

SAFETY DATA SHEET

Nutrisulfate® Liquid



Revision Date: 4/19/2022
Version 1.2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: Nutrisulfate® Liquid

Synonyms: Sulfate-Enhanced Remediation Product, Epsom Salt, Magnesium Sulfate Heptahydrate

Product Form: Mixture

Recommended use of the chemical and restrictions on use

Recommended Use: Remediation of contaminated groundwater and soils.

Restrictions on Use: Use as recommended by the label

Details of the supplier and of the safety data sheet

Supplier Tersus Environmental, LLC
 1116 Colonial Club Rd
 Wake Forest, NC 27587
 Phone: +1-919-453-5577
 Email: info@tersusenv.com

Emergency telephone number

For leak, fire, spill or accident emergencies, call:

+1-919-453-5577 (Tersus Office Hours, 8:00 AM to 5:00 PM Eastern)
+1-919-638-7892 (Tersus Outside office hours)
+1-800-424-9300 (Chemtrec 24 Hour Service – Emergency Only)
+1-703-527-3887 (Chemtrec Outside United States 24 Hour Service – Emergency Only)

2. HAZARD IDENTIFICATION

Classification of the substance or mixture

This product is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Label Elements

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

Causes mild irritation to the eyes.
No known adverse effects.
Causes nausea, vomiting, abdominal cramps, and diarrhea.
Spilled material can be slippery.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Formula Mixture

Hazardous Components

This product is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). No known chronic hazards. Not listed by NTP, IARC or OSHA as a carcinogen.

Components

Chemical Name	CAS Number	Concentration (%)
Magnesium Sulfate Heptahydrate	10034-99-8	10 – 30
Nutrimens® Liquid, Yeast Fermentation Product	Proprietary	0 - 5
Water	7732-18-5	Balance

Synonyms are provided in Section 1.

Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

General Information	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. Give psychological aid. Keep the victim calm, avoid physical strain. Take victim to a doctor if irritation persists. Remove affected person from source of contamination.
Eye Contact	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
Skin Contact	May cause an allergic skin reaction. Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Inhalation	If inhaled: remove person to fresh air. Seek medical attention if you feel unwell.
Ingestion	Rinse out mouth with water. Health injuries are not known or expected under normal use.
Most important symptoms and effects, both acute and delayed	Information not available
Indication of any immediate medical attention and special treatment needed	If exposed or concerned, get medical advice and attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Specific Hazards Arising from the chemical or mixture	During fire, gases hazardous to health may be formed.

Special Fire Fighting Procedures	This material is non-combustible. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Provide enough ventilation. Advice for emergency responders: protective equipment see Section 8. Wear protective clothing as described in Section 8 of this safety data sheet. Do not smoke or use open fire or other sources of ignition. Contact with walking surface may result in formation of slippery film/falling hazard.
Environmental Precautions	Do not discharge into drains, sewers or watercourses or onto the ground. Inform the relevant authorities if this occurs. Spilled product should be removed immediately. Avoid contamination of waterways and (if large quantity) vegetation.
Methods for Containment and Clean Up	Spilled product should be removed immediately. Avoid contamination of waterways and (if large quantity) vegetation. Absorb in non-combustible material, vermiculite, dry sand or earth and place into containers.

7. HANDLING AND STORAGE

Precautions for safe handling	Avoid breathing dust. Promptly clean up spills.
Hygiene measures	Handle in accordance with good industrial hygiene and safety procedures. Use good personal hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep containers closed and protected from extremes of temperature and humidity during storage. Recommended storage conditions 68-

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Control parameters

Exposure guidelines, ingredients with workplace control parameters.

Name	CAS-No	OSHA	ACGIH	NIOSH	Supplier
Magnesium Sulfate Heptahydrate	10034-99-8	No Established Limit	No Established Limit	No Established Limit	No Established Limit
Yeast Fermentation Product	Proprietary				

Carcinogen Data

Name	CAS-No	OSHA	NTP	IARC
Magnesium Sulfate Heptahydrate	10034-99-8	Select Carcinogen: No	Known: No; Suspected: No	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No
Yeast Fermentation Product	Proprietary	Select Carcinogen: No	Known: No; Suspected: No	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No

Exposure Control**Protective equipment****Appropriate engineering controls**

Provide adequate ventilation. Where reasonably practicable this should be achieved using local exhaust ventilation and good general extraction. If these are not enough to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Eye/face protection

The following protection should be worn: Safety glasses with shields, chemical splash goggles or face shield.

