

# Safety Data Sheet

## LIFELINE CELL TECHNOLOGY SAFETY DATA SHEET

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### SECTION 1 – PRODUCT AND COMPANY INFORMATION

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**Product Name:** LifeFactors<sup>®</sup> VascuLife<sup>®</sup> SMC  
**Product Number:** LS-1040

**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/Tissue culture

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### SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

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**Principal Components:**

LifeFactors<sup>®</sup> VascuLife<sup>®</sup> SMC Kit, LS-1038:

L-Glutamine (200 mM), 25 mL, LS-1013

rh Insulin, 0.5 mL, LS-1004

rh FGF-b, 0.5 mL, LS-1002

Ascorbic Acid, 0.5 mL, LS-1005

rh EGF, 0.5 mL, LS-1015

FBS, 10 mL, LS-1012

Please refer to Safety Data Sheets (SDS) for the above listed components on the following pages.

# Safety Data Sheet

## LIFELINE CELL TECHNOLOGY SAFETY DATA SHEET

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### SECTION 1 – PRODUCT AND COMPANY INFORMATION

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**Product Name:** L-Glutamine [200 mM]  
**Product Number:** LS-1013  
**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/Tissue culture

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### SECTION 2 – HAZARDS IDENTIFICATION

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**Hazardous Components:** Not a hazardous substance or mixture

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### SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

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<b>Principal Components:</b>	L-Glutamine	CAS number:	58-85-9
	Water	CAS number:	7732-18-5

**Composition:** The item formulation is a solution of L-Glutamine and water. The solution contains 1-5% L-Glutamine in water.

**Synonym:** Glutamine, Levoglutamine, L-(+) Glutamine, Cebrogen, Glavamin, Stimulina

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### SECTION 4 – FIRST AID MEASURES

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#### Potential Health Effects:

**Eye:** May cause irritation of the eye.

**Skin:** May cause skin irritation.

**Ingestion:** May be harmful if swallowed.

**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

#### First aid measures:

**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.

# Safety Data Sheet

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## SECTION 5 – FIRE FIGHTING MEASURES

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- General Fire hazard:** Product does not present any special fire hazard. Carbon 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 if necessary.

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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.
- Environmental Precautions:** No special environmental precautions are required.
- Methods for Clean Up:** Absorb liquid with disposable laboratory towel or other absorbent material and then place in a closed container for 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

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- Precautions for Handling:** Refer to section 8 for appropriate personal protection. Avoid contact with eyes, skin or clothing. Product may cause allergic reaction in sensitized individuals. Do not pipet by mouth.
- Storage:** Keep container tightly closed. Store at -20°C or below. Protect from light.

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## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

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- Exposure limits:** Not listed on the OSHA Occupational Chemical database.
- Engineering Controls:** Eye wash stations are required.
- Ventilation:** Area ventilation is generally adequate.
- Personal Protective Equipment:**
- Respiratory:** Respirator is not required.
- Hand:** Chemical resistant gloves required.
- Eye:** Safety glasses or goggles required.
- Clothing:** Laboratory coat recommended.
- General Hygiene Measures:** Wash hands thoroughly after handling.

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## SECTION 9 – PHYSICAL / CHEMICAL PROPERTIES

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- Appearance:** Frozen, liquid with white precipitate above ~0° C, clear liquid above ~20° C.
- Upper/lower flammability or Explosive limits:** No data available
- Odor:** Odorless
- Vapor pressure:** No data available
- Odor threshold:** No data available

# Safety Data Sheet

**Vapor density:** No data available  
**pH:** No data available  
**Relative density:** No data available  
**Freezing point:** ~0° C  
**Solubility:** Completely soluble in water  
**Boiling point:** ~100° C  
**Flash point:** No data available  
**Evaporation rate:** No data available  
**Flammability:** Not flammable  
**Upper/lower flammability or explosive limits:** No data available  
**Relative density:** 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  
**Hazardous decomposition products:** Carbon oxides may be released in a fire.

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## SECTION 11 – TOXICOLOGICAL INFORMATION

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**Likely routes of exposure:** Ingestion, skin, eye contact.

