

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 as amended by Regulation (EU) No. 2020/878, and Regulation (EC) No. 1272/2008

Revision date 06-May-2023 Version 7

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product No E8036

Product name Chitin Magnetic Beads

Pure substance/mixture Mixture

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

Recommended useThis product is for research and development only

Uses advised against

1.3. Details of the supplier of the safety data sheet

<u>Supplier Address</u> New England BioLabs 240 County Road Ipswich, MA 01938 USA

For further information, please contact

Company Phone Number 978-927-5054, 800-632-5227 (toll free)

Telefax 978-921-1350

E-mail address info@neb.com

1.4. Emergency telephone number

24 Hour Emergency Phone Number Chemtrec +44 20 3885 0382

Europe +1 978-380-2125

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Flammable liquids	Category 3 - (H226)
Chronic aquatic toxicity	Category 3 - (H412)

2.2. Label elements



Signal word Warning

Hazard statements

H226 - Flammable liquid and vapor

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

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

P233 - Keep container tightly closed.

P273 - Avoid release to the environment.

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

P403 + P235 - Store in a well-ventilated place. Keep cool.

P501 - Dispose of contents/ container to an approved waste disposal plant.

Unknown aquatic toxicityContains 0 % of components with unknown hazards to the aquatic environment.

2.3. Other hazards

No information available.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

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

Chemical	Weight-%	REACH registration	EC No (EU Index	Classification according to	Specific	M-Facto	M-Factor
name		number	No)	Regulation (EC) No.	concentratio	r	(long-ter
				1272/2008 [CLP]	n limit (SCL)		m)
Ethanol	10 - 30	No data available	(603-002-00-5)	Flam. Liq. 2 (H225)	-	-	-
64-17-5			200-578-6				

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

No information available

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg		Inhalation LC50 - 4 hour - vapor - mg/L	
Ethanol 64-17-5	7060	No data available	116.9 133.8	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Do not rub affected area.

Skin contactWash off immediately with soap and plenty of water while removing all contaminated clothes

and shoes.

Ingestion Rinse mouth.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s)

involved, take precautions to protect themselves and prevent spread of contamination. Use

personal protective equipment as required. See section 8 for more information.

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

Symptoms No information available.

Effects of Exposure No information available.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the

chemical

Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Page 3/13

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See

section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the

product must be grounded. Do not touch or walk through spilled material.

Other information Ventilate the area.

6.2. Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if

safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor

suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other

non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert

absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing

vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers.

Use according to package label instructions.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not

be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat,

sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national

regulations. Store in accordance with local regulations.

Page 4/13

Storage class (TRGS 510) Storage class 3.

7.3. Specific end use(s)

Risk management methods [RMM] The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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

