

MATERIAL SAFETY DATA SHEET



1. IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND OF THE COMPANY/UNDERTAKING

Trade Name: 3E-Zyme
Intended use: Enzymatic detergent for cleaning re-usable medical instruments and devices.
Manufacturer: Medisafe UK Limited
Marketing Address: Twyford Road
Bishop's Stortford
Herts. CM23 3LJ UK
Tel: +44 (0)1279 461641
Fax: +44 (0)1279 461643
E-mail: info@medisafe.uk.com
Website: www.medisafe.uk.com

Australian Supplier

In Vitro Technologies Pty. Ltd.
Street/P.O.Box: 7-9 Summit Road
Country code/Postal code/Town/City: Noble Park, Melbourne, VIC 3174
Telephone / Telefax: +61397713700 / +61397713720
Emergency information: Poisons Information Centre: Tel. 131126

2. COMPOSITION/INFORMATION ON INGREDIENTS

Product Type: The product is a pH-neutral aqueous concentrate of protease, lipase and amylase enzymes together with 2-propanol, propylene glycol, stabilisers, corrosion inhibitor and surfactants. It is intended be used at concentrations between 0.3–1.0% in water at temperatures between 40-45 °C.

Major Ingredients:

Compound	Concentration	OEL	R-Phrases	Hazard Class	CAS	EINECS
2-propanol	<15%	LD ₅₀ (rat) 5000mg/kg	R11, R36, R67	F, Xi	67-63-0	200-661-7
Propylene glycol	<15%	N/A	N/A	N/A	57-55-6	200-338-0
Distilled water	~70%	N/A	N/A	N/A		

3. HAZARDS IDENTIFICATION

Skin: May cause degreasing and redness of the skin on repeated contact.
Not significantly harmful by skin absorption.
Eyes: May cause discomfort or irritation on contact with the eye.
Respiratory: Repeated inhalation of spray or mist may cause an allergic reaction in susceptible persons.
Ingestion: Accidental ingestion may cause slight gastric discomfort.

4. FIRST-AID MEASURES

Skin: Wash the affected area with soap and water.
Eyes: Irrigate with fresh water for 10 minutes. If discomfort continues, seek immediate medical advice
Respiratory: Remove to fresh air. If symptoms continue, seek immediate medical advice.
Ingestion: Irrigate the mouth and throat with water. Give milk or water to drink. DO NOT induce vomiting.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: All are suitable – Water, CO₂, Foam, Dry Powder
Hazardous By-products: The product does not pose any special fire hazard.
No specific hazardous by-products.
The product is wholly miscible with water.
Special Measures: No special measures are indicated.

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6. ACCIDENTAL RELEASE MEASURES

- Personal Protection:** Wear rubber gloves, apron and boots.
- Clean up methods:** Absorb into any inert absorbent material, and dispose of as clinical waste.
- Environmental Measures:** Although the product is wholly biodegradable, measures should be taken to prevent discharge to groundwater.

7. HANDLING & STORAGE

- Handling:** Observe the instructions on the product label.
Keep away from children.
Do not mix with other chemicals
- Storage:** Store in dry place not below 5°C or above 38°C and out of direct sunlight.
Keep away from foodstuffs.
Recap bottles after use.
Large quantities should be stored in a bund if there is the potential to contaminate groundwater.
- Specific Uses:** No special requirements

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Indicative Limits:** 2-propanol: EH40 OEL 400 ppm (8-hour TWA)
- Personal Protection:** Follow the measures below when using the product in non-automated cleaning operations.
- Skin:** Wear nitrile, neoprene or PVC rubber gloves
Wash hands thoroughly with soap and water after handling the product.
- Eye:** Wear safety goggles or visor.
Provide eyewash facilities in the workplace.
- Respiratory:** Avoid formation of aerosols.
Provide a well-ventilated workplace or LEV in manual cleaning operations.
Persons sensitised to biological washing powders or suffering from asthma should not use the product.
Do not smoke when using the product.
- Ingestion:** Do not eat or drink when using the product.

