




# SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Product identifier</b>	<b>Enzymax Powder</b>
<b>Other means of identification</b>	IMS-1230
<b>Recommended use</b>	Detergent
<b>Recommended restrictions</b>	None known.
<b>Manufacturer</b>	Hu-Friedy Mfg. Co., LLC 3232 N. Rockwell St. Chicago, IL 60618-5982 US Phone: 773.975.6100 Fax: 773.868.3599 Emergency Phone: 1-800-535-5053 Outside US: 001-352-323-3500

## 2. Hazards Identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Sensitization, respiratory	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		
<b>Signal word</b>	Danger	
<b>Hazard statement</b>	Causes skin irritation. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
<b>Precautionary statement</b>		
<b>Prevention</b>	Avoid breathing dust. Wear protective gloves. Wear eye/face protection. In case of inadequate ventilation wear respiratory protection. Wash hands thoroughly after handling.	
<b>Response</b>	If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor. If on skin: Wash with plenty of water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention. 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.	
<b>Storage</b>	Store away from incompatible materials.	
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.	
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.	
<b>Supplemental information</b>	7% of the mixture consists of component(s) of unknown acute toxicity.	

## 3. Composition/Information on Ingredients

### Mixture

Chemical name	Common name and synonyms	CAS number	%
Carbonic acid, sodium salt (2:3)		533-96-0	60-100
Sodium dodecylbenzene sulfonate		25155-30-0	1-5
Sodium metasilicate		6834-92-0	1-5
Subtilisin carlsburg		9014-01-1	0.1-1

<b>Composition comments</b>	US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.
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#### 4. First Aid Measures

<b>Inhalation</b>	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
<b>Skin contact</b>	Take off contaminated clothing and wash before reuse. Wash with plenty of soap and water. If irritation persists, get medical attention.
<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. Obtain medical attention if irritation persists.
<b>Ingestion</b>	If ingested, do not induce vomiting. Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
<b>Most important symptoms/effects, acute and delayed</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause allergic respiratory reaction. 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.

#### 5. Fire Fighting Measures

<b>Suitable extinguishing media</b>	Treat for surrounding material.
<b>Unsuitable extinguishing media</b>	None known.
<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>	In the event of fire, cool tanks with water spray.
<b>Specific methods</b>	Cool containers exposed to flames with water until well after the fire is out.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available.
<b>Sensitivity to static discharge</b>	Not available.

#### 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. 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>	This product is miscible in water. Stop the flow of material, if this is without risk. Dike far ahead of spill for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. 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>	Avoid breathing dust. Avoid contact with eyes and skin. Avoid prolonged exposure. Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage.
<b>Conditions for safe storage, including any incompatibilities</b>	Keep container tightly closed. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

#### 8. Exposure Controls/Personal Protection

##### Occupational exposure limits

##### US. ACGIH Threshold Limit Values Components

Subtilisin carlsburg (CAS  
9014-01-1)

##### Type

Ceiling

##### Value

0.00006 mg/m3

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

Components	Type	Value
Subtilisin carlsburg (CAS 9014-01-1)	STEL	0.00006 mg/m3
Biological limit values	No biological exposure limits noted for the ingredient(s).	
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) 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. Provide eyewash station.	
Individual protection measures, such as personal protective equipment		
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield.	
Skin protection		
Hand protection	Wear appropriate chemical resistant gloves.	
Other	Wear appropriate chemical resistant clothing.	
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.	
Thermal hazards	Not applicable.	
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.	

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**9. Physical and Chemical Properties**


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<b>Appearance</b>	Powder.
<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	White with beige specs
<b>Odor</b>	Lemon
<b>Odor threshold</b>	Not available.
<b>pH</b>	10 (Dilution 0.5%)
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not applicable
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not applicable
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable
<b>Flammability limit - upper (%)</b>	Not applicable
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not applicable
<b>Vapor density</b>	Not available.
<b>Relative density</b>	0.79
<b>Solubility(ies)</b>	Not available.
<b>Auto-ignition temperature</b>	Not applicable
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

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**10. Stability and Reactivity**


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<b>Reactivity</b>	None known.
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<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Excessive heat. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of carbon.

## 11. Toxicological Information

**Routes of exposure** Eye, Skin contact, Inhalation, Ingestion.

### Information on likely routes of exposure

<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Inhalation</b>	Prolonged inhalation may be harmful. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye damage.

