

# Safety Data Sheet

## LIFELINE CELL TECHNOLOGY SAFETY DATA SHEET

### SECTION 1 – PRODUCT AND COMPANY INFORMATION

**Product Name:** 1% Glutaraldehyde  
**Product Number:** CM-0050  
**Company Address:** Lifeline Cell Technology  
8415 Progress Drive, Suite T  
Frederick, MD 21701  
**Technical Phone:** (877) 845-7787  
**Fax:** (443) 393-0393  
**Emergency Phone:** (877) 845-7787  
**Product use:** Cell testing reagent

### SECTION 2 – HAZARDS IDENTIFICATION

#### Hazard Identification:

#### GHS Classification

Acute toxicity, Oral (Category 4), H302  
Acute toxicity Inhalation (Category 4), H332  
Skin corrosion (Category 1B), H318  
Serious eye damage (Category 1), H318  
Respiratory sensitization (Category 1), H334  
Skin sensitization (Category 1), H317  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 2), H411  
Reproductive toxicity (Category 1B), H360

#### GHS Label elements including precautionary statements:



Pictograms:

Signal word                      Danger

Hazard statements

H302+H332            Harmful if swallowed or inhaled  
H314                    Causes severe skin burns and eye damage  
H317                    May cause allergic skin reaction  
H318                    Causes serious eye damage  
H334                    May cause allergy or asthma symptoms or breathing difficulty if inhaled  
H360                    May damage fertility or the unborn child  
H400                    Very toxic to aquatic life  
H411                    Toxic to aquatic life with long lasting effects

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## Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P264	Wash skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P271	Use only outdoors or in well ventilated places
P272	Contaminated work clothing should not be allowed out of the workplace
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection
P281	Use personal protective equipment as required.
P285	In case of inadequate ventilation wear respiratory protection
P301+P312+P330	If swallowed: Call a poison center or doctor/physician if you feel unwell, rinse mouth
P301+P330+P331	If swallowed: Rinse mouth. Do not induce vomiting.
P303+P361+P353	If on skin or hair: Remove/takeoff off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340+P310	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call poison center or doctor/physician.
P305+P351+P338+P310	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call poison center or doctor/physician.
P308+P313	If exposed or concerned: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention
P342+P311	If experiencing respiratory symptoms: Immediately call poison center or doctor/physician.
P363	Wash contaminated clothing before reuse
P391	Collect spillage
P405	Store locked up
P501	Dispose of contents/container to an approved waste disposal plant

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## SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

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<b>Principal Components:</b>	Glutaraldehyde	CAS number:	111-30-8
	Boric Acid	CAS number:	10043-35-3
	Sodium tetraborate	CAS number:	1303-96-4
	Water	CAS number:	7732-18-5

**Composition:** The subject formulation is a mixture of Glutaraldehyde, Boric Acid and Sodium tetraborate in water.

### Hazardous components:

<b>Glutaraldehyde:</b>	CAS #: 111-30-8	EC #: 203-856-5	Index #: 605-022-00-X
	<b>Concentration:</b> 0.5-2%		
	<b>Classification:</b> Flam. Liq.; Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Resp.Sens. 1; Skin Sens. 1; Aquatic Acute 1; Aquatic Chronic 2; H227, H301+H331, H314, H317, H334, H400, H411		
<b>Boric Acid:</b>	CAS #: 10043-35-3	EC #: 233-139-2	Index #: 005-007-00-2
	<b>Concentration:</b> 1-3%		
	<b>Classification:</b> Repr.2; H361		
	<b>Boric Acid</b> included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) number 1907/2006 (REACH)		

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**Sodium tetraborate:** CAS #: 1303-96-4      EC #: 215-540-4      Index #: 005-011-01-1

**Concentration:** 0.5-2%

**Classification:** Repr.2; H361

**Sodium Tetraborate** included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) number 1907/2006 (REACH)

**Synonym:** N/A

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## SECTION 4 – FIRST AID MEASURES

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### First aid measures in case of exposure:

**General Advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**Oral Exposure:** If swallowed, rinse out mouth with water provided person is conscious. Call a physician.

**Dermal Exposure:** In case of contact with skin, flush with copious amounts of water for at least 15 minutes. Should irritation occur, call a physician.

**Eye Exposure:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**Most important symptoms and effects, acute or delayed:** Refer to section 2 for most important symptoms and effects, acute or delayed.

