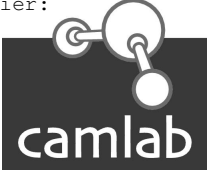


**1. Identification**

Product Code 1111623

Product Name UNIVERSAL INDICATOR SOLUTION (pH 4 – 11)

CAS Number Mixture

Supplier:  **CAMLAB LIMITED**  
 Norman Way Industrial Estate  
 Over  
 Cambridge  
 England  
 CB4 5WE

Phone 01954 233110  
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 (Have this document to hand)

**2. Composition**

Component	CAS No	EEC No	Conc w/w	Classification & Risk Phrases	Exp (See 8.1)
Ethanol	64-17-5	200-578-6	63.6%	R11	WEL
Methanol	67-56-1	200-659-6	3.0%	R11,R23/24/25,R39/23/24/25	WEL

**3. Hazards Identification**

Flammable.

**4. First Aid Measures**

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

**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 <sup>-3</sup>	ppm	mg m <sup>-3</sup>	ppm	mg m <sup>-3</sup>	ppm	mg m <sup>-3</sup>
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	Green solution which changes colour with pH.
Odour	Fresh and characteristic.
pH	7 @ 20 °C
Boiling point	80.0 °C
Melting point	45.0- °C
Flash point	23.0 °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	0.8630
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	The liquid will cause conjunctival irritation and corneal damage. 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	Not available
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	Not available
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

Ethanol is readily biodegradable after 15 days in non-acclimated fresh water. 75% biodegradability occurs after 20 days in salt water.

## 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 Solution
UN Number	1170
UN Classification	3 Flammable liquid
Subsidiary Risk	None
Flash Point	23.0 °C(Closed cup)
Packing Group	III
Transport Category	3
Marine pollutant	No
ADR Hazard ID	30



## 15. Regulatory Information

Labelling	Flammable.
Classification	
Label Symbols	None
Risk & safety Phrases	Flammable. Keep container tightly closed. Keep away from sources of ignition - No Smoking. Avoid contact with skin and eyes.
EEC Number	Not available

## 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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Data reviewed and PDF file generated: 17/03/10.

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