

**MATERIAL SAFETY DATA SHEET**

**Section 1. Product And Company Identification**

**Product Name:** Benco Z<sup>3</sup> 2.5% Glutaraldehyde  
**Product Use:** Liquid Sterilant/High Level Disinfectant

**Distributor:** Benco Dental  
295 CenterPoint Blvd.  
Pittston, PA 18640  
U.S.A.

**Information Phone Number:** 1-800-GO-BENCO (Customer Service)

**Chemical Emergency Phone Number (Chemical Spills, Leaks, Fire, Exposure or Accident only):**  
CHEMTREC 1-800-424-9300 (in the US) 1-703-527-3887 (Outside the US)

**SDS Date Of Preparation/Revision:** 3/19/15

**Section 2. Hazards Identification**

**GHS / HAZCOM 2012 Classification:**

Eye Irritation Category 2A  
Respiratory Sensitization Category 1

Label Elements

**Warning!**



**Hazard Phrases**

Causes serious eye irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Prevention:**

Wash thoroughly after handling.  
Wear eye protection and face protection.  
Avoid breathing mist, vapors or spray.  
In case of inadequate ventilation wear respiratory protection.

**Response:**

IF INHALED: remove person to fresh air and keep comfortable for breathing.  
If experiencing respiratory symptoms: Call a POISON CENTER.  
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 attention.

**Storage and Disposal**

Dispose of contents and container in accordance with local and national regulations.

**Section 3. Composition/Information On Ingredients**

<b>Component</b>	<b>CAS No.</b>	<b>Amount</b>
Water and non-hazardous ingredients	Mixture	97.5%
Glutaraldehyde	111-30-8	2.5%

**Section 4. First Aid Measures**

**Eye Contact:** Hold eye open and rinse slowly and gently with water for 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Seek medical attention if irritation persists.

**Skin Contact:** Wash thoroughly with soap and water. If skin irritation develops, seek medical attention.

**Inhalation:** Move to fresh air. If ill effects occur, seek immediate medical attention.

**Ingestion:** If swallowed, get immediate medical advice by calling a Poison Control Center or hospital emergency room. If advice is not available, take victim and product container to the nearest emergency treatment center or hospital. Do not induce vomiting unless directed to do so by medical personnel. If the victim is alert, rinse their mouth with water. Do not attempt to give anything by mouth to an unconscious person.

**Note to physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

**Most important symptoms and effects, acute and delayed:** May cause severe eye irritation. May cause respiratory tract irritation. Ingestion of glutaraldehyde may cause nervous system effects including nausea, dizziness, headache, and drowsiness. Repeated inhalation of vapors may cause asthmatic symptoms in some individuals.

**Indication of immediate medical attention and special treatment, if needed:** Treat symptomatically.

**Section 5. Fire Fighting Measures**

**Suitable (and Unsuitable) Extinguishing Media:** Use any media that is suitable for the surrounding fire.

**Specific Hazards Arising from the Chemical:** None known.

**Special Protective Equipment and Precautions for Fire-fighters:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

**Section 6: Accidental Release Measures**

**Personal precautions, Protective equipment, and Emergency procedures:** Wear appropriate protective clothing and equipment.

**Methods and Materials for Containment and Cleaning up:** Stop leak if it is safe to do so and move containers from the spill area. Collect material with an inert absorbent material and place in appropriate, labeled container for disposal.

**Section 7. Handling and Storage**

**Precautions for Safe Handling:** Avoid breathing vapors or mists. Avoid contact with eyes, skin and clothing. Wash thoroughly with soap and water after handling. Avoid contamination of food. Use in a well-ventilated area in closed containers. Use in accordance with label directions.

**Conditions for Safe Storage, Including any Incompatibilities:** Store at room temperature. Keep containers closed.

**Section 8. Exposure Controls / Personal Protection**

**Exposure Limits**

Chemical	Exposure Limit
Glutaraldehyde	0.05 ppm Ceiling ACGIH TLV (sen)

**Appropriate Engineering Controls:** Use general or local exhaust ventilation as needed to maintain airborne concentrations below the occupational exposure limits.