9. PHYSICAL & CHEMICAL PROPERTIES

- Appearance:** Clear blue liquid.
- Odour:** Faint odour of screen wash.
- pH:** 6.5 to 7.5 (neutral).
- Boiling Point:** 110 °C.
- Freezing Point:** -20 °C.
- Flammability:** Not flammable.
- Explosion:** Not explosive.
- Oxidising/Reducing:** Not an oxidant or reductant.
- Vapour Pressure:** As water.
- Relative Density:** 1.01 at 25°C.
- Solubility:** Soluble in water in all proportions.
- Evaporation Rate:** As water.
- Special Properties:** None.

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10. STABILITY & REACTIVITY

Stability:	Stable.
Conditions to Avoid:	Do not allow to freeze.
Materials to Avoid:	Oxidising agents.
Hazardous polymerisation:	Will not occur.
Decomposition Products:	Water, carbon monoxide, carbon dioxide when exposed to fire.

11. TOXICOLOGICAL INFORMATION

Acute:

Oral Toxicity:	2-propanol:	LD ₅₀ (rat) 5000mg/kg
	Propylene glycol:	LD ₅₀ (rat) 22000mg/kg
Inhalation:	2-propanol:	LC ₅₀ (8-hour; rat) 51 mg/l
	Propylene glycol:	No data (low volatility)
Dermal Toxicity:	2-propanol:	LD ₅₀ (rat) 12900mg/kg
	Propylene glycol:	LD ₅₀ (rat) 20800mg/kg
Skin Irritation (OECD TG404):	2-propanol:	Not irritating
	Propylene glycol:	Not irritating
Eye Irritation (OECD TG405):	2-propanol:	Irritant
	Propylene glycol:	Not irritating
Skin Sensitisation (Draize):	2-propanol:	Not sensitising
	Propylene glycol:	Not sensitising

Chronic:

None of the ingredients are classifiable as carcinogenic, mutagenic, teratogenic, or endocrine disruptive.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish (OECD TG203):	2-propanol	LC ₅₀ (96-hour) 9640 mg/l
	Propylene glycol	LC ₅₀ (96-hour) 49500 mg/l
Daphnia magna	2-propanol	EC ₅₀ (24-hour) >10000 mg/l
	Propylene glycol	EC ₅₀ (24-hour) 43500 mg/l
Algae (OECD TG202)	2-propanol	Toxicity Threshold 1050 mg/l
	Propylene glycol	LC

Mobility:

2-propanol	Fugacity level I
Propylene glycol	Fugacity level III

Persistence & Degradability:

2-propanol	BOD (5-day) 49%
Propylene glycol	BOD (10-day) 80%

Bioaccumulation Potential:

2-propanol	BCF = 1
Propylene glycol	BCF < 1

Other Adverse Effects:

None known.
The product does not contain any substances classifiable as ozone depleting.
The product does not contain any substances of animal origin.

Based on the available data the product exhibits low ecotoxicity, is wholly biodegradable, and has no potential for bioaccumulation.

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13. DISPOSAL CONSIDERATIONS

Product: Neat product that cannot be used or re-cycled for re-use should be disposed of as hazardous waste through a registered waste contractor. It must not be discharged into groundwater drains or the foul sewer.
Contaminated product should be disposed of as clinical waste.

Packaging Both the primary and secondary packaging are recyclable.
Contaminated packaging should be disposed of as clinical waste.

14. TRANSPORT INFORMATION

Road/Rail Non-hazardous
Sea IMDG Non-hazardous
Air ICAO Non-hazardous

15. REGULATORY INFORMATION

Classification: The product is not classifiable as hazardous

Safety Phrases: S2 Keep out of the reach of children
S24/25 Avoid contact with skin and eyes
S50 Do not mix with other chemicals

16. OTHER INFORMATION

Risk Phrases:

The following relate to the ingredients stated in Section 2 and not to the formulated product.

R11 Highly flammable
R36 Irritating to eyes
R67 Vapours may cause drowsiness and dizziness

Revision History:

Replaces Issue 3 published December 2006 – Disposal Considerations clarified

Disclaimer:

This Material Safety Data Sheet is not a technical specification and does not guarantee any properties or performance. It has been published for the purpose of giving guidance to the user in the safe storage, use and disposal of the product, and conforms to Regulation 6 of the Chemicals (Hazardous Information and Packaging for Supply) Regulations 2002 (CHIP 3) - Third Edition.

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