



# Material Safety Data Sheet

MSDS has been prepared in accordance with EC Directive 93/112/EEC

## Section 1 Chemical Product and Company Identification

<b>Name</b> Ethanol in water 40%		
<b>Synonyms:</b> ethyl alcohol, alcohol	<b>Product type:</b> Liquid density certified reference material	<b>Date revised:</b> Mar 2003 <b>Previous:</b> first issue
<b>Manufacturer:</b> H & D Fitzgerald Ltd. Cefn Du, Tremeirchion, St Asaph, Clwyd, LL17 0US UK		
<b>Prepared by:</b> Denis Fitzgerald		
<b>Chemical family:</b> alcohol		
<b>Poison schedule number:</b> None allocated		
<b>Chemical Formula:</b> C <sub>2</sub> H <sub>5</sub> OH		

## Section 2 Composition / Information on ingredients

Substance name	C.A.S. No.	EINECS No.	% weight	HSCN (Tariff#)
water	7732-18-5	231-791-2	≈ 67%	28510010
ethanol	64-17-5	200-578-6	≈ 33%	22071000

## Section 3 Hazards identification

<b>Emergency overview</b> Colourless liquid with strong smell of alcohol. Supplied sealed in a 10ml glass ampoule. <b>Caution:</b> None. <b>Potential environmental effects:</b> None.
<b>Potential health effects</b> <b>Eyes:</b> None. <b>Skin:</b> None. <b>Ingestion:</b> None. <b>Chronic:</b> None known. This material is not listed as carcinogenic.

## Section 4 First Aid measures

<b>Eyes:</b> Wash eyes with water or normal saline. If symptoms develop, seek medical advice.
<b>Skin:</b> Wash with water.
<b>Ingestion:</b> None

<b>Section 5 Fire fighting measures</b>		
<b>Extinguishing media:</b> Use extinguishing media appropriate for surrounding fire		
<b>Unsuitable media:</b> None		
<b>Lower explosive limit:</b> Not applicable	<b>Upper explosive limit:</b> Not applicable	<b>Flash point:</b> Not applicable
<b>Flammability classification:</b> Not flammable	<b>Flame propagation:</b> Not applicable	<b>Ignition in air:</b> Not applicable
<b>Combustion hazards:</b> Not combustible		
<b>Protective equipment:</b> None needed		
<b>Unusual fire hazards:</b> None		
<b>Static charge effects:</b> Not applicable		

<b>Section 6 Spillage measures</b>
<b>Spill cleanup:</b> Mop up liquid and place in waste disposal container.
<b>Environmental precautions:</b> None needed for the quantity supplied in an ampoule.

<b>Section 7 Handling and storage</b>
<b>Handling precautions:</b> Avoid contact with eyes.
<b>Storage precautions:</b> Store ampoule in package until ready to use Store in a cool place if possible (less than 25°C)

<b>Section 8 Exposure controls and personal protection</b>
<b>Exposure guidelines:</b> No occupational exposure limits established.
<b>Personal protective equipment</b>
<b>Eye/Face protection:</b> Safety glasses are recommended to minimise eye contact.
<b>Hands:</b> Wash hands with soap before eating or drinking.

<b>Section 9 Physical and chemical properties</b>		
<b>Physical state:</b> Liquid	<b>Colour:</b> Colourless	<b>Odour:</b> alcohol
<b>pH:</b> 6.9	<b>Freezing point:</b> -22°C	<b>Boiling point:</b> ≈82°C
<b>Miscibility with water:</b> The solution mixes completely with water	<b>Density of liquid:</b> ≈948 kgm <sup>-3</sup>	
<b>Vapour pressure:</b> Slightly higher than water at the same temperature	<b>Molecular weight:</b> anhydrous ethanol 46.07	

<b>Section 10 Stability and reactivity</b>
<b>Conditions to avoid:</b> None.
<b>Incompatible materials:</b> Reactions are unlikely at the concentration of the solution provided.
<b>Reactivity:</b> None known.
<b>Hazardous decomposition:</b> None.
<b>Hazardous polymerisation:</b> None.

### Section 11 Toxicological information

<b>Acute effects</b>	
<b>Acute inhalation:</b>	LC <sub>50</sub> (rat): 20000 ppm / 10 hrs (for pure ethanol)
<b>Acute ingestion:</b>	LD <sub>50</sub> (rat): 7060 mg/kg. (for pure ethanol)
<b>Acute skin:</b>	Not tested
<b>Eye irritation:</b>	Not tested
<b>Skin irritation:</b>	Not tested
<b>Chronic effects</b>	
<b>Chronic ingestion:</b>	Not tested
<b>Chronic eye:</b>	Not tested
<b>Chronic skin:</b>	Not tested
<b>Mutagenic effects:</b>	Not tested
<b>Reproductive effects:</b>	Not tested
<b>Sensitisation</b>	Not tested

### Section 12 Ecological information

<b>Persistence / degradability:</b> Material does not show potential to bioconcentrate from water.
<b>Ecotoxicity:</b> Ethanol is a naturally occurring substance.

### Section 13 Disposal

<b>For small quantities:</b> Flush the aqueous solution down the drain / mop up with paper and dispose of as none hazardous waste. Observe all national and local environmental regulations.
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### Section 14 Transport information

<b>UN Number</b> Not applicable	<b>UN shipping name</b> Not regulated	<b>UN class</b> Not applicable
<b>RID /ADR</b> Non hazardous for rail or road	<b>IMDG shipping name</b> Non hazardous for sea freight	<b>ICAO / IATA:</b> Non hazardous for air freight

### Section 15 Regulatory information

<b>European classification:</b> Label symbols: none
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### Section 16 Other information

<b>Reason for revision:</b> change to new format
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