

## 1. Identification

**Product identifier** ENZYME STAIN REMOVER

**Other means of identification**

**SDS number** 319

**Product code** HIL01420

**Recommended use** Enzyme Pre-Spotter

**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** Acute toxicity, oral Category 5

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2A

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**



**Signal word** Warning

**Hazard statement** Causes skin irritation. Causes serious eye irritation. May be harmful if swallowed.

**Precautionary statement**

**Prevention** Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

**Response** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

**Storage** Store away from incompatible materials.

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

**Hazard(s) not otherwise classified (HNOC)** 3.6% of the mixture consists of ingredient(s) of unknown toxicity.

### 3. Composition/information on ingredients

#### Mixtures

| Chemical name                            | Common name and synonyms | CAS number | %  |
|--|--------------------------|------------|----|
| 2-Butoxyethanol                          |                          | 111-76-2   | 12 |
| Other components below reportable levels |                          |            | 88 |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. First-aid measures

|   |   |
|---|---|
| <b>Inhalation</b>   | Move to fresh air. Call a physician if symptoms develop or persist.   |
| <b>Skin contact</b>   | Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.                                 |
| <b>Eye contact</b>  | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| <b>Ingestion</b>  | Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.   |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.  |
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.  |
| <b>General information</b>  | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.                           |

### 5. Fire-fighting measures

|  |   |
|--|---|
| <b>Suitable extinguishing media</b>                                  | Alcohol resistant foam. Powder. Carbon dioxide (CO <sub>2</sub> ).                            |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.                        |
| <b>Specific hazards arising from the chemical</b>                    | During fire, gases hazardous to health may be formed.   |
| <b>Special protective equipment and precautions for firefighters</b> | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| <b>Fire fighting equipment/instructions</b>                          | Move containers from fire area if you can do so without risk.                                 |
| <b>Specific methods</b>  | Use standard firefighting procedures and consider the hazards of other involved materials.    |
| <b>General fire hazards</b>  | No unusual fire or explosion hazards noted.   |

### 6. Accidental release measures

|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.  |
| <b>Methods and materials for containment and cleaning up</b>               | Use water spray to reduce vapors or divert vapor cloud drift.<br><br>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.<br><br>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.<br><br>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |
| <b>Environmental precautions</b>   | Avoid discharge into drains, water courses or onto the ground.  |

## 7. Handling and storage

|   |  |
|---|--|
| <b>Precautions for safe handling</b>                                | Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. |
| <b>Conditions for safe storage, including any incompatibilities</b> | Store in original 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.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components                     | Type | Value               |
|--------------------------------|------|---------------------|
| 2-Butoxyethanol (CAS 111-76-2) | PEL  | 240 mg/m3<br>50 ppm |

#### US. ACGIH Threshold Limit Values

| Components                     | Type | Value  |
|--------------------------------|------|--------|
| 2-Butoxyethanol (CAS 111-76-2) | TWA  | 20 ppm |

#### US. NIOSH: Pocket Guide to Chemical Hazards

| Components                     | Type | Value             |
|--------------------------------|------|-------------------|
| 2-Butoxyethanol (CAS 111-76-2) | TWA  | 24 mg/m3<br>5 ppm |

### Biological limit values

#### ACGIH Biological Exposure Indices

| Components                     | Value    | Determinant                              | Specimen            | Sampling Time |
|--------------------------------|----------|--|---------------------|---------------|
| 2-Butoxyethanol (CAS 111-76-2) | 200 mg/g | Butoxyacetic acid (BAA), with hydrolysis | Creatinine in urine | *             |

\* - For sampling details, please see the source document.

### Exposure guidelines

#### US - California OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

#### US - Minnesota Haz Subs: Skin designation applies

2-Butoxyethanol (CAS 111-76-2) Skin designation applies.

#### US - Tennessee OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

#### US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

|   |   |
|---|---|
| <b>Appropriate engineering controls</b> | 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. Ensure adequate ventilation, especially in confined areas. Eye wash fountain and emergency showers are recommended. |
|---|---|

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Avoid contact with eyes. If contact is likely, safety glasses with side shields are recommended.

#### Skin protection

**Hand protection** For prolonged or repeated skin contact use suitable protective gloves.

**Other** None normally required. If unable to avoid prolonged or repeated contact with skin, wear impervious clothing.

|                                       |   |
|---------------------------------------|---|
| <b>Respiratory protection</b>         | If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. |
| <b>Thermal hazards</b>                | None known.   |
| <b>General hygiene considerations</b> | Keep away from food and drink. 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