### Acute toxicity

**Oral LD50:** No data available  
**Inhalation LC50:** No data available  
**Dermal LD50:** No data available  
**Other:** No data available

**Chronic toxicity:** No data available

**Skin corrosion:** No data available  
**Eye damage:** No data available  
**Sensitization (Respiration or Skin):** No data available  
**Germ cell mutagenicity:** No data available  
**Carcinogenicity:** No data available  
**Reproductive toxicity:** No data available  
**Teratogenicity:** No data available

### Carcinogenicity

**NTP:** not listed  
**IARC:** not listed  
**OSHA:** not listed

# Safety Data Sheet

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## SECTION 12 – ECOLOGICAL INFORMATION

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**Ecotoxicity:** No data available  
**Persistence/Degradability:** No data available  
**Bioaccumulation Potential:** No data available  
**Mobility in Soil:** No data available.

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## SECTION 13 – DISPOSAL CONSIDERATIONS

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**RCRA hazardous waste code:** Not listed as a hazardous waste.  
**Appropriate disposal containers:** No specific restrictions on waste container type.  
**Appropriate Method of Disposal:** Clean up and dispose of waste in accordance with all federal, state and local environmental regulations.

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## SECTION 14 – TRANSPORT INFORMATION

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**UN number:** N/A  
**Proper Shipping Name:** None.  
**DOT:** Non-hazardous for transport.  
**IMDG:** Non-hazardous for transport.  
**IATA:** Non-hazardous for transport.

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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:** Not a hazardous substance or mixture

**Massachusetts Right to Know Components:** No components are subject to Massachusetts Right to Know Act.

**Pennsylvania Right to Know Components:**

L-Glutamine	CAS number:	58-85-9
Water	CAS number:	7732-18-5

**New Jersey Right to Know Components:** No components are subject to New Jersey Right to Know Act.

**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:** January 23, 2015  
**Replaced Version date:** July 30, 2012

**Disclaimer:** This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Lifeline Cell Technology. The data on this sheet relate only to the specific materials designated herein and shall only be used as a guide. Lifeline Cell Technology assumes no legal responsibility for the use or reliance upon these data.

# Safety Data Sheet

## LIFELINE CELL TECHNOLOGY SAFETY DATA SHEET

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### SECTION 1 – PRODUCT AND COMPANY INFORMATION

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**Product Name:** rh Insulin

**Product Number:** LS-1004

**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/Tissue culture

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### SECTION 2 – HAZARDS IDENTIFICATION

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**Hazardous Components:** Not a hazardous substance or mixture

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### SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

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**Principal Components:** recombinant human Insulin      CAS number: 11061-68-0  
Water      CAS number: 7732-18-5

**Composition:** The item formulation is a mixture of recombinant human Insulin, water and stabilizing agents. With the exception of purified water, all ingredients are in concentrations of less than 1%.

**Synonym:**

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### SECTION 4 – FIRST AID MEASURES

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**Potential Health Effects:**

**Eye:** May cause irritation of the eye.

**Skin:** May cause skin irritation.

**Ingestion:** May be harmful if swallowed.

**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

**First aid measures:**

**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.

# Safety Data Sheet

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## SECTION 5 – FIRE FIGHTING MEASURES

---

- General Fire hazard:** Product does not present any special fire hazard. Carbon 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 if necessary.

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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.
- Environmental Precautions:** No special environmental precautions are required.
- Methods for Clean Up:** Absorb liquid with disposable laboratory towel or other absorbent material and then place in a closed container for 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. Product may cause allergic reaction in sensitized individuals. Do not pipet by mouth.
- Storage:** Keep container tightly closed. Store at -20°C or below. Protect from light.

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## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

---

- Exposure limits:** Not listed on the OSHA Occupational Chemical database.
- Engineering Controls:** Eye wash stations are required.
- Ventilation:** Area ventilation is generally adequate.
- Personal Protective Equipment:**
- Respiratory:** Respirator is not required.
- Hand:** Chemical resistant gloves required.
- Eye:** Safety glasses or goggles required.
- Clothing:** Laboratory coat recommended.
- 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 above ~0° C.
- Upper/lower flammability or Explosive limits:** No data available
- Odor:** Odorless
- Vapor pressure:** No data available
- Odor threshold:** No data available

# Safety Data Sheet

**Vapor density:** No data available  
**pH:** No data available  
**Relative density:** No data available  
**Freezing point:** ~0° C  
**Solubility:** Completely soluble in water  
**Boiling point:** ~100° C  
**Flash point:** No data available  
**Evaporation rate:** No data available  
**Flammability:** Not flammable  
**Upper/lower flammability or explosive limits:** No data available  
**Relative density:** ~1 at 20° C  
**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  
**Hazardous decomposition products:** Carbon oxides may be released in a fire.