Respiratory protection

Confined spaces that held yeast fermentation product could potentially contain carbon dioxide gas. Use NIOSH/MSHA approved self-contained breathing apparatus or supplied respirator if oxygen content below 19%. Use in accordance with 29 CFR 1901.134.

Hand protection

Neoprene. Vinyl, Rubber (natural, latex), Butyl rubber. Wear protective gloves made of the following material: Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Polyvinyl chloride (PVC). Manufactured/tested in accordance with EN 374, Avoid the following conditions: Polyvinyl alcohol (PVA).

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Wash promptly if skin becomes contaminated. Wash hands at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Tan to brown liquid
Odor	Fermented, yeasty aroma
Odor threshold	Unknown
pH	6-7
Melting point /Freezing Point	Unknown
Initial Boiling point and boiling point range	Unknown
Flash Point	Unknown
Evaporation rate	Unknown
Flammability (solid; gas)	Will not burn
Upper/lower flammability or explosive limits	Unknown
Vapor pressure	Unknown
Vapor density	Unknown
Specific gravity	1.25 – 1.35
Solubility (ies)	Soluble
Partition coefficient: n-octanol/water	Unknown

Initial Boiling point and boiling point range	Unknown
Auto-ignition temperature	Unknown
Decomposition temperature	Unknown
Viscosity	Unknown

10. STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions and use.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	At very high temperatures, magnesium oxide, sulfur dioxide, and sulfur trioxide may be generated.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Data is not available.

Persistence and degradability

There is no data available on the preparation itself.

Bioaccumulative potential

Not Measured

Mobility in soil

No data available.

Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

Other adverse effects

No data available.

12. ECOLOGICAL INFORMATION

Chemical Fate Information

Information Not Available

Biodegradability

Readily degradable.

Excess product in waterways may encourage eutrophication.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

Waste material is not a hazardous waste. Dispose in accordance with federal, provincial and local regulations.

14. TRANSPORTATION INFORMATION

U.S. (D.O.T.)

Proper Shipping Name:	Chemicals not otherwise indexed (NOI) nonhazardous.
Hazard Class:	Not applicable
UN/NA:	Not applicable
Labels:	Not applicable

Canada (T.D.G.)

Proper Shipping Name:	Chemicals not otherwise indexed (NOI) nonhazardous.
Hazard Class:	Not applicable
UN/NA:	Not applicable
Labels:	Not applicable

IMDG

Proper Shipping Name:	Chemicals not otherwise indexed (NOI) nonhazardous.
Hazard Class:	Not applicable
UN/NA:	Not applicable
Labels:	Not applicable

IATA

Proper Shipping Name:	Chemicals not otherwise indexed (NOI) nonhazardous.
Hazard Class:	Not applicable
UN/NA:	Not applicable
Labels:	Not applicable

15. REGULATORY INFORMATION

TSCA	No
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WHMIS Classification	D2B
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US EPA Tier II Hazards

Fire	No
Sudden Release of Pressure	No
Reactive	No
Immediate (Acute)	Yes
Delayed (Chronic)	No

EPCRA 311/312 Chemicals and RQs

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 302 Extremely Hazardous

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%)

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%)

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%)

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%)

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

New Jersey RTK Substances (>1%)

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Pennsylvania RTK Substances (>1%)

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

16. OTHER INFORMATION

Components not precisely identified are proprietary or non-hazardous.

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All recommendations for the use of our products, whether given by us, orally or to be implied from data or lab tests results by us, are based on the current state of our knowledge at the time those recommendations are made. When additional information is obtained, these recommendations may be updated. They may also be influenced by circumstances outside our control. Notwithstanding, such recommendation the user is responsible that the product as supplied by us is suitable to the process or purpose he/she intends to use it.

Due to the proliferation of sources for information such as manufacturer specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.



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End of Safety Data Sheet