



ALCORFIX™ SAFETY DATA SHEET

This Safety Datasheet complies with the requirements of Regulation (EC) No 1907/2006

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND THE COMPANY/UNDERTAKING

1.1 Product Identifier: AlcorFix™

148885, 148886, 148887, 148889, 148962, 149980, 149995, 248200, 248930, 249200, 249300, 249420

1.2 Relevant identified uses of the substance or mixture and uses advised against: Solution for fixation/conservation of biological samples.

1.3 Details of the supplier of the Safety Data Sheet:

Apacor Limited, Unit 5 Sapphire Centre, Fishponds Road, Wokingham, Berkshire, RG41 2QL, England
+44 (0) 118 979 5566

technical@apacor.com

1.4 Emergency telephone number:

+44 (0)118 979 5566

(Monday-Friday 0900-1700 excluding UK Public Holidays)

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (gas) (Category 4), H332

Serious eye damage (Category 1), H318

Hazardous to the aquatic environment (Category 2), H411

Flammable liquids (Category 2), H225

See Section 16 for the full text of H-Statements mentioned in this Section.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]



Pictogram

Signal word

Danger

Hazard statement(s)

H225 – Highly flammable liquid and vapour

H302 - Harmful if swallowed

H318 - Causes serious eye damage

H332 - Harmful if inhaled

H411 - Toxic to aquatic life with long lasting effects

Precautionary statements:

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTER or doctor/physician.

P370 + P378 - In case of fire: Use dry sand, carbon dioxide (CO₂), water spray, dry chemical or alcohol resistant foam to extinguish.

2.3 Other hazards

None.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component: **Ethanol**

CAS No: 64-17-5

EC No: 200-578-6

Index No: 603-002-00-5

Classification: Flam. Liq. 2 (H225)

Concentration: 25%

Component: **Zinc sulphate**

CAS No: 7733-02-0

EC No: 231-793-3

Index No: 030-006-00-9

Classification: Acute Tox. 4 (H302), Eye Dam. 1 (H318), Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410)

Concentration: 7.9%

Component: **Acetic Acid**

CAS No: 64-19-7

EC No: 200-580-7

Index No: 607-002-00-6

Classification: Skin Corr. 1A (H314), Flam. Liq. 3 (H226)

Concentration: 4.8%

Component: **Isopropanol**

CAS No: 67-63-0

EC No: 200-661-7

Index No: 603-117-00-0

Classification: Eye Irrit. 2 (H319), STOT SE 3 (H336), Flam. Liq. 2 (H225)

Concentration: 1%

Component: **Methyl Alcohol**

CAS No: 67-56-1

EC No: 200-659-6

Index No: 603-001-00-X

Classification: Acute Tox. 3 (H301), Acute Tox. 3 (H311), Acute Tox 3. (H331), STOT SE 1 (H370), Flam. Liq. 2 (H225)

Concentration: 1%

3.3 Other Information

Additional non-hazardous ingredients:

Polyvinyl alcohol (minimum 1g/l)

DI water

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures

Consult a physician. Show this safety data sheet to the doctor in attendance.

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



ALCORFIX™ SAFETY DATA SHEET

This Safety Datasheet complies with the requirements of Regulation (EC) No 1907/2006

In case of skin contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

If swallowed: Clean mouth with water and drink afterwards plenty of water.

If inhaled: Move to fresh air.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media (use media appropriate to the circumstances and environment): dry sand, carbon dioxide (CO₂), water spray, alcohol-resistant foam, dry chemical.

5.2 Special hazards arising from the substance or mixture

No information available

5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas.

6.2 Environmental precautions

Should not be released into the environment. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up

Absorb spill with inert material (eg dry sand or earth), then place in a chemical waste container. After cleaning, flush away traces with water.

6.4 Reference to other sections

SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Do not breathe vapours or spray mist. Ensure that ventilation is adequate before using this product. Avoid contact with skin and eyes. Take necessary personal protective precautions before using this product. Keep away from heat and flame. Take precautionary measures against static discharges.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Incompatible products: Avoid strong bases. Oxidizing agent.