**Recommendations for immediate medical care or treatment:** Seek immediate medical assistance if any symptoms described in section 2 are present after exposure or suspected exposure to this product.

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## SECTION 5 – FIRE FIGHTING MEASURES

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**General Fire hazard:** Components at the concentrations in this product do not present any special fire hazard. Carbon oxides, Borane or boron oxides may be released in a fire.

**Flash point:** N/A

**Extinguishing media:** Use media appropriate for the material that is burning.

**Advice for Firefighters:** Wear self-contained breathing apparatus.

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## SECTION 6 – ACCIDENTAL RELEASE MEASURES

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**Personal Precautions and Protective Equipment:** Refer to section 8 for appropriate personal protection. Avoid breathing mist, vapors or gas. Ensure adequate ventilation. Evacuate personnel to a safe location in case of accidental release.

**Environmental Precautions:** Prevent leakage or spillage into the environment. Do not let product enter into drains.

**Methods for Clean Up:** Use personal protective equipment when cleaning spilled product. Absorb liquid with absorbent material and then place in a closed container for hazardous waste disposal. Wash spill site after liquid cleanup is complete with cleansers appropriate for the spill site surface material.

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## SECTION 7 – HANDLING AND STORAGE

**Precautions for Handling:** Refer to section 8 for appropriate personal protection. Avoid contact with eyes, skin or clothing. Avoid inhalation of vapor or mist. Product may cause allergic reaction.

**Storage:** Keep container tightly closed and in the upright position. Store at 2-8°C.

## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Components with workplace control parameters:**

Component	CAS#	Value	Control Parameters	Basis
Glutaraldehyde	11-30-8	C	0.200000 ppm 0.800000 mg/m <sup>3</sup>	USA NIOSH Recommended Exposure Limits
	Remarks	See Appendix C		
		C	0.050000 ppm	USA ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Upper Respiratory Tract irritation Eye irritation Skin irritation Not classified as a human carcinogen		

Component	CAS#	Value	Control Parameters	Basis
Sodium tetraborate	1303-96-4	STEL	6 mg/m <sup>3</sup>	USA ACGIH Threshold Limit Values (TLV)
	Remarks	Not classified as a human carcinogen		
		TWA	10 mg/m <sup>3</sup>	USA OSHA – Table Z1 Limits for Air Contaminants – 1910.1000
		TWA	2 mg/m <sup>3</sup>	USA ACGIH Threshold Limit Values (TLV)
	Remarks	Not classified as a human carcinogen		
		TWA	5 mg/m <sup>3</sup>	USA NIOSH Recommended Exposure Limits
		TWA	2 mg/m <sup>3</sup>	USA ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritant Not classified as a human carcinogen varies		
		STEL	6 mg/m <sup>3</sup>	USA ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritant Not classified as a human carcinogen varies		

**Engineering Controls:** Handle with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the workday..

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## Personal Protective Equipment:

**Respiratory:** Respirator is not required. Avoid breathing fumes and limit exposure time.  
**Hand:** Chemical resistant gloves required.  
**Eye:** Safety glasses or goggles required.  
**Clothing:** Laboratory coat required.

**General Hygiene Measures:** Wash hands thoroughly after handling.

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## SECTION 9 – PHYSICAL / CHEMICAL PROPERTIES

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**Appearance:** Frozen, clear liquid

**Upper/lower flammability or Explosive limits:** No data available

**Odor:** No data available

**Vapor pressure:** No data available

**Odor threshold:** No data available

**Vapor density:** No data available

**pH:** No data available

**Relative density:** No data available

**Freezing point:** No data available

**Solubility:** Soluble in water

**Boiling point:** No data available

**Flash point:** No data available

**Evaporation rate:** No data available

**Flammability:** Not flammable

**Upper/lower flammability or explosive limits:** No data available

**Partition coefficient: n-octanol/water:** No data available

**Auto-ignition temperature:** No data available

**Viscosity:** No data available

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## SECTION 10 – STABILITY AND REACTIVITY

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**Reactivity:** No data available

**Chemical stability:** Stable under recommended storage and usage conditions.

**Possible hazardous reactions:** No data available

**Conditions to be avoided:** No data available

**Incompatible materials:** Strong oxidizing agents, strong acids and bases, potassium

**Hazardous decomposition products:** Carbon oxides, Borane or boron oxides may be released in a fire.

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## SECTION 11 – TOXICOLOGICAL INFORMATION