**Symptoms related to the physical, chemical and toxicological characteristics** Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

### Information on toxicological effects

**Acute toxicity** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components	Species	Test Results
Carbonic acid, sodium salt (2:3) (CAS 533-96-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	5600 mg/kg
Sodium dodecylbenzene sulfonate (CAS 25155-30-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	2700 mg/kg
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	438 mg/kg
Sodium metasilicate (CAS 6834-92-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Mouse	2400 mg/kg
	Rat	1153 mg/kg
Subtilisin carlsburg (CAS 9014-01-1)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	1800 mg/kg

<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Exposure minutes</b>	Not available.
<b>Erythema value</b>	Not available.
<b>Oedema value</b>	Not available.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.
<b>Corneal opacity value</b>	Not available.
<b>Iris lesion value</b>	Not available.
<b>Conjunctival reddening value</b>	Not available.
<b>Conjunctival oedema value</b>	Not available.
<b>Recover days</b>	Not available.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Teratogenicity</b>	Not classified.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not classified.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.
<b>Further information</b>	Not available.
<b>Name of Toxicologically Synergistic Products</b>	Not available.

## 12. Ecological Information

<b>Ecotoxicity</b>	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. See below
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Components		Species	Test Results
Sodium dodecylbenzene sulfonate (CAS 25155-30-0)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	3.26 - 14.51 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	3.2 - 5.6 mg/l, 96 hours
Sodium metasilicate (CAS 6834-92-0)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	0.28 - 0.57 mg/l, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis)	1800 mg/l, 96 hours

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Mobility in general</b>	Not available.
<b>Other adverse effects</b>	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

<b>Disposal instructions</b>	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.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.

<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport Information

### U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

### Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

## 15. Regulatory Information

**Canadian federal regulations** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

### Canada WHMIS Ingredient Disclosure: Threshold limits

Sodium dodecylbenzene sulfonate (CAS 25155-30-0)	1 %
Sodium metasilicate (CAS 6834-92-0)	1 %

**WHMIS status** Controlled

**WHMIS classification** Class D - Division 2A, 2B

**WHMIS labeling**



**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.

### US CWA Section 311 Hazardous Substances: Listed substance

Sodium dodecylbenzene sulfonate (CAS 25155-30-0) Listed.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium dodecylbenzene sulfonate (CAS 25155-30-0) Listed.

### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

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

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

**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** No

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

### Other federal regulations

**Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)** Hazardous substance

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

**Food and Drug Administration (FDA)** 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 Hazardous Substances (Director's): Listed substance**

Sodium dodecylbenzene sulfonate (CAS 25155-30-0) Listed.  
 Subtilisin carlsburg (CAS 9014-01-1) Listed.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**US - Illinois Chemical Safety Act: Listed substance**

Sodium dodecylbenzene sulfonate (CAS 25155-30-0) Listed.

**US - Louisiana Spill Reporting: Listed substance**

Sodium dodecylbenzene sulfonate (CAS 25155-30-0) Listed.

**US - New Jersey RTK - Substances: Listed substance**

Sodium dodecylbenzene sulfonate (CAS 25155-30-0) Listed.

**US - New York Release Reporting: Hazardous Substances: Listed substance**

Sodium dodecylbenzene sulfonate (CAS 25155-30-0) Listed.

**US - Texas Effects Screening Levels: Listed substance**

Sodium dodecylbenzene sulfonate (CAS 25155-30-0) Listed.  
 Sodium metasilicate (CAS 6834-92-0) Listed.  
 Subtilisin carlsburg (CAS 9014-01-1) Listed.

**US. Massachusetts RTK - Substance List**

Sodium dodecylbenzene sulfonate (CAS 25155-30-0) Listed.

**US. Pennsylvania RTK - Hazardous Substances**

Sodium dodecylbenzene sulfonate (CAS 25155-30-0) Listed.

**US. Rhode Island RTK**

Sodium dodecylbenzene sulfonate (CAS 25155-30-0) Listed.

**Inventory status**

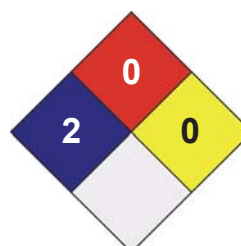
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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

**16. Other Information**

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	* 2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

**Disclaimer**

The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

**Issue date**

04-February-2015

**Effective date**

01-August-2014

**Expiry date**

01-August-2017

**Further information**

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

**Prepared by**  
**Other information**

Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.