

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identification**

**Product Code/Catalogue Number:** 5390  
**SDS Number:** D14467\_SDS\_Ammonia (5390) R1, R3 \_EN  
**Product Name** **Enzytec fluid Ammonia R1, R3**

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

**Recommended Use** Laboratory chemicals.  
**Uses advised against** No Information available

**1.3. Details of the supplier of the safety data sheet**

**Company** **Thermo Fisher Scientific Oy**  
Analyzers & Automation  
Clinical Diagnostics  
Ratastie 2, P.O. Box 100  
FI-01621 Vantaa, Finland  
**Telephone number** +358 10 329200  
**E-mail address** [system.support.fi@thermofisher.com](mailto:system.support.fi@thermofisher.com)

**1.4. Emergency telephone number**

CHEMTREC INTERNATIONAL +1 703-741-5970

**SECTION 2: HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture****CLP Classification - Regulation (EC) No 1272/2008**

Based on available data, the classification criteria are not met

**2.2. Label elements**

EUH210 - Safety data sheet available on request

**2.3. Other hazards**

No information available

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Component	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Tris (hydroxymethyl) aminomethane (CAS #: 77-86-1)	1 - <2 %	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)
Sodium azide (CAS #: 26628-22-8)	< 0.1 %	Acute Tox. 2 (H300) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)

*Full text of Hazard Statements: see section 16***SECTION 4: FIRST AID MEASURES****4.1. Description of first aid measures**

**General Advice**

If symptoms persist, call a physician.

**Inhalation**

Move to fresh air. If not breathing, give artificial respiration. Consult a physician.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

**Eye Contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Ingestion**

Clean mouth with water and drink afterwards plenty of water.

**4.2. Most important symptoms and effects, both acute and delayed**

No information available.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: FIREFIGHTING MEASURES****5.1. Extinguishing media****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray. alcohol-resistant foam. Dry chemical. Carbon dioxide (CO<sub>2</sub>).

**Extinguishing media which must not be used for safety reasons**

No information available.

**5.2. Special hazards arising from the substance or mixture**

Thermal decomposition can lead to release of irritating gases and vapors.

**Hazardous Combustion Products**

None under normal use conditions.

**5.3. Advice for firefighters**

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

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Ensure adequate ventilation.

**6.2. Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas.

**6.3. Methods and material for containment and cleaning up**

Soak up with inert absorbent material.

**6.4. Reference to other sections**

Refer to protective measures listed in Sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Ensure adequate ventilation. Avoid contact with skin and eyes.

**7.2. Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place.

**7.3. Specific end use(s)**

Use in laboratories

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters****Component Exposure Limits**

Component	Finland	European Union	The United Kingdom	Germany
Sodium azide	TWA: 0.1 mg/m <sup>3</sup> 8 tunteina STEL: 0.3 mg/m <sup>3</sup> 15 minuutteina Iho	Skin TWA 0.1 mg/m <sup>3</sup> STEL 0.3 mg/m <sup>3</sup>	Skin TWA 0.1 mg/m <sup>3</sup> STEL 0.3 mg/m <sup>3</sup>	MAK 0.2 mg/m <sup>3</sup> (inhalable)
Component	Sweden	Norway	Denmark	France
Sodium azide	STV: 0.3 mg/m <sup>3</sup> 15 minuter LLV: 0.1 mg/m <sup>3</sup> 8 timmar. Hud	TWA: 0.1 mg/m <sup>3</sup> 8 timer STEL: 0.1 mg/m <sup>3</sup> 15 minutter.	TWA: 0.1 mg/m <sup>3</sup> 8 timer Hud	TWA / VME: 0.1 mg/m <sup>3</sup> (8 heures). restrictive limit STEL / VLCT: 0.3 mg/m <sup>3</sup> . restrictive limit Peau

**8.2. Exposure controls****Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment****Eye Protection**

Safety glasses with side-shields (European standard - EN 166)

**Hand Protection**

Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Disposable gloves	See manufacturers recommendations	-	EN 374	(minimum requirement)

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection**

Long sleeved clothing

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Small scale/Laboratory use**

