Ecological Laboratories INC. Solving Environmental Problems Naturally Since 1976

SAFETY DATA SHEET
VERSION 1.1
Revision Date**:** September 2018

Section 1: IDENTIFICATION

Product Identifier: MICROBE-LIFT HYDRO
Brand: MICROBE-LIFT
Product Number is based on Product Size. For more information request for brochure/ refer one.
Manufacturer: Ecological Laboratories Inc.
Address: 2525 N.E. 9th Avenue
Cape Coral, FL 33909
Phone: (800) 645-2976
Emergency: (800) 424-9300
Outside USA: (202) 483-7616
Recommended Use: Read Label

Section 2: HAZARD(S) IDENTIFICATION

Hazard Classification: Combustible Dusts, Skin & Eye Irritant
Signal Word: Warning
Hazard Statement: May form combustible dust concentrations in the air. Can cause eye and skin irritation over a long period of exposure.
Pictograms:

Precautionary Statements: Avoid contact with eyes. Flush immediately if needed. Use gloves to avoid contact with skin and open wounds. If exposed, wash with soap and water. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
Description of hazard not otherwise classified: NA
Mixture containing an ingredient with unknown toxicity: NA

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: MICROBE-LIFT HYDRO
Common Name & Synonyms: NA
Chemical Abstracts Service (CAS) number and unique identifiers:

Name	**CAS Number**	**%**
Subtilisin	9014-01-0	1-5

Impurities & Stabilizing Additives: NA

Chemical Name and Concentration of all ingredients (classified as health hazard): NA

Section 4: FIRST AID MEASURES

In case of eye contact
Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately. In case of contact with eyes, rinse immediately with plenty of water.
If inhaled
Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
In case of skin contact
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
If swallowed
Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Recommendation for immediate medical care: Proceed as mentioned above. Call poison control if ingested. Seek medical attention if irritation persists. Remove contaminated clothing and footwear; wash with soap and water if it comes in contact with skin. No specific treatment. Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the environment.
Special hazards arising from the substance or mixture
May form explosible dust-air mixture if dispersed.
Advice for firefighters
Fire fighters should wear full face, self-container breathing apparatus and impervious protective clothing.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental Precautions
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for containment and cleaning up
For small spills: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
For large spills: Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on PPE
See Section 13 for disposal information.

Section 7: HANDLING & STORAGE

Precautions for safe handling

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Ingredient	Exposure limits
Subtilisin	**OSHA PEL 1989 (United States, 3/1989).** STEL: 0.00006 mg/m³ 60 minutes. **NIOSH REL (United States, 4/2013).** STEL: 0.00006 mg/m³ 60 minutes. **ACGIH TLV (United States, 6/2013).** C: 0.00006 mg/m³, (measured as 100% pure crystalline enzyme)

Components with workplace control parameters

See above

Exposure controls

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Permissible Exposure Limit (PELs)

See above

Threshold Limit Values (TLVs)

See above

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with sideshields. If operating conditions cause high dust concentrations to be produced, use dust goggles.

Skin protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9: PHYSICAL & CHEMICAL PROPERTIES

Appearance
Brown Solid
Odor
NA
pH
NA
Melting point/freezing point
NA
Initial Boiling Point
NA
Flash Point
NA
Flammability (solid, gas)
None
Relative Density
NA
Water Solubility
NA
Specific gravity
NA

Section 10: STABILITY AND REACTIVITY

Reactivity
NA
Chemical stability
Stable under normal conditions.
Possibility of hazardous reactions

NA

Condition to avoid

Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.

Incompatible materials

Oxidizing materials.

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
subtilisin	LD50 Oral	Rat	3700 mg/kg	-

Chronic toxicity

NA

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
subtilisin	Eyes - Moderate irritant	Rabbit	-	3 milligrams	-

Reproductive Toxicity

NA

Additional Information

NA

Section 12: ECOLOGICAL INFORMATION

Toxicity

NA

Aquatic Toxicity

Product/ingredient name	Result	Species	Exposure
subtilisin	Acute EC50 23.78 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours

Bio-accumulative potential

NA

Mobility in soil

NA

Other adverse effects

This product is believed not to be dangerous to the environment with respect to mobility, persistency and degradability,

bio accumulative potential, aquatic toxicity and other data relating to eco toxicity.

Section 13: DISPOSAL CONSIDERATIONS

Waste Treatment Methods
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14: TRANSPORT INFORMATION

DOT (US)
UN Number
NA
Class
NA
Packing Group
NA
Proper Shipping Name
NA

Section 15: REGULATORY INFORMATION

There are no safety, health and environmental regulations/legislation specific for the substance or mixture. Preparation does not contain ingredients listed as a dangerous substance in Annex 1 of the EEC directive 67/548.

Section 16: OTHER INFORMATION

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named manufacturer nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

This product conforms on its chemical description and is reasonably fit for the purpose referred to in the directions for use when used in accordance with the directions under normal conditions. However the manufacturer could withdraw the chemical composition of the product on the basis of it being a trade secret.

29 CFR 1910.1200 (I)(1)
The safety data sheet indicates that the specific chemical identity and/or percentage of composition is being withheld as a trade secret; The specific chemical identity and percentage is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions.

Seller makes no other warranty or representation of any kind, express or implied, concerning the product, including NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OF THE GOODS FOR ANY OTHER PARTICULAR PURPOSE. No such warranties shall be implied by law and no agent of seller is authorized to alter this warranty in any way except in writing with a specific reference to this warranty. The exclusive remedy against seller shall be in a claim for damages not to exceed the purchase price of the product, without regard to whether such a claim is based upon breach of warranty or tort. Any controversy or claim arising out or relating to this contract, or breach thereof, shall be settle by arbitration in accordance with the commercial arbitration rules of the American Arbitration Association, and judgment upon the rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.