

Document Type AGHS - OSHA GHS

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Version 1

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

Product name NEB 5-alpha Competent E.coli (High Efficiency)
Product No C2987

Recommended use of the chemical and restrictions on use

Recommended use This product is for research and development only
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier address New England BioLabs
240 County Road
Ipswich, MA 01938
USA

Company phone number 978-927-5054
800-632-5227 (toll free)

Telefax 978-921-1350

E-mail address info@neb.com

Emergency telephone number

Emergency telephone 978-927-5054
800-632-5227 (toll free)
9:00am - 5:00pm Monday-Friday EST

2. HAZARDS IDENTIFICATION

Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance Colorless

Physical state Liquid

Odor None

Hazards not otherwise classified (HNOC)

Other information

Per Centers for Disease Control and Prevention (CDC) Guidelines (Biosafety in Microbiological and Biomedical Laboratories, 5th Edition), this material can be handled at Biological Safety Level One (BSL-1) containment.

Biological Safety Level One (BSL-1) containment, using standard microbiological practices, is suitable for work involving well-characterized microbiological organisms not known to consistently cause disease in immunocompetent adult humans, and present minimal potential hazard to laboratory personnel and the environment.

19.75% of the mixture consists of ingredient(s) of unknown toxicity *Note: No data available*

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	CAS No	Weight-%	Trade Secret
Glycerol	56-81-5	7 - 13	*
Trade Secret	Proprietary	5 - 10	*
Trade Secret	Proprietary	1 - 5	*

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. FIRST AID MEASURES

First aid measures

General advice

Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact

Wash skin with soap and water.

Inhalation

Remove to fresh air.

Ingestion

Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed**Note to physicians**

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the product

No information available.

Protective equipment and precautions for firefighters

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures**Personal precautions**

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment [PPE]

Use personal protection recommended in Section 8.

Environmental precautions

See Section 12 for additional ecological information.

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

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

7. HANDLING AND STORAGE

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities**Storage temperature**

Refer to www.neb.com for specific information.

Storage conditions

Keep/store only in original container.

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Specification No No information available

Incompatible materials

None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control Parameters****Exposure Guidelines**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glycerol 56-81-5	-	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction (vacated) TWA: 10 mg/m ³ mist, total particulate (vacated) TWA: 5 mg/m ³ mist, respirable fraction	-
Trade Secret	TWA: 0.02 mg/m ³ Mn TWA: 0.1 mg/m ³ Mn	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 500 mg/m ³ Mn TWA: 1 mg/m ³ Mn STEL: 3 mg/m ³ Mn

NIOSH IDLH *Immediately Dangerous to Life or Health***Other information**

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear suitable protective clothing and gloves.

Respiratory protection

Use in well ventilated areas.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

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

Physical state	Liquid
Appearance	Colorless
Odor	None

Property	Remarks • Method
pH	6.9
Melting point/freezing point	No information available
Boiling point / boiling range	No information available
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available

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Specification No No information available

Flammability Limit in Air	No information available
Upper flammability limit	
Lower flammability limit	
Vapor pressure	No information available
Vapor density	No information available
Relative density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
 <u>Other information</u>	
Softening point	No information available
Molecular weight	No information available
VOC content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

Can react briskly with oxidizers - danger of explosion.

Conditions to avoid

Incompatible materials. Ignition sources. Heat.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation

Avoid breathing vapors or mists. May cause irritation of respiratory tract.

Eye contact

Redness. May cause slight irritation.

Skin contact

Prolonged contact may cause redness and irritation. Repeated exposure may cause skin dryness or cracking.

Ingestion

May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Glycerol	= 12600 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 570 mg/m ³ (Rat) 1 h
Trade Secret	= 14500 mg/kg (Rat)	= 40 g/kg (Rat)	-
Trade Secret	= 2600 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Mild
Serious eye damage/eye irritation	Mild
Irritation	Mild
Corrosivity	Mild
Sensitization	
Skin	No information available
Respiratory	No information available
Germ cell mutagenicity	No information available
Carcinogenicity	No information available
Reproductive toxicity	No information available
Developmental toxicity	No information available
Teratogenicity	No information available
STOT - single exposure	No information available
STOT - repeated exposure	No information available
Chronic toxicity	May cause adverse effects on the bone marrow and blood-forming system
Subchronic toxicity	No information available
Target organ effects	Blood, Central nervous system, Eyes, Kidneys, Respiratory system, Skin.
Neurological effects	No information available
Other adverse effects	No information available
Aspiration hazard	No information available

Numerical measures of toxicity - Product information

Unknown acute toxicity 19.75% of the mixture consists of ingredient(s) of unknown toxicity

12. ECOLOGICAL INFORMATION

Marine pollutant

No information available

Ecotoxicity

No information available

11.41% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Glycerol 56-81-5	-	51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static	-	500: 24 h Daphnia magna mg/L EC50
Trade Secret	12350 - 25500: 96 h Skeletonema costatum mg/L EC50	34000: 96 h Pimephales promelas mg/L LC50 33 - 37: 96 h Oncorhynchus mykiss g/L LC50 static 40: 96 h Lepomis macrochirus g/L LC50 static 41.7: 96 h Cyprinus carpio g/L LC50	-	7000: 24 h Daphnia species mg/L EC50

Trade Secret	2500: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	1060: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 750 - 1020: 96 h <i>Pimephales promelas</i> mg/L LC50 static	-	825: 48 h <i>Daphnia magna</i> mg/L EC50 83: 48 h <i>Daphnia magna</i> mg/L EC50 Static
Trade Secret	-	10650: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static	-	2400: 48 h <i>Daphnia magna</i> mg/L LC50

Persistence and degradability

No information available

Bioaccumulation

No information available

Mobility

No information available

Chemical Name	Partition coefficient
Trade Secret	-2.03

Other adverse effects

Ozone No information available

Ozone depletion potential (ODP) No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Relevant information

Keep out of drains, sewers, ditches and waterways.

Disposal considerations

Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by a chemical incinerator.

Contaminated packaging

Empty containers must be triple rinsed prior to disposal.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

DOT Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

Legend:

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

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Specification No No information available

US Federal Regulations

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Glycerol 56-81-5	X	X	X
Trade Secret	X	-	-

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA Health hazards 0 **Flammability** 0 **Instability** 0 **Special Hazard** -
HMIS Health hazards 0 **Flammability** 0 **Physical hazards** 0 **Personal protection** -

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Revision note SDS is valid 3 years from revision date. Contact info@neb.com for latest revision.

Disclaimer

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End of Safety Data Sheet