	0,1,000	are minite ectabilished t	y and region openine	regulatory beares.	
Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Ethanol	-	TWA: 1000 ppm	TWA: 1000 ppm	TWA: 1000 mg/m ³	TWA: 1000 ppm
64-17-5		TWA: 1900 mg/m ³	TWA: 1907 mg/m ³		TWA: 1900 mg/m ³
		STEL 2000 ppm			
		STEL 3800 mg/m ³			
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Ethanol	-	TWA: 1000 mg/m ³	TWA: 1000 ppm	TWA: 500 ppm	TWA: 1000 ppm
64-17-5		Ceiling: 3000 mg/m ³		TWA: 1000 mg/m ³	TWA: 1900 mg/m ³
			STEL: 2000 ppm	STEL: 1000 ppm	STEL: 1300 ppm
			STEL: 3800 mg/m ³	STEL: 1900 mg/m ³	STEL: 2500 mg/m ³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Ethanol	TWA: 1000 ppm	TWA: 200 ppm	TWA: 200 ppm	TWA: 1000 ppm	TWA: 1000 ppm
64-17-5	TWA: 1900 mg/m ³	TWA: 380 mg/m ³	TWA: 380 mg/m ³	TWA: 1900 mg/m ³	TWA: 1900 mg/m ³
	STEL: 5000 ppm		Peak: 800 ppm		STEL: 2000 ppm
	STEL: 9500 mg/m	3	Peak: 1520 mg/m ³		STEL: 3800 mg/m ³
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Ethanol	STEL: 1000 ppm	-	STEL: 1000 ppm	TWA: 1000 mg/m ³	TWA: 500 ppm
64-17-5			STEL: 1884 mg/m ³		TWA: 1000 mg/m ³
					STEL: 1000 ppm
					STEL: 1900 mg/m ³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Ethanol	-	-	TWA: 137 ppm	TWA: 500 ppm	TWA: 1900 mg/m ³
64-17-5			TWA: 260 mg/m ³	TWA: 950 mg/m ³	
			STEL: 1000 ppm	STEL: 625 ppm	
			STEL: 1900 mg/m ³	STEL: 1187.5 mg/m ³	
			H*		
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Ethanol	STEL: 1000 ppm	TWA: 1000 ppm	TWA: 500 ppm	TWA: 960 mg/m ³	STEL: 1000 ppm
64-17-5		TWA: 1900 mg/m ³	TWA: 960 mg/m ³	TWA: 500 ppm	STEL: 1910 mg/m ³
		STEL: 5000 ppm	Ceiling: 1920 mg/m ³	STEL: 1000 ppm	
		STEL: 9500 mg/m ³		STEL: 1920 mg/m ³	
Chemical name		Sweden	Switzerland		ited Kingdom
Ethanol		/: 500 ppm	TWA: 500 ppm		'A: 1000 ppm
64-17-5	NGV:	1000 mg/m ³	TWA: 960 mg/n	n³ TWÆ	A: 1920 mg/m ³
		e KGV: 1000 ppm	STEL: 1000 ppi		EL: 3000 ppm
Vägledand		KGV: 1900 mg/m ³	STEL: 1920 mg/	m³ STE	L: 5760 mg/m ³

Biological occupational exposure limits

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

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
Ethanol	-	343 mg/kg bw/day [4] [6]	950 mg/m³ [4] [6]
64-17-5			1900 mg/m³ [5] [7]

Notes

Systemic health effects. [4] [5] Local health effects. [6] Long term. Short term. [7]

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
Ethanol	87 mg/kg bw/day [4] [6]	-	114 mg/m³ [4] [6]
64-17-5			950 mg/m³ [5] [7]

Notes

Systemic health effects. [4] [5] Local health effects. Long term. [6] [7] Short term.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls No information available.

Individual protection measures, such as personal protective

equipment

Tight sealing safety goggles. Eye/face protection

Hand protection Wear suitable gloves. Impervious gloves.

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Skin and body protection

Antistatic boots.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required.

Do not eat, drink or smoke when using this product. Contaminated work clothing should not General hygiene considerations

> be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid **Appearance** Colorless

Color No information available Odor Mild.

Odor threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

Melting point / freezing point No data available None known

Initial boiling point and boiling range90 °C

Flammability (solid, gas) No data available None known Flammability Limit in Air None known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Flash point 36 °C Autoignition temperature 363 °C

Decomposition temperature None known

pH 8.0

pH (as aqueous solution) No data available None known Kinematic viscosity No data available None known Dynamic viscosity No data available None known Water solubility No data available None known Solubility(ies) No data available None known **Partition coefficient** No data available None known Vapor pressure No data available None known Relative density No data available None known

Bulk density
Liquid Density

No data available
No data available

Vapor density No data available None known

Particle characteristics

Particle Size No information available Particle Size Distribution No information available

9.2. Other information

9.2.1. Information with regard to physical hazard classes Not applicable

9.2.2. Other safety characteristics

No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None. Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks.

