



SAFETY DATA SHEET

1. Identification

Product Identifier Bacti-Zyme Apple
Other means of identification EI-1412
Product code
Recommended use Non-pathogenic bacteria spotter and drain cleaner.
Recommended restrictions Professional use only. Use only as directed
Manufacturer information
Company name Empire Industries
Address P.O. Box 1404
Brentwood, TN 37024
Telephone (615) 315-0026
Fax (615) 315-0035
Emergency phone number PERS (800) 633-8253
24-hour Emergency (800) 633-8253

2. Hazard(s) Identification

Physical hazards Not classified.
Health hazards Skin irritant Category 2
Eye Damage-Eye Irritation Category 2B
Environmental hazards Not classified.
OSHA defined hazards Not listed.
Label elements None.
Signal word **WARNING**
Hazard statement Causes mild skin irritation.
Precautionary statement
Prevention Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Response If skin irritation occurs: Get medical advice/attention.
Storage Store in secure area away from unauthorized persons
Disposal Dispose of empty container and any un-used content in accordance with applicable local, state or national rules and regulations
Hazard(s) not otherwise classified (HNOC) None.
Supplemental information None.

3. Composition/information on ingredients

Mixtures		
Chemical name	CAS number	%
2-butoxyethanol	111-76-2	1-2
Other components below reportable levels		96-98

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.



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Eye contact	Rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention. Eye wash stations should be located in work area.
Most important symptoms/effects, acute and delayed	Dermatitis. Rash. May cause an allergic skin reaction.
Indication of immediate medical attention and special treatment needed	Provide general support measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	None known.
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 protecting 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	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Wear appropriate protective equipment and clothing during clean-up. Wear eye/face protection.
Methods and materials for containment and cleaning up	Caution – spillages may be slippery. 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. Prevent entry into waterways, sewer, basements or confined areas. Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original container for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Do not release into the environment (see section 12). Avoid discharge into areas not consistent with package labeling.

7. Handling and storage

Precautions for safe handling	Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
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Store in original tightly closed container. Do not store in extreme conditions.



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Conditions for safe storage, including any incompatibilities

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value
2-butoxyethanol	PEL	50 ppm

US ACGIH Threshold Limit Values

Components	Type	Value
2-butoxyethanol	STEL	20 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Species	Sampling Time
2-butoxyethanol	200 mg/g	Creatinine	Urine	End of shift.

Appropriate engineering controls Emergency eye wash stations and showers should be readily accessible. Provide natural or mechanical ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other None.

Respiratory protection Respiratory protection not required.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke or use chewing tobacco. 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. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical State Liquid.

Color White

Odor Floral

Odor threshold Not available.

pH 6-7

Melting/freezing point Not available.

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

Flash point >385°F (196°C)

Evaporation rate Not available.

Flammability Not available.



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Flammability Limits

Upper	Not available.
Lower	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity (water=1)	1.0
Solubility in water	Soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Decomposes on heating.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	This product is stable and non-reactive under normal conditions of use.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames can cause product to decompose.
Incompatible materials	Strong acids, strong bases, strong oxidizing agents.
Hazardous decomposition products	Carbon dioxide, carbon monoxide.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Expected to be a low inhalation hazard.
Skin contact	Repeated and/or prolonged skin contact may cause slight irritation.
Eye contact	Repeated and/or prolonged eye contact may cause slight irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Dermatitis. Rash. May cause an allergic skin reaction.
Acute toxicity	Not established.

Product - Bacti-Zyme Apple (CAS mixture)		
Exposure Classification	Route and Species	LD ₅₀
Acute	Oral, rat	48,500 mg/kg (estimated)
Acute	Dermal, rat	>7,460 mg/kg (estimated)

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

Skin corrosion/irritation	May cause mild skin irritation.
Serious eye damage/ irritation	Not classified.
Respiratory sensitization	Not classified.
Skin sensitization	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not considered a carcinogen.



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OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not Listed.
 Reproductive toxicity Not classified.
 Specific target organ toxicity – single exposure Not classified.
 Specific target organ toxicity – repeated exposure Not classified.
 Aspiration hazard Not considered an aspiration hazard.

12. Ecological information

Ecotoxicity		
Product Bacti-Zyme Apple (CAS mixture)		
Aquatic Receptor	Species	Test Thresholds
Crustacea	Daphnia magna (waterflea)	EC ₅₀ (48-hr): 980 mg/L (estimated)
Fish	Oncorhynchus mykiss	LC ₅₀ (96-hr): 400 mg/L (estimated)
*Estimates for product may be based on additional component data not shown		

Persistence and degradability 2-butoxyethanol is considered readily biodegradable.
 Bioaccumulative potential Potential to bioaccumulate is low.
 Mobility in soil Not available. Chemicals of this class are expected to exhibit moderate to high mobility in saturated and semi-saturated soil composites
 Other adverse effects Not available.

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. Do not release to the environment.
 Local disposal regulations Dispose in accordance with all applicable regulations. As packaged, this product is not believed to meet criteria defining RCRA hazardous wastes when disposed. (40 CFR Part 261, Subpart C). Before selecting disposal method, ensure that the waste materials have been properly assessed and, as necessary, tested to confirm regulatory status.
 Waste from residues/unused product 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 Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may contain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT Not regulated as dangerous goods.

15. Regulatory information

US Federal regulations

SARA 302 Extremely hazardous substance Not listed
 SARA 304 Emergency release notification Not listed
 SARA 311/312 Hazard Categories
 Immediate Hazard - Yes



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Delayed Hazard – No

Fire Hazard – No

Pressure Hazard – No

Reactivity Hazard – No

SARA 313 (TRI reporting) 2-butoxyethanol (Glycol ether category)

California Proposition 65 – California Safe Drinking Water and Toxic Enforcement Act of 1986

This product is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to threshold determination and Safe Harbor notification (1/2019)

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

Issue date 10/28/2019
 Revision date
 Version # 1
 HMIS® ratings Health: 1
 Flammability: 0
 Physical hazard: 0



NFPA ratings Health: 1
 Flammability: 0
 Instability: 0



Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, and have been obtained from resources believed to be reliable. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information related only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified by the text.

Revision information First issue