SAFETY DATA SHEETS

This SDS packet was issued with item: 073711710

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

073710373 073710381

MATERIAL SAFETY DATA SHEET HMIS HEALTH HU-FRIEDY IMS DAILY CLEAN HMIS FLAMMABILITY IMS-1218 / IMS-1220 HMIS REACTIVITY HMIS PERSONAL PROTECTION SECTION I - IDENTIFICATION Company Name: Hu-Friedy Mfg. Co., Inc. Address: 3232 N. Rockwell Street Chicago, IL 60618 Telephone number: (312) 975-6100 Date Prepared: September 1, 1991 SECTION II - HAZARDOUS INGREDIENTS Sodium Sulfate CAS # 7757-82-6 Urea CAS # 57-13-6 Sodium Bicarbonate CAS # 144-55-8 Sodium DDBSA CAS # 25155-30-0 Sodium Carbonate CAS # 497-19-8 Sodium Tripolyphosphate CAS # 7758-29-4 Carboxymethylcellulose CAS # 9004-32-4 SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS Boiling Point (F) n/a Volatility/Vol (%) n/a Vapor pressure (mm Hg) n/a Vapor density (Air=1) -Solubility in H20 n/a complete Appearance/odor white, free-flowing powder Specific gravity (H2O=1) - n/a Evaporation rate n/a SECTION IV - REACTIVITY DATA Chemical stability stabel Conditions to avoid n/a Incompatible materials acids Decomposition products n/a Hazardous polymerization will not occur Polymerization avoid n/a SECTION V - FIRE AND EXPLOSION HAZARD DATA Flash point n/a Flammable limits n/a Lower flame limit n/a Higher flame limit n/a Extinguish media -CO2, H2O For fire none Unusual fire hazard none SECTION VI - STORAGE/HANDLING INSTRUCTIONS

Handling and ottant Global Safety Management, www.globalsafetynet.com, (877) 683-7460

SAFETY DATA SHEET



1. Product and Company Identification

	1. Product and Company Iden	uncation	
Product identifier	Enzymax Liquid		
Other means of identification	IMS-1224 IMS-1226		
Recommended use	Detergent		
Recommended restrictions	None known.		
Manufacturer	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 Identificatio	n	
Physical hazards	Not classified.		
Health hazards	Sensitization, respiratory	Category 1	
Environmental hazards	Not classified.		
OSHA defined hazards	Not classified.		
Label elements			
Signal word	Danger		
Hazard statement	May cause allergy or asthma symptoms or breathing difficulties if inhaled.		
Precautionary statement			
Prevention	Avoid breathing mist or vapor. In case of inadequate ventilation wear respiratory protection.		
	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.		
Response		on to fresh air and keep con	• •
Response Storage		on to fresh air and keep con	• •
	experiencing respiratory symptoms: Call a po	on to fresh air and keep con ison center/doctor.	nfortable for breathing. If
Storage	experiencing respiratory symptoms: Call a po Store away from incompatible materials.	on to fresh air and keep con ison center/doctor.	nfortable for breathing. If
Storage Disposal Hazard(s) not otherwise	experiencing respiratory symptoms: Call a po Store away from incompatible materials. Dispose of contents/container in accordance	on to fresh air and keep con ison center/doctor. with local/regional/national/in	nfortable for breathing. If
Storage Disposal Hazard(s) not otherwise classified (HNOC)	experiencing respiratory symptoms: Call a po Store away from incompatible materials. Dispose of contents/container in accordance None known.	on to fresh air and keep con ison center/doctor. with local/regional/national/in f unknown acute toxicity.	nfortable for breathing. If
Storage Disposal Hazard(s) not otherwise classified (HNOC)	experiencing respiratory symptoms: Call a po Store away from incompatible materials. Dispose of contents/container in accordance None known. 6% of the mixture consists of component(s) o	on to fresh air and keep con ison center/doctor. with local/regional/national/in f unknown acute toxicity.	nfortable for breathing. If
Storage Disposal Hazard(s) not otherwise classified (HNOC) Supplemental information	experiencing respiratory symptoms: Call a po Store away from incompatible materials. Dispose of contents/container in accordance None known. 6% of the mixture consists of component(s) o	on to fresh air and keep con ison center/doctor. with local/regional/national/in f unknown acute toxicity.	nfortable for breathing. If

Composition comments The event % concentration of composition has been withheld as a trade		orat in accorda	
	Subtilisin carlsburg	9014-01-1	0.1 - 1
	Phosphonic acid, disodium salt	13708-85-5	0.1 - 1
	Octanoic Acid, Potassium Salt	764-71-6	1 - 5
		00-01-0	5 - 10

Composition comments The exact % concentration of composition has been withheld as a trade secret in accordance with paragraph (i) of the OSHA HCS 1910.1200.