10.5. Incompatible materials

Incompatible materialsNone known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

 ATEmix (oral)
 35,300.00 mg/kg

 ATEmix (dermal)
 99,999.00 mg/kg

 ATEmix (inhalation-gas)
 99,999.00 ppm

 ATEmix (inhalation-vapor)
 99,999.00 mg/l

 ATEmix (inhalation-dust/mist)
 584.50 mg/l

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethanol	= 7060 mg/kg (Rat)	-	= 116.9 mg/L (Rat) 4 h
			= 133.8 mg/L (Rat)4 h

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

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposureNo information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Harmful to aquatic life with long lasting effects.

Unknown aquatic toxicityContains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethanol	-	LC50: 12.0 - 16.0mL/L (96h, Oncorhynchus mykiss) LC50: >100mg/L (96h, Pimephales promelas) LC50: 13400 - 15100mg/L (96h, Pimephales promelas)	-	LC50: 9268 - 14221mg/L (48h, Daphnia magna) EC50: =2mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Chemical name	Partition coefficient
Ethanol	-0.35

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

Chemical name	PBT and vPvB assessment	
Ethanol	The substance is not PBT / vPvB	

12.6. Endocrine disrupting properties

No information available. **Endocrine disrupting properties**

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused

products

Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld

containers.

SECTION 14: Transport information

IATA

UN1170 14.1 UN number or ID number

ETHANOL SOLUTION 14.2 Extended Proper Shipping

Name

14.3 Transport hazard class(es)

14.4 Packing group

14.5 Environmental hazard Not applicable

14.6 Special precautions for user

Special Provisions None

IMDG

14.1 UN number or ID number Not regulated Not regulated 14.2 Extended Proper Shipping

Name

14.3 Transport hazard class(es) Not regulated 14.4 Packing group Not regulated 14.5 Environmental hazard Not applicable

14.6 Special precautions for user

Special Provisions None

14.7 Maritime transport in bulk No information available according to IMO instruments

RID

14.1 UN/ID No Not regulated Not regulated 14.2 Extended Proper Shipping Name

14.3 Transport hazard class(es) Not regulated 14.4 Packing group Not regulated14.5 Environmental hazard Not applicable

14.6 Special precautions for user

Special Provisions None

ADR

14.1 UN number or ID number Not regulated

14.2 UN proper shipping name ETHANOL SOLUTION

14.3 Transport hazard class(es)
 14.4 Packing group
 14.5 Environmental hazard
 Not regulated Not regulated Not applicable

14.6 Special precautions for user

Special Provisions None

SECTION 15: Regulatory information

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

Chemical name	French RG number
Ethanol - 64-17-5	RG 84

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
Ethanol	Present	-	Fertility Category 1A Development Category 1A Can be harmful via
			breastfeeding

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

P5a - FLAMMABLE LIQUIDS

P5b - FLAMMABLE LIQUIDS

P5c - FLAMMABLE LIQUIDS

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
Ethanol - 64-17-5	Product-type 1: Human hygiene Product-type 2:
	Disinfectants and algaecides not intended for direct
	application to humans or animals Product-type 4: Food and
	feed area

International Inventories

TSCA Contact supplier for inventory compliance status
DSL/NDSL Contact supplier for inventory compliance status
EINECS/ELINCS Contact supplier for inventory compliance status

ENCS
Contact supplier for inventory compliance status
Contact supplier for inventory compliance status
KECL
Contact supplier for inventory compliance status
PICCS
Contact supplier for inventory compliance status
Contact supplier for inventory compliance status
Contact supplier for inventory compliance status
NZIOC
Contact supplier for inventory compliance status

Legend:

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

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

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

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value * Skin designation

+ Sensitizers

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)

European Chemicals Agency (ECHA) (ECHA_API)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Prepared by Environmental, Health and Safety

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

Revision date 06-May-2023

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

The information provided in this Safety Data Sheet is correct to the best of our knowledge and belief at the date of publication. This information is intended only as a guide for safe handling, use, processing, storage, transportation, disposal and release and should not be taken as a warranty or quality specification. The information relates only to the specific material and may not be valid for such material used in combination with any other materials or in any process unless expressly specified in the text. New England Biolabs will not be liable for any damages resulting from handling or contact with the product.

End of Safety Data Sheet

Page 13/13