1. Identification

Product identifier  LIQUID ENZYME II
Other means of identification
SDS number  559N-46A
Product code  HIL00470
Recommended use  Multipurpose Drain Maintenance
Recommended restrictions  For Labeled Use Only
Manufacturer/Importer/Supplier/Distributor information
Manufacturer
Company name  HILLYARD INDUSTRIES
Address  302 North Fourth St.
          St. Joseph, MO 64501
Contact person  Regulatory Affairs
Telephone number  (816) 233-1321 (Ext. 8285)
Fax  (816) 383-8485
E-mail  regulatoryaffairs@hillyard.com
Emergency telephone #  (800) 424-9300
(Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals)

2. Hazard(s) identification

Physical hazards  Not classified.
Health hazards  Not classified.
Environmental hazards  Not classified.
OSHA defined hazards  Not classified.
Label elements
   Hazard symbol  None.
   Signal word  None.
   Hazard statement  The mixture does not meet the criteria for classification.
Precautionary statement
   Prevention  Observe good industrial hygiene practices.
   Response  Wash hands after handling.
   Storage  Store away from incompatible materials.
   Disposal  Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements.
Hazard(s) not otherwise classified (HNOC)  None known.
Supplemental information  None.

3. Composition/information on ingredients

Mixtures
The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.
*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.
4. First-aid measures

<table>
<thead>
<tr>
<th>Condition</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Move to fresh air. Call a physician if symptoms develop or persist.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Wash off with soap and water. Get medical attention if irritation develops and persists.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Rinse with water. Get medical attention if irritation develops and persists.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Rinse mouth. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>Most important symptoms/effects, acute and delayed</td>
<td>Direct contact with eyes may cause temporary irritation.</td>
</tr>
<tr>
<td>General information</td>
<td>Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.</td>
</tr>
</tbody>
</table>

5. Fire-fighting measures

| Suitable extinguishing media | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting equipment/instructions | Move containers from fire area if you can do so without risk. |
| Specific methods | Move container from fire area if it can be done without risk. |
| General fire hazards | No unusual fire or explosion hazards noted. |

6. Accidental release measures

| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning up | Extinguish all flames in the vicinity. This product is miscible in water. |
| Large Spills | Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. |
| Small Spills | Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. |
| Environmental precautions | Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |

7. Handling and storage

| Precautions for safe handling | Avoid prolonged exposure. Observe good industrial hygiene practices. |
| Conditions for safe storage, including any incompatibilities | Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). |

8. Exposure controls/personal protection

| Occupational exposure limits | The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits. |
| Biological limit values | No biological exposure limits noted for the ingredient(s). |
| Appropriate engineering controls | Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. |
| Individual protection measures, such as personal protective equipment | Where splashing of concentrate is a concern, use protective glasses with side shield |
| Eye/face protection | Not normally needed. |
| Skin protection | Not normally needed. |
| Hand protection | Not normally needed. |
| Other | Not normally needed. |
Respiratory protection
Not normally needed.

Thermal hazards
None known.

General hygiene considerations
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
Opaque, white liquid

Physical state
Liquid.

Form
Liquid.

Color
White

Odor
Floral odor

Odor threshold
Not available

pH
7 - 8

Melting point/freezing point
Not available

Initial boiling point and boiling range
212 °F (100 °C)

Flash point
> 200.0 °F (> 93.3 °C) Tag Closed Cup

Evaporation rate
< 1 (ethyl ether = 1)

Flammability (solid, gas)
Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%)
Not available.

Explosive limit - upper (%)
Not available.

Vapor pressure
17.5 mm Hg

Vapor density
0.6 AIR=1

Relative density
0.99 at 77°F

Solubility(ies)
Solubility (water) 100 complete

Partition coefficient (n-octanol/water)
Not available

Auto-ignition temperature
Not available

Decomposition temperature
Not available

Viscosity
Not available

Other information
Density 8.32 lb/gal

Explosive properties
Not explosive.

Oxidizing properties
Not oxidizing.

Percent volatile
99 - 100 %

VOC 0 %

10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
No hazardous decomposition products are known.
11. Toxicological information

Information on likely routes of exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Prolonged inhalation may be harmful.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Product concentrate is not an irritant; prolonged exposure may produce slight irritation in sensitive individuals</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Direct contact with eyes may cause temporary irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Expected to be a low ingestion hazard.</td>
</tr>
</tbody>
</table>

Symptoms related to the physical, chemical and toxicological characteristics

Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Prolonged skin contact may cause temporary irritation.</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Direct contact with eyes may cause temporary irritation.</td>
</tr>
</tbody>
</table>

Respiratory or skin sensitization

<table>
<thead>
<tr>
<th>Sensitization type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory sensitization</td>
<td>Not a respiratory sensitizer.</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>This product is not expected to cause skin sensitization.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classifiable as to carcinogenicity to humans.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monographs</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC Monographs. Overall Evaluation of Carcinogenicity</td>
<td>Not listed.</td>
</tr>
<tr>
<td>US. National Toxictology Program (NTP) Report on Carcinogens</td>
<td>Not listed.</td>
</tr>
</tbody>
</table>

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

Not classified.

Specific target organ toxicity - repeated exposure

Not classified.

Aspiration hazard

Not an aspiration hazard.

Chronic effects

Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

<table>
<thead>
<tr>
<th>Product Information</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIQUID ENZYME II</td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50 Daphnia 406.8965 mg/l, 48 hours estimated</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50 Fish 6608.8882 mg/l, 96 hours estimated</td>
</tr>
</tbody>
</table>

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

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

Disposal instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law.

Local disposal regulations

Dispose in accordance with all applicable regulations.
Hazardous waste code  The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products  Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging  Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

14. Transport information

DOT  Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  Not established.

15. Regulatory information

US federal regulations  This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

- **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  Not regulated.
- **CERCLA Hazardous Substance List (40 CFR 302.4)**  Not listed.
- **SARA 304 Emergency release notification**  Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

- **SARA 302 Extremely hazardous substance**  Not listed.
- **SARA 311/312 Hazardous chemical**  No
- **SARA 313 (TRI reporting)**  Not regulated.

Other federal regulations

- **Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**  Not regulated.
- **Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**  Not regulated.
- **Safe Drinking Water Act (SDWA)**  Not regulated.

US state regulations

- **California Proposition 65**  California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)*

*A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s)*

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

<table>
<thead>
<tr>
<th>Issue date</th>
<th>Revision date</th>
<th>Version #</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-22-2015</td>
<td>12-19-2018</td>
<td>02</td>
</tr>
</tbody>
</table>

Material name: LIQUID ENZYME II  Version #: 02  Revision date: 12-19-2018  Issue date: 01-22-2015
HMIS® ratings

Health: 0
Flammability: 0
Physical hazard: 0

Disclaimer

No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.