BIOPHARM INC.

SAFETY DATA SHEET

1. Identification:

Product Identifier: Triethanolamine 99% w/w

Product code: BT2005

Synonym(s): Triethanolamine 99%, TEA 99

Recommended use: Manufacture of other chemical products, professional, scientific, and technical activities.

Recommended restrictions: None known.

Manufacturer/Supplier/Distributor Information

Company name: Biopharm Inc.

Address: 187 South Tilley Road
Hatfield, AR 71945

Telephone: (870) 389-6114

Website: www.bphchem.com

E-mail: support@bphchem.com

Emergency phone number: Chemtrec 800-424-9300

2. Hazard(s) identification:

Classification: This chemical is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Eye Irritation	Category 2B
Reproductive Toxicity	Category 2

Label elements:

Signal word: Warning

Hazard statement: Suspected of damaging fertility. Causes serious eye damage.

Precautionary statement:

Prevention Wash skin thoroughtly after handling. Do NOT eat, drink, or smoke when using this product. Wear eye protection/face protection

Response IF EXPOSED OR CONCERNED: Get medical advice.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a Poison Center/doctor.

Storage Store bottles tightly capped and upright. Keep in a cool place. Store locked up.

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

Hazard(s) not otherwise classified (HNOC): None known.

Supplemental information: No information available.

3. Composition/information on ingredients

Mixtures

Chemical Name	CAS number	%
Triethanolamine	102-71-6	> 99.0
Diethanolamine	111-42-2	<=1.0

4. First-aid measures

Inhalation: Move to fresh air. Give artificial respiration if not breathing. Have trained personnel administer oxygen if breathing is difficult. Call a physician.

Ingestion: Call a physician or poison control center immediately. Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs.

Skin contact: Immediately flush with cool, running water for at least 15 minutes. Seek medical advice if irritation occurs.

Eye contact: While holding lids gently, but firmly apart, irrigate eyes with cool, clear running water for several minutes. Remove contact lenses. Seek medical care.

Most important symptoms/effects, acute and delayed: Any additional important symptoms and effects are described in Section 11: Toxicology Information

General information: Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media: SMALL FIRE: Use dry chemical, CO2, water spray or regular foam.
LARGE FIRE: Use water spray, water fog or regular foam.
Do NOT use straight streams.
Alcohol resistant foam.

Unsuitable extinguishing media: Do not use solid water stream/may spread fire.

Specific hazards arising from the chemical Oxides of nitrogen will evolve.

Special protective equipment and precautions for firefighters Wear positive pressure self-contained breathing apparatus (SCBA).
Structural firefighter's protective clothing will only provide limited protection.
Fight fire from a safe distance/protected location.

Fire-fighting equipment/instructions Water may be ineffective but should be used to keep fire-exposed containers cool.
Move containers from fire area if it can be done without risk.
For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

NFPA Health: 1 Flammability: 1 Reactivity: 0

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures: Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. Keep out of low areas. Ensure adequate ventilation. Avoid inhalation of vapors or mists.

Methods and materials for containment and cleaning up:	Contain spilled material if possible. Absorb with materials such as: Sand or Dirt. Collect in suitable and properly labeled containers. Do not use water for cleanup.
Environmental precautions:	Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses, or onto the ground. Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling:	Do not get in eyes. Avoid contact with skin or clothing. Do not swallow. Wash thoroughly after handling. Avoid breathing vapor. Use with adequate ventilation. Keep container closed.
Conditions for safe storage, including any incompatibilities:	Avoid freezing. Keep storage containers clean, dry and free of oxygen. Store under nitrogen. Keep container tightly closed when not in use.

8. Exposure controls/personal protection

Control Parameters:

Component	Control Parameters	Basis
Triethanolamine	5 mg/m^3	US (ACGIH)
Diethanolamine	1 mg/m^3	US(ACGIH)