**Respiratory Protection:** None under normal use conditions with adequate ventilation. For operations where exposure limits are exceeded, a NIOSH approved respirator with an organic vapor cartridge is recommended. Equipment selection depends on contaminant type and concentration. Select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

**Hand protection:** Protective gloves such as butyl rubber or nitrile are recommended to avoid skin contact.

**Eye Protection:** Safety goggles recommended.

**Skin Protection:** Wear protective clothing as needed to avoid skin contact.

**Hygiene measures:** Suitable eye wash and washing facilities should be available in the work area.

**Section 9. Physical and Chemical Properties**

<b>Appearance:</b>	Clear, colorless liquid	<b>Odor:</b>	Fruity odor.
<b>Odor Threshold:</b>	0.038 ppm (glutaraldehyde)	<b>pH:</b>	3.2-4.3 inactivated, 6.5-8.5 activated
<b>Melting/Freezing Point:</b>	Not available	<b>Boiling Point/Range:</b>	100°C (212°F)
<b>Flash Point:</b>	Not flammable	<b>Evaporation Rate:</b>	Not available
<b>Flammability: (Solid, Gas)</b>	Not applicable	<b>Flammability Limits:</b>	Not applicable
<b>Vapor Pressure:</b>	0.3 mmHg @20°C (glutaraldehyde)	<b>Vapor Density:</b>	Not available
<b>Relative Density:</b>	>1.0	<b>Solubilities:</b>	Soluble in Water
<b>Partition Coefficient: (N-Octanol/Water)</b>	Not available	<b>Autoignition Temperature:</b>	Not flammable
<b>Decomposition Temperature:</b>	Not available	<b>Viscosity:</b>	Not available

**Section 10. Stability and Reactivity**

**Reactivity:** None known.

**Chemical Stability:** Stable.

**Possibility of Hazardous Reactions:** None known.

**Conditions to avoid:** Avoid temperatures above 100°C. Do not allow significant evaporation.

**Incompatible Materials:** Strong oxidizing agents, acids and bases.

**Hazardous decomposition products:** Thermal decomposition will produce carbon monoxide and carbon dioxide.

**Section 11. Toxicological Information**

**Potential Health Effects:**

**Inhalation:** Vapors may cause irritation of the nose, throat and upper respiratory tract. Repeated inhalation of glutaraldehyde vapors may cause asthmatic symptoms in some individuals, including cough, wheezing and difficulty breathing.

**Skin Contact:** May cause skin irritation. No signs of toxicity were observed in a dermal toxicity study in rabbits. Irritating in a primary irritation study with rabbits, effects reversed in 72 hrs. Negative in a skin sensitization study with guinea pigs.

**Eye Contact:** Causes severe irritation with possible burns.

**Ingestion:** Do not ingest. If swallowed, may irritate mouth, throat and intestinal tract. Ingestion of glutaraldehyde may cause nervous system effects including nausea, dizziness, headache, and drowsiness.

**Chronic Hazards:** No adverse effects expected based on the available data.

**Carcinogen:** None of the components is listed as a carcinogen or potential carcinogen by IARC, NTP, ACGIH, or OSHA.

**Acute Toxicity Values for Glutaraldehyde HLD:**  
LD50 Oral Rat 3450 mg/kg; LD50 Dermal Rabbit >2000 mg/kg

**Section 12. Ecological Information**

This product is classified as toxic to the aquatic environment.

**Toxicity:** No toxicity data available for product.  
Glutaraldehyde: LC50 fathead minnow 10.8 mg/L/96 hr; EC50 daphnia magna 0.69 mg/L/48 hr; EbC50 green algae 2.64 mg/L/72 hr.

**Persistence and degradability:** Glutaraldehyde is readily biodegradable.

**Bioaccumulative Potential:** Glutaraldehyde: log Kow -0.333, potential for bioaccumulation is low

**Mobility in Soil:** Glutaraldehyde: highly mobile in soil.

**Other Adverse Effects:** None known

**Section 13. Disposal Considerations**

**Solution Disposal:** Refer to product label for disposal information. Dispose in accordance with national, state/provincial and local regulations.

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. If recycling is not available, discard in accordance with hospital policy.

**Section 14. Transport Information**

	UN Number	UN Proper Shipping Name	Hazard Class(s)	Packing Group	Environmental Hazards
US DOT	None	Not Regulated			None
EU ADR/RID	None	Not Regulated			None
IMDG	None	Not Regulated			None
IATA/ICAO	None	Not Regulated			None

**Section 15. Regulatory Information**

**U.S. Federal Regulations:**

**EPA SARA 311/312 Hazard Classification:** Acute Health

**EPA SARA 313:** This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

**Protection Of Stratospheric Ozone:** This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

**CERCLA SECTION 103:** This product is not subject to CERCLA reporting requirements; however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**International Inventories**

**US EPA TSCA Inventory:** All of the components of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory or exempt.

**Canadian Environmental Protection Act:** All of the components in this product are listed on the Domestic Substances List (DSL) or exempt.

<b>Section 16. Other Information</b>
--------------------------------------

NFPA Rating: Fire: 1                  Health: 2                  Instability: 0

**Effective Date:** 3/19/15

**Revision Summary:** New GHS Formatted SDS

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date of preparation, however, BENCO DENTAL makes no warranty with respect to the accuracy or suitability of the recommendations, and assumes no liability to any use thereof.