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls**

No information available.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

<b>Appearance</b>	No information available	
<b>Physical State</b>	Liquid	
<b>Odor</b>	No information available	
<b>Odor Threshold</b>	No data available	
<b>pH</b>	No data available	
<b>Melting Point/Range</b>	No data available	
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	No data available	
<b>Flash Point</b>	No data available	<b>Method -</b> No information available
<b>Evaporation Rate</b>	No data available	
<b>Flammability (solid,gas)</b>	No information available	
<b>Explosion Limits</b>	No data available	
<b>Vapor Pressure</b>	No data available	
<b>Vapor Density</b>	No data available	(Air = 1.0)
<b>Specific Gravity / Density</b>	No data available	
<b>Bulk Density</b>	No data available	
<b>Water Solubility</b>	No information available	
<b>Solubility in other solvents</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>		
<b>Autoignition Temperature</b>	No data available	
<b>Decomposition Temperature</b>	No data available	
<b>Viscosity</b>	No data available	
<b>Explosive Properties</b>	No information available	
<b>Oxidizing Properties</b>	No information available	
<b>9.2. Other information</b>	No data available	

**SECTION 10: STABILITY AND REACTIVITY****10.1. Reactivity**

No data available

**10.2. Chemical stability**

Stable under normal conditions

**10.3. Possibility of hazardous reactions**

No information available.

**10.4. Conditions to avoid**

None known.

**10.5. Incompatible materials**

Heavy metals.

**10.6. Hazardous decomposition products**

None under normal use conditions.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects****Product Information**

No acute toxicity information is available for this product

**(a) acute toxicity;****Oral**

Based on available data, the classification criteria are not met

# SAFETY DATA SHEET

Enzytec fluid Ammonia R1, R3

Revision Date 06-Jul-2016

## Dermal Inhalation

Based on available data, the classification criteria are not met  
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Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tris (hydroxymethyl) aminomethane	LD50 = 5900 mg/kg ( Rat )		
Sodium azide	LD50 = 27 mg/kg ( Rat )	-	

## (b) skin corrosion/irritation;

Based on available data, the classification criteria are not met.

## (c) serious eye damage/irritation;

Based on available data, the classification criteria are not met.

## (d) respiratory or skin sensitization;

### Respiratory

No data available.

### Skin

No data available.

## (e) germ cell mutagenicity;

No data available

## (f) carcinogenicity;

No data available

There are no known carcinogenic chemicals in this product

## (g) reproductive toxicity;

No data available.

## (h) STOT-single exposure;

Based on available data, the classification criteria are not met.

## (i) STOT-repeated exposure;

No data available.

## Target Organs

No information available.

## (j) aspiration hazard;

No data available.

## Symptoms / effects, both acute and delayed

No information available

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Sodium azide	LC50: = 5.46 mg/L, 96h flow-through (Pimephales promelas) LC50: = 0.7 mg/L, 96h (Lepomis macrochirus) LC50: = 0.8 mg/L, 96h (Oncorhynchus mykiss)			

### 12.2. Persistence and degradability

No information available

**12.3. Bioaccumulative potential**

No information available

**12.4. Mobility in soil**

No information available

**12.5. Results of PBT and vPvB assessment**

No data available for assessment.

**12.6. Other adverse effects**

None known

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods****Waste from Residues / Unused Products**

Dispose of in accordance with local regulations.

**Contaminated Packaging**

Dispose of in accordance with local regulations.

**SECTION 14: TRANSPORT INFORMATION**

	IMDG/IMO	ADR	IATA
	Not regulated	Not regulated	Not regulated
14.1. UN number	-	-	-
14.2. UN proper shipping name	-	-	-
14.3. Transport hazard class(es)	-	-	-
14.4. Packing group	-	-	-

**14.5. Environmental hazards**

No hazards identified

**14.6. Special precautions for user**

No special precautions required

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

Not applicable, packaged goods

**SECTION 15: REGULATORY INFORMATION**

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories** X = listed

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
Tris (hydroxymethyl) aminomethane	201-064-4	-		X	X	-	X	X	X	X	X
Sodium azide	247-852-1	-		X	X	-	X	X	X	X	X

**National Regulations**

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Tris (hydroxymethyl) aminomethane	WGK 2	

Sodium azide	WGK 2	
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**15.2. Chemical safety assessment**

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

**SECTION 16: OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H300 - Fatal if swallowed  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects  
EUH032 - Contact with acids liberates very toxic gas

**Legend**

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**PNEC** - Predicted No Effect Concentration

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - Volatile Organic Compounds

**Key literature references and sources for data**

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

<b>Version</b>	1
<b>Revision Date</b>	06-Jul-2016
<b>Reason for revision</b>	Update to CLP Format.

**Disclaimer**

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