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### Information on toxicological effects

#### Acute toxicity:

**Glutaraldehyde:** No data available

**Boric Acid:** LD50 Oral – rat – 2,660 mg/kg

**Sodium Tetraborate:** LD50 Oral – rat – 4,500 – 5,000 mg/kg

**Sodium Tetraborate:** LD50 Dermal – rabbit – 10,000 mg/kg

**Skin corrosion/irritation:** No data available

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**Serious eye damage/irritation:** No data available

**Respiratory or Skin sensitization:** No data available

**Germ Cell mutagenicity:** No data available

## Carcinogenicity

**NTP:** not listed

**IARC:** not listed

**OSHA:** not listed

**Reproductive toxicity:** Fetotoxicity. Presumed reproductive toxicant (Boric Acid and Sodium Tetraborate). In animal testing, risk of impaired fertility was shown only after administration of very high doses of this substance (Boric Acid).

**Specific target organ toxicity – single exposure:** No data available

**Specific target organ toxicity – repeated exposure:** No data available

**Aspiration hazard:** No data available

**Additional Information:** Liver – irregularities – Based on human evidence (Boric Acid and Glutaraldehyde)

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## SECTION 12 – ECOLOGICAL INFORMATION

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**Toxicity to Fish:** LC50 Carassius auratus (goldfish) 178 mg/L – 72 h (sodium tetraborate)  
LC50 Ptychocheilus Lucius 279 mg/L – 96 h (boric acid)  
LC50 Lepomis macrochirus (bluegill) 1,021 mg/L – 96 h (boric acid)

### Toxicity to other aquatic

**Invertebrates:** LC50 Daphnia magna (water flea) 53.2 mg/L – 21 d (boric acid)  
EC50 Daphnia magna (water flea) 133 mg/L – 48 h (boric acid)  
EC50 Daphnia magna (water flea) 1,085 – 1,402 mg/L – 48 h (sodium tetraborate)

**Toxicity to algae:** IC50 Desmodesmus subspicatus (green algae) 158 mg/L – 96 h

**Persistence/Degradability:** No data available

**Bioaccumulation Potential:** No data available

**Mobility in Soil:** No data available. Expected to be mobile in soil due to high solubility in water.

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## SECTION 13 – DISPOSAL CONSIDERATIONS

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**Appropriate disposal of product:** Offer surplus product to a licensed disposal company. Dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner or scrubber.

**Appropriate disposal containers:** Follow procedure for unused product.

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## SECTION 14 – TRANSPORT INFORMATION

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**DOT:** Not dangerous goods

**IMDG:**

**UN number:** 3082 (Glutaraldehyde) Class: 9 Packing group: III EMS-No: F-A, S-F

**Proper Shipping Name:** Environmentally hazardous substance, liquid, N.O. S. (Glutaral)

**Marine pollutant:** Yes

**IATA:**

**UN number:** 3082 (Glutaraldehyde) Class: 9 Packing group: III EMS-No: F-A, S-F

**Proper Shipping Name:** Environmentally hazardous substance, liquid, N.O. S. (Glutaral)

**Further information:**

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

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## SECTION 15 – REGULATORY INFORMATION

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**SARA 302 Components:** No chemicals in this product are subject to SARA Title III, Section 302.

**SARA 313 Components:** This product does not contain chemical components with known CAS numbers that exceed the threshold (De Minimus) reporting levels established by SARA Title III, Section 313.

**SARA 311/312:** Acute health hazard, Chronic health hazard

**Massachusetts Right to Know Components:**

Glutaraldehyde	CAS number:	111-30-8
Sodium tetraborate	CAS number:	1303-96-4

**Pennsylvania Right to Know Components:**

Glutaraldehyde	CAS number:	111-30-8
Boric Acid	CAS number:	10043-35-3
Sodium tetraborate	CAS number:	1303-96-4
Water	CAS number:	7732-18-5

**New Jersey Right to Know Components:**

Glutaraldehyde	CAS number:	111-30-8
Boric Acid	CAS number:	10043-35-3
Sodium tetraborate	CAS number:	1303-96-4

**California Prop. 65 Components:** This product does not contain any chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

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## SECTION 16 – OTHER INFORMATION

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**Preparation information:**

**Prepared by:** Quality Department

**Date Prepared:** March 9, 2015

**Replaced Version date:** July 30, 2012

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