

1. Identification

Product Identifier	Ultra Enzyme	
Other means of identification		
Product code	UL-EZ200	
Recommended use	Fluid cleaner.	
Recommended restrictions	For use only in Dornoch Medical System Fluid Carts.	
Distributed by		
Company name	Zimmer Biomet, Inc.	
Address	1777 West Center Street Building 4 Warsaw, IN 46581 U.S.A.	
Telephone	(888) 466-6633	
Manufactured by		
Company name	Chemical Universe, Inc.	
Address	1133 Saline St. North Kansas City, MO 64116	
Telephone	(816) 471-3602	
Emergency phone number	PERS	(800) 633-8253
	24 hour Emergency	(800) 633-8253

2. Hazard(s) Identification

Physical hazards	Not classified.	
Health hazards	Skin irritation	Category 3
	Eye irritation	Category 2A
Environmental hazards	Not classified	
OSHA defined hazards	Not listed.	
Label elements		



Signal word	Warning	
Hazard statement	Causes serious eye irritation. Causes mild skin irritation.	
Precautionary statement		
Prevention	Wear eye protection/face protection. Wash hands and exposed skin thoroughly after handling.	
Response	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. If eye irritation persists: Get medical advice/attention.	
Storage		
Disposal		
Hazard(s) not otherwise classified (HNOC)	None	
Supplemental information	None	

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
1-butoxy-2-propanol	5131-66-8	4-8
Tetrasodium ethylenediamine tetraacetate	64-02-8	1-3
Other components below reportable levels		90-100

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.
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.
Ingestion	Rinse mouth. Get medical attention if symptoms occur. Do not induce vomiting.
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.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Do not store in extreme conditions.

8. Exposure controls/personal protection

Occupational exposure limits
None established.

Biological limit values
None established.

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 Clear liquid.

Color Green.

Odor Bland.

Odor threshold Not available.

pH 8.7-9.3

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.

Flammability Limits

Upper Not available.

Lower Not available.

Vapor pressure Not available.

Vapor density	Not available.
Specific gravity (water=1)	1.01
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	Aldehydes, ketones, organic acids.

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	Avoid contact with eyes. Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Dermatitis. Rash. May cause an allergic skin reaction.
Acute toxicity	Not established.

Product	Route and Species	LD ₅₀
Ultra Enzyme (CAS mixture)		
Acute	Oral, rat	>5,000 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	Causes serious eye irritation.
Respiratory sensitization	Not classified.
Skin sensitization	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not considered a carcinogen.
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	Species	Test Results
Ultra Enzyme (CAS mixture)		
Aquatic		
Fish	Fathead	LC ₅₀ (96hr): 2,500 mg/L estimated

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

Persistence and degradability 1-butoxy-2-propanol: considered readily biodegradable.

Bioaccumulative potential Bioaccumulative potential is low.

Mobility in soil Not available.

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.

Local disposal regulations Dispose in accordance with all applicable regulations

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

Delayed Hazard – No

Fire Hazard – No

Pressure Hazard – No

Reactivity Hazard – No

SARA 313 (TRI reporting)

Not listed.

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

Issue date 12/7/2015

Revision date 12/7/2015

Version #	2
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.