Engineering measures:	Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines.
Personal protective equipment:	
Eye/face protection:	Wear protective eyeglasses or chemical safety goggles.
Skin and body protection:	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance:	Liquid: Colorless to Yellow
Odor:	Ammonia-like
Odor threshold:	No data available
Vapor Pressure (mm Hg):	<=0.03 nPa (0.02 mm Hg) at 100ºF (38ºC)
Density:	1.1 g/cm^3 at 68ºF (20ºC)
pH:	No data available
Relative Vapor Density:	5
Melting point/freezing point:	63ºF (17ºC) at 1,013 hPa (760 mm Hg)
Solubility in Water:	Miscible
Boiling Point (°F)**:**	608ºF (320ºC) at 1,013 hPa (760 mm Hg)
Flash point:	354 ºF (179 ºC) at 1,013 hPa (760 mm Hg) Method: Closed Cup

Evaporative Rate (H_2O = 1): 0.01

Flammability (solid, gas): No

Upper/lower flammability or explosive limits

Flammability limit - lower No data available

Flammability limit - upper No data available

Explosive limit – lower No data available

Explosive limit - upper No data available

Partition coefficient: n-octanol/water Log Pow: -1.9 at 77º F (25 ºC)

Molecular Weight 149.18 g/mol

Decomposition temperature: No data available

Viscosity/Kinematic: 810-830 mm^2/s at 68 ºF (20ºC)
182 mm^2/s at 104 ºF (40 ºC)

Other information:

Oxidizing Properties Not considered an oxidizing agent.

10. Stability and reactivity

Reactivity: Will not occur

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Will not occur

Conditions to avoid: Avoid processing of material over 300ºC (572 ºF)
Exposure to moisture.

Incompatible materials: Nitrites. Strong Acids. Strong Oxidizing agents. Halogentated Hydrocarbons.

Hazardous decomposition products: Carbon Monoxide and Carbon Dioxide.
Oxides of Nitrogen.
Ammonia

11. Toxicological information

Information on likely routes of exposure:

Ingestion: Low toxicity if swallowed.

Inhalation: At room temperature, exposure to vapor is minimal due to low volatility.

Skin Contact: May cause slight or mild irritation to the skin.

Eye Contact: May cause severe irritation to the eyes.

Information on toxicological effects

Chronic toxicity This product is not classified as an chronic toxicity hazard. See below for individual ingredient acute toxicity data.

Component	NTP	IARC	OSHA
Diethanolamine	No data available	2B	No data available

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

Skin corrosion/ irritation No data available

Serious eye damage/ irritation No data available

Reproductive Toxicity	Classified Suspected of damaging fertility Contains Diethanolamine, toxicity to male reproduction may occur. Testicular effects have been found after repeated exposures.
Skin sensitization	No data available.
Carcinogenicity	No data available
IARC Monographs. Overall Evaluation of Carcinogenicity	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)	
U.S. National Toxicology Program (NTP) Report on Carcinogens	
Mutagenic effects	No data available.
Reproductive effects	No data available.
STOT – single exposure	No data available
STOT – repeated exposure	No data available
Aspiration hazard	No data available.
Chronic effects	No data available

12. Ecological information

Ecotoxicity:	Not classified.
Persistence and degradability:	96% Rapid degradable
Bioaccumulation/ Accumulation:	Bioconcentration factor (BCF): 3.9 This material is not expected to bioaccumulate.
Mobility in soil:	Stability in soil
Other adverse effects:	No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Waste disposal methods:	To be performed in compliance with all current local, state and federal regulations. Spills onto sand, soil, or other absorbent may be handled by placing the affected soil into approved containers then label and store for proper treatment or disposal.

14. Transport information

DOT:	Not regulated for transport.
UN number:	
UN proper shipping name:	
Hazard class(es)	
Subsidiary class(es)	

Packing group

Other information

15. Regulatory information

U.S. Federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated
U.S. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not regulated
CERCLA Hazardous Substances List (40 CFR 302.4)	Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories	Immediate Hazard – No
	Delayed Hazard No
	Fire Hazard –No
	Pressure Hazard – No
	Reactivity Hazard – No

Other Federal regulations

Clean Air Act	Not regulated
Clean Water Act	Not regulated
California Prop 65	This product does not contains a chemical known to the State of California to cause cancer.

16. Other information, including date of preparation or last revision

Revision date	March 24, 2020
Disclaimer	The statements contained herein are offered as informational data only and are believed to be correct. However, this product should be handled by persons having related technical skills, and at their own discretion and risk. Since seller has no control over the use of this product, no warranty, expressed or implied, is made and seller assumes no liability in connection with any use of this information or from contact and/or handling of this product.