7.3 Specific end use(s)

No other specific end uses(s) are specified apart from those listed in Section 1.2.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Component	Ethanol 64-17-5	Zinc sulphate 7733-02-0	Acetic Acid 64-19-7	Isopropanol 67-63-0	Methyl Alcohol 67-56-1
UK	STEL: 3000 ppm STEL: 5760 mg/m ³ TWA: 1000 ppm TWA: 1920 mg/m ³			STEL: 500 ppm STEL: 1250 mg/m ³ TWA: 400 ppm TWA: 999 mg/m ³	STEL: 250 ppm STEL: 333 mg/m ³ TWA: 200 ppm TWA: 266 mg/m ³ Skin
France	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 5000 ppm STEL: 9500 mg/m ³		STEL: 10 ppm STEL: 25 mg/m ³	STEL: 400 ppm STEL: 980 mg/m ³	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 1000 ppm STEL: 1300 mg/m ³
Spain	STEL: 1000 ppm STEL: 1910 mg/m ³		STEL: 15 ppm STEL: 37 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³	STEL: 400 ppm STEL: 1000 mg/m ³ TWA: 200 ppm TWA: 500 mg/m ³	S* TWA: 200 ppm TWA: 266 mg/m ³
Germany	TWA: 500 ppm TWA: 960 mg/m ³ Ceiling / Peak: 1000 ppm Ceiling / Peak: 1920 mg/m ³ Skin	TWA: 0.1 mg/m ³ TWA: 2 mg/m ³ Ceiling / Peak: 0.4 mg/m ³ Ceiling / Peak: 4 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³ Ceiling / Peak: 20 ppm Ceiling / Peak: 50 mg/m ³	TWA: 200 ppm TWA: 500 mg/m ³ Ceiling / Peak: 400 ppm Ceiling / Peak: 1000 mg/m ³	TWA: 200 ppm TWA: 270 mg/m ³ Ceiling / Peak: 800 ppm Ceiling / Peak: 1080 mg/m ³ Skin TWA: 200 ppm TWA: 260 mg/m ³ Skin
Portugal	TWA: 1000 ppm		STEL: 15 ppm TWA: 10 ppm TWA: 25 mg/m ³	STEL: 400 ppm TWA: 200 ppm	STEL: 250 ppm TWA: 200 ppm TWA: 260 mg/m ³
The Netherlands	Skin STEL: 1900 mg/m ³ TWA: 260 mg/m ³				Skin TWA: 133 mg/m ³ TWA: 100 ppm
Finland	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 1300 ppm STEL: 2500 mg/m ³		TWA: 5 ppm TWA: 13 mg/m ³ STEL: 10 ppm STEL: 25 mg/m ³	TWA: 200 ppm TWA: 500 mg/m ³ STEL: 250 ppm STEL: 620 mg/m ³	TWA: 200 ppm TWA: 270 mg/m ³ STEL: 250 ppm STEL: 330 mg/m ³ Skin
Denmark	TWA: 1000 ppm TWA: 1900 mg/m ³		TWA: 10 ppm TWA: 25 mg/m ³	TWA: 200 ppm TWA: 490 mg/m ³	TWA: 200 ppm TWA: 260 mg/m ³ Skin
Austria	STEL 2000 ppm STEL 3800 mg/m ³ TWA: 1000 ppm TWA: 1900 mg/m ³		STEL 20 ppm STEL 50 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³	STEL 800 ppm STEL 2000 mg/m ³ TWA: 200 ppm TWA: 500 mg/m ³	Skin STEL 800 ppm STEL 1040 mg/m ³ TWA: 200 ppm TWA: 260 mg/m ³
Switzerland	STEL: 1000 ppm STEL: 1920 mg/m ³ TWA: 500 ppm TWA: 960 mg/m ³	STEL: 4 mg/m ³ TWA: 0.1 mg/m ³ TWA: 2 mg/m ³	STEL: 20 ppm STEL: 50 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³	STEL: 400 ppm STEL: 1000 mg/m ³ TWA: 200 ppm TWA: 500 mg/m ³	Skin STEL: 800 ppm STEL: 1040 mg/m ³ TWA: 200 ppm TWA: 260 mg/m ³
Poland	TWA: 1900 mg/m ³		STEL: 30 mg/m ³ TWA: 15 mg/m ³	STEL: 1200 mg/m ³ TWA: 900 mg/m ³	STEL: 300 mg/m ³ TWA: 100 mg/m ³
Norway	TWA: 500 ppm TWA: 950 mg/m ³ STEL: 500 ppm STEL: 950 mg/m ³		TWA: 10 ppm TWA: 25 mg/m ³ STEL: 20 ppm STEL: 37.5 mg/m ³	TWA: 100 ppm TWA: 245 mg/m ³ STEL: 150 ppm STEL: 306.25 mg/m ³	TWA: 100 ppm TWA: 130 mg/m ³ Skin STEL: 150 ppm STEL: 162.5 mg/m ³
Ireland	STEL: 1000 ppm		TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³	TWA: 200 ppm STEL: 400 ppm Skin	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 600 ppm STEL: 780 mg/m ³ Skin
European Union			TWA 10 ppm TWA 25 mg/m ³		TWA: 200 ppm TWA: 260 mg/m ³ Skin

