

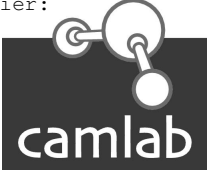
1. Identification

Product Code **1111090**

Product Name **ETHANOL INDUSTRIAL (94% IMS) (64 OP)
(customs & excise authority required)**

Molecular Formula **CH₃CH₂OH =46.07**

CAS Number **64-17-5**

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2. Composition

Component	CAS No	EEC No	Conc w/w	Classification & Risk Phrases	Exp (See 8.1)
Ethanol	64-17-5	200-578-6	90.0%	F : R11	WEL
Methanol	67-56-1	200-659-6	4.0%	F : R11,R23/24/25,R39/23/24/25	WEL

3. Hazards Identification



Highly flammable.

4. First Aid Measures

Eyes Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION.

Skin Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use.

Inhalation Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.

Ingestion If conscious give plenty of water to drink. Do not induce vomiting. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.

5. Fire Fighting Measures

Hazards Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus. Vapour-air mixtures are explosive.

Extinguishing Media Water spray, alcohol resistant foam, dry powder or carbon dioxide. Use water spray to keep fire exposed containers cool.

Unsuitable Media Do not use water jet.

6. Accidental Release Measures

Personal Protection	Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so. Beware : vapour is heavier than air and will tend to accumulate at low spots.
Environmental	Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.
Major Spillage	Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.
Minor Spillage	Contain and absorb on inert material. Transfer absorbent to container for removal. Allow solvent to evaporate in remote area, then dispose of absorbent as solid chemical waste. Wash area down with copious amounts of water.

7. Storage & Handling

Handling Precautions	All transfer systems should be earthed to prevent accumulation of static electricity. Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing. Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.
Storage Conditions	Well ventilated, cool, dry storage . Protect from direct sun and store away from sources of ignition. Keep containers closed when not in use. Keep well separated from oxidising agents.

8.1 Workplace Exposure Limits

Component	CAS No	Workplace Exposure Limits				Maximum Exposure Limits			
		Long Term		Short Term		Long Term		Short Term	
		ppm	mg m ⁻³	ppm	mg m ⁻³	ppm	mg m ⁻³	ppm	mg m ⁻³
Ethanol	64-17-5	1000	1920	3000	5760	-	-	-	-
Methanol	67-56-1	200.0	266.0	250.0	333.0	-	-	-	-

8.2 Personal Protection

Respiratory	Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus.
Hands	Use solvent resistant gloves.
Eyes	Use chemical splash proof glasses or goggles.
Skin	Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.

9. Physical & Chemical Properties

Appearance	Clear colourless liquid.
Odour	Fresh and characteristic.
pH	Not available
Boiling point	78.3 °C
Melting point	112.3- °C
Flash point	13.0 °C(Closed cup)
Upper Flammable Limit	19.0 %
Lower Flammable Limit	3.3 %
Auto Ignition	363.0 °C
Explosive properties	Moderate/severe in confined spaces.
Oxidising Properties	No.
Vapour Pressure	59 mmHg @ 20,C
Relative Density	0.8158
Water Solubility	Completely miscible in water.

10. Stability & Reactivity

Chemical Stability	Stable under normal conditions
Conditions to Avoid	Hot surfaces, naked flames or other sources of ignition.
Materials to Avoid	Strong oxidising agents. Nitric acid. Silver nitrate, potassium perchlorate, chromyl chloride, chromium trioxide and permanganic acid. Peroxides, potassium permanganate, sodium, potassium, platinum, potassium tertiary butoxide.
Hazardous Decomposition Products	None unusual. Burning will produce smoke, carbon monoxide and/or carbon dioxide.

11. Toxicological Information

Eyes	High concentrations of vapour may be irritating to the eyes.
Skin	Repeated or prolonged contact may defat the skin producing irritation and dermatitis. Unlikely to be absorbed across the skin in harmful amounts.
LD50 Skin	Rabbit 20g/Kg
Ingest	Low order of acute toxicity. Fatal dose in man 300-400ml. Ingestion of large amounts will produce central nervous system depression. Symptoms may include nausea, vomiting muscular incoordination and loss of consciousness. Aspiration during swallowing or vomiting may injure lungs.
LD50 Ingest	Oral Rat 21g/kg
Inhalation	Exposure to vapour concentrations above the occupational exposure limits may produce irritation of the eyes and respiratory tract. High concentrations of vapour may produce central nervous system depression and unconsciousness. Symptoms will be similar to those following ingestion.
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	Some evidence for foetotoxicity and tetragenecity has been observed in experimental animals treated with high doses of ethanol during gestation.
Other Information	Contains methanol. This will not constitute a special problem since ethanol is preferentially metabolised. Chronic intoxication may however produce damage to the optic nerve.

12. Ecological

Readily bio-degraded in the environment.

13. Disposal Considerations

Disposal Methods	Dispose of in a licensed incinerator for organic solvents. Do not dispose of as domestic waste. Never dispose of into water courses or sewerage systems due to high risk of explosion.
Contaminated Packaging	Use a licensed waste disposer. Do not attempt to burn any residual liquids due to risk of explosion.

14. Transport Information

Proper Shipping Name	Ethanol
UN Number	1170
UN Classification	3 Flammable liquid
Subsidiary Risk	None
Flash Point	13.0 °C(Closed cup)
Packing Group	II
Transport Category	2
Marine pollutant	No
ADR Hazard ID	33



15. Regulatory Information

Labelling Classification Highly Flammable.

Label Symbols

F



Risk & safety Phrases Highly flammable. Keep out of reach of children. Keep container tightly closed. Keep away from sources of ignition - No Smoking.

EEC Number 200-578-6

16. Other Information

Document Information This document has been prepared in accordance with directive 88/379/EEC.

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment.

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