



Material Safety Data Sheet

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

Section 1 Chemical Product and Company Identification

Name Ethanol in water 11%		
Synonyms: ethyl alcohol, alcohol	Product type: Liquid density certified reference material	Date revised: Mar 2003 Previous: first issue
Manufacturer: H & D Fitzgerald Ltd. Cefn Du, Tremeirchion, St Asaph, Clwyd, LL17 0US UK		
Prepared by: Denis Fitzgerald		
Chemical family: alcohol		
Poison schedule number: None allocated		
Chemical Formula: C ₂ H ₅ 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	≈ 91%	28510010
ethanol	64-17-5	200-578-6	≈ 9%	22071000
Bronopol (biocide)	52-51-7	200-142-7	≈ 0.02%	

Section 3 Hazards identification

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

Section 4 First Aid measures

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

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

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

Section 7 Handling and storage
Handling precautions: Avoid contact with eyes.
Storage precautions: Store ampoule in package until ready to use (Aqueous solutions of Bronopol degrade when exposed to light). Store in a cool place if possible (less than 25°C)

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

Section 9 Physical and chemical properties		
Physical state: Liquid	Colour: Colourless	Odour: alcohol
pH: 7.0	Freezing point: -4°C	Boiling point: ≈98°C
Miscibility with water: The solution mixes completely with water	Density of liquid: ≈983 kgm ⁻³	
Vapour pressure: Slightly higher than water at the same temperature	Molecular weight: anhydrous ethanol 46.07	

Section 10 Stability and reactivity
Conditions to avoid: Avoid exposure to sunlight, Bronopol will degrade, causing very slight density shift.
Incompatible materials: Reactions are unlikely at the concentration of the solution provided.
Reactivity: None known.
Hazardous decomposition: None.
Hazardous polymerisation: None.

Section 11 Toxicological information

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

Section 12 Ecological information

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

Section 13 Disposal

For small quantities: Flush the aqueous solution down the drain / mop up with paper and dispose of as non hazardous waste. Observe all national and local environmental regulations.
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Section 14 Transport information

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

Section 15 Regulatory information

European classification: Label symbols: none
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Section 16 Other information

Reason for revision: change to new format
Disclaimer: H&D Fitzgerald Ltd. believes that data given here is accurate. It is derived from published information about anhydrous ethanol. No warranty, expressed or implied, is intended. The data is provided for your information and consideration when using dilute aqueous ethanol solution as a certified reference material for the calibration of density meters. H&D Fitzgerald Ltd. assumes no legal responsibility for its use.