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

8.2 Exposure controls

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Respiratory protection: No special protective equipment required.

Hand protection: Wear appropriate protective gloves.

Eye protection: Wear tightly fitting safety goggles or safety glasses with side-shields.

Skin and body protection: Protective clothing to protect exposed skin.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls: No information available.



ALCORFIX™ SAFETY DATA SHEET

This Safety Datasheet complies with the requirements of Regulation (EC) No 1907/2006

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) **Appearance:** clear liquid
- b) **Odour:** pungent
- c) **Odour threshold:** no information available
- d) **pH:** no information available
- e) **Melting point / freezing point:** no information available
- f) **Initial boiling point / boiling range:** 84°C
- g) **Flash point:** 16°C
- h) **Evaporation rate:** no information available
- i) **Flammability (solid, gas):** no information available
- j) **Upper/lower flammability or explosive limits:** no information available
- k) **Vapour pressure:** no information available
- l) **Vapour density:** no information available
- m) **Relative density:** no information available
- n) **Solubility (ies) :** soluble in water
- o) **Partition coefficient: n-octanol/water:** no information available
- p) **Auto-ignition temperature:** no information available
- q) **Decomposition temperature:** no information available
- r) **Viscosity:** no information available
- s) **Explosive properties:** no information available
- t) **Oxidising properties:** no information available

9.2 Other information:

SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No information available.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

No particular materials.

10.6 Hazardous decomposition products

Under normal use – none.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information of toxicological effects

Acute toxicity:

Product: based on known/supplied information, does not present an acute toxicity hazard.

Inhalation: no data available.

Eye contact: no data available.

Skin contact: no data available.

Ingestion: no data available.

≤ 60.3% of the mixture consists of ingredients of unknown toxicity.

The following values are calculated based on GHS document chapter 3.1.

Oral	1,363.00mg/kg
Dermal	5,158.00mg/kg
Inhalation:	Gas 4,263.00mg/l
	Mist 20.90mg/l
	Vapour 829.22mg/l

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	7060mg/kg (Rat)		124.7mg/L (Rat) 4 h
Zinc sulphate	500mg/kg (Rat)		
Acetic acid	3310mg/kg (Rat)	1060mg/kg (Rabbit)	11.4mg/L (Rat) 4 h
Methyl alcohol	6200mg/kg (Rat)	15800mg/kg (Rabbit)	22500 ppm (Rat) 8 h 64000 ppm (Rat) 4 h
Isopropanol	1870mg/kg (Rat)	4059mg/kg (Rabbit)	72600mg/m3 (Rat) 4 h

