measures against static discharge.
- Do not breathe vapours.
- Avoid contact during pregnancy/while breast feeding.
- Wear protective gloves, clothing, eye protection and face protection.

- Keep container tightly closed.

**Response Statements:**
- If on skin (or hair,) remove/take off immediately all
- contaminated clothing, rinse skin with water/shower.
- In case of fire, use water fog (or if unavailable fine water spray), Foam, Dry agent (Carbon Dioxide), Sand, Dolomite.

**Storage Statement:**
- Store in a well ventilated place. Keep cool.

**Disposal Statement:**
- Please refer to Section 13 Disposal Considerations.

## 3: Composition/information on ingredients

**Substance/Mixture: Substance**
**Substances**
Molecular Formula: C2H5OH + HCl (Ethanol + Hydrochloric acid)

**Hazardous components**

| Component | CAS No. | Concentration |
|---|---|---|
| Ethanol | 64-17-5 | ≥ 98% |
| Hydrochloric acid | 7647-01-0 | ≤ 0.8% |

## 4: First aid measures

**Description of first aid measures**
**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5: Firefighting measures

**Specific Hazards:**
Highly flammable liquid. Severe Fire Hazard when exposed to Oxidisers. May form flammable vapour mixtures with air. Avoid all ignition sources.
Can be considered a severe explosive hazard when exposed to heat, flame and /or oxidisers.
Intrinsically safe equipment necessary in area where chemical is being used. Nearby equipment must be earthed.
Vapour may travel considerable distance to source of ignition and flash back.
On combustion, may emit toxic fumes of carbon monoxide (CO).

**Suitable Extinguishing Media**
Water fog (or if unavailable fine water spray), Foam, Dry agent (Carbon Dioxide), Sand, Dolomite.
DO NOT extinguish fire unless flow can be stopped first.

**Advice for firefighters**

Keep upwind. Consider evacuation. Shut off all possible sources of ignition. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. Heating can cause expansion or decomposition leading to a violent rupture of containers. On burning will emit toxic fumes including those of carbon monoxide and carbon dioxide. Fire fighters to wear self-contained, breathing apparatus, if risk of exposure to vapour or products of combustion. And protective gloves and boots.

## 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

**Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations (see section 13).

**Reference to other sections**
For disposal see section 13.

## 7: Handling and storage

**Precautions for safe handling**
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.
For precautions see section 2.2.

**Conditions for safe storage, including any incompatibilities**
Store in cool place. 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.

## 8: Exposure controls/personal protection

**Exposure controls**
As there is no exposure control data currently available for this particular mixture (98% ethanol: 0.5% hydrochloric acid) both Ethanol and Hydrochloric acid standards have been published.

***Ethanol*** - Threshold Limit Value – Time Weighted Average (TLV – TWA) 1,000ppm 1880mg/m³ (As published by The Department of Labour, New Zealand.)
STEL (short term exposure limit) – none allocated.
Carcinogen category – none allocated.
Ethanol - Odour Threshold 350ppm

**Appropriate engineering controls**
Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use with local exhaust ventilation or while wearing organic vapour respirator. Vapour is heavier than air – Prevent concentrations in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use. Earth all containers to reduce the possibility of sparks from static electricity.
Flameproof equipment to be used with this product. Refer SAA HB 13/NEEITC 1992 Electrical Equipment for Hazardous Areas.

**Personal protective equipment**
Wear appropriate clothing to prevent repeated or prolonged skin contact
Gloves made of butyl rubber, Nitrile + PVC or PVC.

Where eye exposure is reasonably probable always wear approved chemical safety goggles or Safety glasses with side shields. It would be advisable not to use Contact lenses when working with this chemical as soft lenses may absorb irritants and all lenses will concentrate vapours on the surface of the eye. If inhalation risk exists wear organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS1716.

**Control of environmental exposure**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## 9: Physical and chemical properties

a) Appearance
- Form : liquid, clear
- Colour : colourless

b) Odour : No data available
c) Odour Threshold : No data available
d) pH : No data available
e) Melting point/freezing point : -143.99 °C
f) Initial boiling point and boiling range : 78.0 - 80.0 °C
g) Flash point : 14.0 °C - closed cup
h) Evaporation rate : No data available
i) Flammability (solid, gas) : No data available
j) Upper/lower flammability or explosive limits
- Upper explosion limit : 19 %(V)
- Lower explosion limit : 3.3 %(V)

k) Vapour pressure : 59.5 hPa at 20.0 °C
l) Vapour density : No data available
m) Relative density : 0.7974 g/cm3
n) Water solubility : completely soluble
o) Partition coefficient : n-octanol/water
- log Pow : -0.349 at 24 °C

p) Auto-ignition temperature : 363.0 °C
q) Decomposition temperature : No data available
r) Viscosity : No data available

## 10: Stability and reactivity

**Stability**
Acid Alcohol is incompatible with oxidising agents, alkali metals, strong acids acids, ammonia and potassium tertbutoxide. Aluminium containers should be avoided as aluminium alcoholates may be formed under certain conditions. Hazardous polymerisation will not occur.
Ethanol is Hygroscopic.