4. First Aid Measures		
Inhalation	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.	
Skin contact	In case of skin contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.	
Eye contact In case of contact, immediately flush eyes with plenty of water. If easy to do, remove c lenses, if worn. Obtain medical attention if irritation persists.		
#25522	Dage: 4 of 7 Jack Jack Jack Jack Jack Jack Jack Jack	

Ingestion	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.		
Most important symptoms/effects, acute and delayed	May cause allergic respiratory reaction.		
Indication of immediate medical attention and special treatment needed	Treat patient symptomatically.		
General information	Ensure that medical personnel are aware of the m protect themselves.	aterial(s) involved	, and take precautions to
	5. Fire Fighting Measures		
Suitable extinguishing media	Treat for surrounding material.		
Unsuitable extinguishing media	Not available.		
Specific hazards arising from the chemical	During fire, gases hazardous to health may be for	med.	
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protec	tive clothing must	be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so wi	thout risk.	
Specific methods	Use standard firefighting procedures and consider	the hazards of oth	ner involved materials.
General fire hazards	No unusual fire or explosion hazards noted.		
Hazardous combustion products	May include and are not limited to: Oxides of carbo	on.	
Explosion data	NI-1		
Sensitivity to mechanical impact	Not available.		
Sensitivity to static discharge	Not available.		
	6. Accidental Release Measure	es	
Personal precautions, protective equipment and emergency procedures	Keep out of low areas. 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. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.		
Methods and materials for	Stop the flow of material, if this is without risk.	•	
containment and cleaning up	Large Spills: Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas		
	Small Spills: Wipe up with absorbent material (e. remove residual contamination.	g. cloth, fleece). C	lean surface thoroughly to
	Never return spills to original containers for re-use	. For waste dispos	al, see section 13 of the SDS.
Environmental precautions	Do not discharge into lakes, streams, ponds or pu	blic waters.	
	7. Handling and Storage		
Precautions for safe handling			
Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).		away from incompatible
	8. Exposure Controls/Personal Pro	tection	
Occupational exposure limits			
• •	for Air Contaminants (29 CFR 1910.1000) Type	Value	Form
Glycerol (CAS 56-81-5)	PEL	5 mg/m3	Respirable fraction.
- ,	_	15 mg/m3	Total dust.

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US. ACGIH Threshold Lim Components	it Values Type	Value	
Subtilisin carlsburg (CAS 9014-01-1)	Ceiling	0.00006 mg/m3	
US. NIOSH: Pocket Guide	to Chemical Hazards		
Components	Туре	Value	
Subtilisin carlsburg (CAS 9014-01-1)	STEL	0.00006 mg/m3	
iological limit values	No biological exposure limits noted for the ingredient(s).		
xposure guidelines	Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH or OSHA PEL.		
ppropriate engineering ontrols	Ensure adequate ventilation.		
ndividual protection measures	s, such as personal protective equipm	ent	
Eye/face protection	Safety goggles or glasses.		
Skin protection			
Hand protection	Wear protective gloves.		
Other	As required by employer code.		
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.		
Thermal hazards	Not available.		
General hygiene onsiderations		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.	

Appearance	Liquid
Physical state	Liquid.
Form	Liquid.
Color	Purple
Odor	Lemon / Spearmint
Odor threshold	Not available.
pH	8.7
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.11
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	This product may react with oxidizing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Routes of exposure

Inhalation. Ingestion. Skin contact. Eye contact.

Information on likely routes of exposure

······································			
Ingestion	May be harmful if swallowed.		
Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause irritation to the respiratory system.		
Skin contact	May be irritating to the skin.		
Eye contact	Direct contact with eyes may cause temporary irritation.		
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling of the eyes, and blurred vision. Symptoms may include stomach distress, nausea or vomiting. Symptoms may include redness, drying, defatting and cracking of the skin.		