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity: no data available

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

SECTION 12 ECOLOGICAL INFORMATION

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and other aquatic invertebrates
Ethanol		12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	9268 - 14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static 10800: 24 h Daphnia magna mg/L EC50
Zinc sulphate	0.056: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 64.8: 72 h Chlorella vulgaris mg/L EC50 2.4: 96 h Chlorella vulgaris mg/L EC50	0.162: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.03 - 0.05: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.34 - 0.93: 96 h Oncorhynchus mykiss mg/L LC50 static 0.218 - 0.42: 96 h Pimephales promelas mg/L LC50 flow-through 0.06: 96 h Pimephales promelas mg/L LC50 static 0.23 - 0.48: 96 h Pimephales promelas mg/L LC50 0.168 - 0.25: 96 h Pimephales promelas mg/L LC50 semi-static 0.15: 96 h Cyprinus carpio mg/L LC50 semi-static 16.85 - 27.18: 96 h Cyprinus carpio mg/L LC50 static 3 - 4.6: 96 h Lepomis macrochirus mg/L LC50 flow-through 3.55 - 6.32: 96 h Lepomis macrochirus mg/L LC50 static 0.63: 96 h Poecilia reticulata mg/L LC50 49.23 - 64.16: 96 h Poecilia reticulata mg/L LC50 semi-static 0.48 - 1.72: 96 h Poecilia reticulata mg/L LC50 static	0.75: 48 h Daphnia magna mg/L EC50 0.538 - 0.908: 48 h Daphnia magna mg/L EC50 Static
Acetic acid		79: 96 h Pimephales promelas mg/L LC50 static 75: 96 h Lepomis macrochirus mg/L LC50 static	65: 48 h Daphnia magna mg/L EC50 Static 47: 24 h Daphnia magna mg/L EC50
Isopropanol	1000: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50	9640: 96 h Pimephales promelas mg/L LC50 flow-through 11130: 96h Pimephales promelas mg/L LC50 static 1400000: 96 h Lepomis macrochirus µg/L LC50	13299: 48 h Daphnia magna mg/L EC50
Methyl alcohol		28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through	



ALCORFIX™ SAFETY DATA SHEET

This Safety Datasheet complies with the requirements of Regulation (EC) No 1907/2006

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

Chemical Name	log Pow
Ethanol	-0.32
Acetic acid	-0.31
Isopropanol	0.05
Methyl alcohol	-0.77

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available

12.6 Other adverse effects

12.7 Additional information

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues / unused products: In accordance with local and national regulations. Should not be released into the environment.

Contaminated packaging: Empty containers should be disposed of at an approved waste handling site for recycling or disposal.

SECTION 14 TRANSPORT INFORMATION

14.1 UN number: UN2924

14.2 UN proper shipping name: Flammable Liquid, Corrosive, n.o.s. (Ethanol, Acetic Acid)

14.3 Transport hazard class(es): 3, Subsidiary Class: 8

14.4 Packing group: II

14.5 Environmental hazards

14.6 Special precautions for user

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not intended to be transported in bulk.

Note: Per 49 CFR – when shipping 30ml or less per inner packaging and the gross weight does not exceed 64lbs, use the 173.4 small quantity exception.

SECTION 15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/ legislation specific for the substance or mixture

Chemical Name	French RG number
Ethanol	RG 84
Isopropanol	RG 84
Methyl alcohol	RG 84

TSCA	Complies
EINECS/ELINCS	-
DSL/NDSL	-
PICCS	-
ENCS	-
IECSC	-
AICS	-
KECL	-

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 AICS - Australian Inventory of Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances

15.2 Chemical Safety Assessment

No information available

SECTION 16 OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H225 - Highly flammable liquid and vapour

H226 - Flammable liquid and vapour

H301 - Toxic if swallowed

H302 - Harmful if swallowed

H311 - Toxic in contact with skin

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H319 - Causes serious eye irritation

H331 - Toxic if inhaled

H332 - Harmful if inhaled

H336 - May cause drowsiness or dizziness

H370 - Causes damage to organs.

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

H411 - Toxic to aquatic life with long lasting effects

Amended sections are indicated by a line in the border.

The information supplied in this SDS is correct to the best of our knowledge. We do not accept any liability for loss, injury or damage, which may result from its use.