## 11: Toxicological information

**General**
No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label.
Symptoms that may arise if the product is mishandled and over exposure occurs are:

**Acute Effects:**
**Ingestion:**
Harmful if swallowed will result in nausea, vomiting, dizziness, fatigue, headache and central nervous system depression. If the victim is uncoordinated there is a greater likelihood of vomit entering the lungs and causing subsequent complications.
*HSNO classifications* - 6.1E Harmful if swallowed
6.8C (Reproductive Developmental)
6.9A (Target organ system)

**Eye Contact:**
Is an eye irritant.

HSNO classification, 6.4A - Eye Irritant

**Skin Contact:**
Contact with skin will result in mild irritation. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis.

**Inhalation:**
Vapour may be irritating to mucous membranes and respiratory tract. Inhalation of vapour can result in headaches, dizziness, fatigue and possible nausea. Inhalation of high concentrations can produce central nervous system depression, which can contribute to loss of co-ordination, impaired judgement and, if exposure is prolonged unconsciousness.

**Long Term Effects:**
Ethanol - Evidence from animal tests and studies on exposed humans indicate that repeated or prolonged exposure to this chemical by inhalation or ingestion could result in liver damage.

**Acute Toxicity/Chronic Toxicity:**
Ethanol component only - Oral LD50 (rat): 7060mg/kg.
Inhalation LC50 (rat): 20,000ppm/10hr.
Estimated fatal dose (human): 300-400ml of Pure Ethanol.
Eyes (Rabbit): Mild-Severe irritant
Skin (Rabbit): Mild irritant.

A study of the effects of ethanol inhalation in humans, found that between 5000-10,000ppm subjects experience coughing and smarting of the eyes and nose, with the symptoms disappearing within minutes. People exposed at 15,000ppm experienced continuous lacrimation and coughing.
Irritation of the eyes and respiratory tract were not noted at concentrations below 5000ppm
There is no clear evidence that ethanol is carcinogenic to laboratory animals; it is however a tumour promoter. Ethanol typically inactive in genotoxic assays, but on some occasions, a weak response has been noted.
Oral exposure to ethanol produces malformations and developmental toxicity in rats and mice at maternally toxic doses. No developmental effects were observed in rats from inhalation at doses up to 20,000ppm.

## 12: Ecological information

**Environmental Effects:**
Methylated Spirits has a low potential for bioaccumulation and is substantially biodegradable in water.
LC50 (rainbow trout) (24hr) (flow through): 11,200mg/L.
n-Octanol/Water Partition Coefficient: -0.3
Avoid contamination of waterways

## 13: Disposal considerations

Can be disposed of in a sewage treatment facility provided it is first diluted with sufficient water to bring the mixture below the flammable threshold (less than 3% ethanol by volume) i.e. to raise the flash point to above 93°C. This requirement is included to ensure that flammable substances do not collect in pockets of sewage collection system with resultant fires or vapour explosions.
Large volumes may be suitable for re-distillation by solvent contractors.

**Contaminated packaging**
Empty containers may contain hazardous residues. Labels should not be removed from containers until they have been appropriately cleaned. Do not cut, puncture or weld on or near to the containers. Containers should be cleaned by approved methods and then re-used or disposed of by landfill. After cleaning, all existing labels should be removed. Do not incinerate closed containers.

## 14: Transport Information Table

| | ADR/RID – European packaging certification | IMDG International Maritime Dangerous Goods | IATA – DGR International Air Travel Association – Dangerous Goods |
|---|---|---|---|

| | | | Code | Regulations |
|---|---|---|---|---|
| **UN Number** | 1993 | 1993 | 1993 | |
| **UN Proper Shipping name** | Flammable Liquid NOS | Flammable Liquid NOS | Flammable Liquid NOS | |
| **Transport Hazard Class** | 3 | 3 | 3 | |
| **Packaging group** | II | II | II | |
| **Environmental Hazards** | No | No | No | |
| **Special precautions for user** | No data available | | | |
| **Hazchem Code** | 2YE | | | |

## 15: Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**Chemical safety assessment**
For this product, a chemical safety assessment was not carried out

## 16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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