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Glycerol (CAS 56-81-5)		
Acute		
Dermal		
LD50	Rabbit	> 10000 mg/kg
		23000 mg/kg
Inhalation		
LC50	Rat	> 143 mg/m³, 4 Hours
Oral		
LD50	Mouse	23000 mg/kg
	Rat	> 12600 mg/kg
		27200 mg/kg

Octanoic Acid, Potassium Salt (CAS 764-71-6)

Not available
Not available
(CAS 13708-85-5)
Not available

LD50	Not available
Subtilisin carlsburg (CAS 9014-01-1)	

Acute

Oral

Dermal	
LD50	Not available
<i>Inhalation</i> LC50	Not available

Components	Species	Test Results
Oral		
LD50	Rat	1800 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation	on.
Exposure minutes	Not available.	
Erythema value	Not available.	
Oedema value	Not available.	
Serious eye damage/eye irritation	May cause irritation.	
Corneal opacity value	Not available.	
Iris lesion value	Not available.	
Conjunctival reddening value	Not available.	
Conjunctival oedema value	Not available.	
Recover days	Not available.	
Respiratory or skin sensitization		
Respiratory sensitization	May cause allergy or asthma symptoms or breathing	difficulties if inhaled.
Skin sensitization	This product is not expected to cause skin sensitizat	ion.
Germ cell mutagenicity	Not classified.	
Mutagenicity	Not classified.	
Carcinogenicity	This product is not considered to be a carcinogen by	IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	This product is not expected to cause reproductive o	r developmental effects.
Teratogenicity	Not classified.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not classified.	
Chronic effects	Prolonged inhalation may be harmful.	
Further information	Not available.	
Name of Toxicologically Synergistic Products	Not available.	

12. Ecological Information

Ecotoxicity	See below		
Components		Species	Test Results
Glycerol (CAS 56-81-5)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	51000 - 57000 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Mobility in soil	No data available.		
Mobility in general	Not 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	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		accordance with local regulations. Emptues. This material and its container must ructions).	

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.	
WHMIS status	Controlled	
WHMIS classification	Class D - Division 2A	
WHMIS labeling		
\bigcirc		
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 Substa	ance List (40 CFR 302.4)	
Not listed.	le Organic Compounds: Listed substance	
Glycerol (CAS 56-81-5)	Listed.	
•	n 112(r) Accidental Release Prevention (40 CFR 68.130)	
Not regulated.		
	n 112 Hazardous Air Pollutants (HAPs) List	
Not regulated.		
-	eauthorization 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	No	
SARA 311/312 Hazardous chemical	No	
SARA 313 (TRI reporting) Not regulated.		
Other federal regulations		
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 Hazardo	ous Substances (Director's): Listed substance	
Subtilisin carlsburg	(CAS 9014-01-1) Listed. ition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance	
Not listed.		
US - Minnesota Haz Su	ibs: Listed substance	
Glycerol (CAS 56-8		
	Substances: Listed substance	
Glycerol (CAS 56-8	1-5) Listed.	

US - Texas Effects Scre	ening Levels: Listed subst	tance	
Glycerol (CAS 56-81 Subtilisin carlsburg (US. Massachusetts RTM	CÁS 9014-01-1)	Listed. Listed.	
Glycerol (CAS 56-81 US. Pennsylvania RTK -	-5) Hazardous Substances	Listed.	
Glycerol (CAS 56-81 US. Rhode Island RTK	-5)	Listed.	
Not regulated.			
Inventory status			
Country(s) or region	Inventory name		On inventory (yes/no)*
Canada	Domestic Substances List	(DSL)	No
Canada	Non-Domestic Substances	s List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control	Act (TSCA) Inventory	Yes
*A "Yes" indicates that all compor	nents of this product comply with	h the inventory requirements admini	stered by the governing country(s)
	16. Oth	er Information	

LEGEND	HEALTH / 2
Severe4Serious3Moderate2Slight1Minimal0	FLAMMABILITY 1 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	15-January-2015
Expiry date	15-January-2018
Further information	For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.
Prepared by	Dell Tech Laboratories, Ltd. Phone: (519) 858-5021
Other information	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.