|   |                      |
|---|----------------------|
| <b>Appearance</b>                                   | Clear, purple liquid |
| <b>Physical state</b>                               | Liquid.              |
| <b>Form</b>   | Liquid.              |
| <b>Color</b>  | Purple               |
| <b>Odor</b>   | Solvent odor         |
| <b>Odor threshold</b>                               | Not available.       |
| <b>pH</b>   | 6 - 7                |
| <b>Melting point/freezing point</b>                 | Not available.       |
| <b>Initial boiling point and boiling range</b>      | Not available.       |
| <b>Flash point</b>                                  | Not available.       |
| <b>Evaporation rate</b>                             | Not available.       |
| <b>Flammability (solid, gas)</b>                    | Not applicable.      |
| <b>Upper/lower flammability or explosive limits</b> |                      |
| <b>Explosive limit - lower (%)</b>                  | Not available.       |
| <b>Explosive limit - upper (%)</b>                  | Not available.       |
| <b>Vapor pressure</b>                               | Not available        |
| <b>Vapor density</b>                                | Not available.       |
| <b>Relative density</b>                             | 1.026 at 77°F        |
| <b>Solubility(ies)</b>                              |                      |
| <b>Solubility (water)</b>                           | Soluble              |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available.       |
| <b>Auto-ignition temperature</b>                    | Not available.       |
| <b>Decomposition temperature</b>                    | Not available.       |
| <b>Viscosity</b>                                    | Not available.       |
| <b>Other information</b>                            |                      |
| <b>Density</b>                                      | 8.54 lb/gal          |
| <b>Explosive properties</b>                         | Not explosive.       |
| <b>Oxidizing properties</b>                         | Not oxidizing.       |
| <b>Percent volatile</b>                             | 72.7 - 74.1 %        |
| <b>VOC</b>  | Not available        |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport.   |
| <b>Chemical stability</b>                 | Material is stable under normal conditions.   |
| <b>Possibility of hazardous reactions</b> | Hazardous polymerization does not occur.  |
| <b>Conditions to avoid</b>                | Avoid temperatures exceeding the flash point. Contact with incompatible materials.  |
| <b>Incompatible materials</b>             | Strong acids. Strong bases. Prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals. |
| <b>Hazardous decomposition products</b>   | No hazardous decomposition products are known.  |

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation** Prolonged inhalation may be harmful.

**Skin contact** Causes skin irritation.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

**Eye contact** Causes serious eye irritation.

**Ingestion** May be harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

### Information on toxicological effects

**Acute toxicity** May be harmful if swallowed.

| Components                     | Species | Test Results |
|--------------------------------|---------|--------------|
| 2-Butoxyethanol (CAS 111-76-2) |         |              |
| <b>Acute</b>                   |         |              |
| <b>Dermal</b>                  |         |              |
| LD50                           | Rabbit  | 400 mg/kg    |
| <b>Oral</b>                    |         |              |
| LD50                           | Rat     | 560 mg/kg    |

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

### Respiratory or skin sensitization

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** Not classifiable as to carcinogenicity to humans.

### IARC Monographs. Overall Evaluation of Carcinogenicity

2-Butoxyethanol (CAS 111-76-2)

3 Not classifiable as to carcinogenicity to humans.

### US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

**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** May be harmful if absorbed through skin. Prolonged inhalation may be harmful.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

## 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.

| Product                        | Species |                                       | Test Results                       |
|--------------------------------|---------|---------------------------------------|------------------------------------|
| ENZYME STAIN REMOVER           |         |                                       |                                    |
| Aquatic                        |         |                                       |                                    |
| Fish                           | LC50    | Fish                                  | 11416.667 mg/l, 96 hours estimated |
| Components                     | Species |                                       | Test Results                       |
| 2-Butoxyethanol (CAS 111-76-2) |         |                                       |                                    |
| Aquatic                        |         |                                       |                                    |
| Fish                           | LC50    | Inland silverside (Menidia beryllina) | 1250 mg/l, 96 hours                |

\* Estimates for product may be based on additional component data not shown.

#### Persistence and degradability

#### Bioaccumulative potential

##### Partition coefficient n-octanol / water (log Kow)

2-Butoxyethanol 0.83

**Mobility in soil** No data available.

**Other adverse effects** The product contains volatile organic compounds which have a photochemical ozone creation potential.

### 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**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.

### 14. Transport information

#### DOT

Not regulated as dangerous goods.

#### IATA

Not regulated as dangerous goods.

#### IMDG

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 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.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

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

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
Not regulated.

**Other federal regulations**

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

2-Butoxyethanol (CAS 111-76-2)

**International Inventories**

| Country(s) or region        | Inventory name   | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia                   | Australian Inventory of Chemical Substances (AICS)                     | Yes                    |
| Canada                      | Domestic Substances List (DSL)   | Yes                    |
| Canada                      | Non-Domestic Substances List (NDSL)                                    | Yes                    |
| China                       | Inventory of Existing Chemical Substances in China (IECSC)             | Yes                    |
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes                    |
| Europe                      | European List of Notified Chemical Substances (ELINCS)                 | Yes                    |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)               | No                     |
| Korea                       | Existing Chemicals List (ECL)  | Yes                    |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | Yes                    |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | Yes                    |

\*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**

**Issue date** 12-18-2017

**Version #** 01

**HMIS® ratings** Health: 2  
Flammability: 1  
Physical hazard: 0

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