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## SECTION 11 – TOXICOLOGICAL INFORMATION

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**Likely routes of exposure:** Ingestion, skin, eye contact.

### Acute toxicity

**Oral LD50:** No data available  
**Inhalation LC50:** No data available  
**Dermal LD50:** No data available  
**Other:** No data available

**Chronic toxicity:** No data available

**Skin corrosion:** No data available  
**Eye damage:** No data available  
**Sensitization (Respiration or Skin):** No data available  
**Germ cell mutagenicity:** No data available  
**Carcinogenicity:** No data available  
**Reproductive toxicity:** No data available  
**Teratogenicity:** No data available

### Carcinogenicity

**NTP:** not listed  
**IARC:** not listed  
**OSHA:** not listed



# Safety Data Sheet

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## SECTION 12 – ECOLOGICAL INFORMATION

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**Ecotoxicity:** No data available  
**Persistence/Degradability:** No data available  
**Bioaccumulation Potential:** No data available  
**Mobility in Soil:** No data available. Expected to be mobile because it is an aqueous solution.

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## SECTION 13 – DISPOSAL CONSIDERATIONS

---

**RCRA hazardous waste code:** Not listed as a hazardous waste.  
**Appropriate disposal containers:** No specific restrictions on waste container type.  
**Appropriate Method of Disposal:** Clean up and dispose of waste in accordance with all federal, state and local environmental regulations.

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## SECTION 14 – TRANSPORT INFORMATION

---

**UN number:** N/A  
**Proper Shipping Name:** None.  
**DOT:** Non-hazardous for transport.  
**IMDG:** Non-hazardous for transport.  
**IATA:** Non-hazardous for transport.

---

## SECTION 15 – REGULATORY INFORMATION

---

**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:** Not a hazardous substance or mixture

**Massachusetts Right to Know Components:** No components are subject to Massachusetts Right to Know Act.

**Pennsylvania Right to Know Components:**  
Water CAS number: 7732-18-5

**New Jersey Right to Know Components:** No components are subject to New Jersey Right to Know Act.

**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:** January 22, 2015  
**Replaced Version date:** July 30, 2012

**Disclaimer:** This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Lifeline Cell Technology. The data on this sheet relate only to the specific materials designated herein and shall only be used as a guide. Lifeline Cell Technology assumes no legal responsibility for the use or reliance upon these data.

# Safety Data Sheet

## LIFELINE CELL TECHNOLOGY SAFETY DATA SHEET

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### SECTION 1 – PRODUCT AND COMPANY INFORMATION

---

**Product Name:** rh FGF-b  
**Product Number:** LS-1002  
**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/Tissue culture

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### SECTION 2 – HAZARDS IDENTIFICATION

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**Hazardous Components:** Not a hazardous substance or mixture

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### SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

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**Principal Components:** recombinant human FGF-b      CAS number: 106096-93-9  
Water      CAS number: 7732-18-5

**Composition:** The item formulation is a mixture of recombinant human FGF-b (rh FGF-b), water and stabilizing agents. With the exception of purified water, all ingredients are in concentrations of less than 1%.

**Synonym:** Fibroblast Growth Factors-basic, bFGF, FGF-2

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### SECTION 4 – FIRST AID MEASURES

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#### Potential Health Effects:

**Eye:** May cause irritation of the eye.

**Skin:** May cause skin irritation.

**Ingestion:** May be harmful if swallowed.

**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

#### First aid measures:

**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.

# Safety Data Sheet

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## SECTION 5 – FIRE FIGHTING MEASURES

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- General Fire hazard:** Product does not present any special fire hazard. Carbon 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 if necessary.

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## SECTION 6 – ACCIDENTAL RELEASE MEASURES

---

- Personal Precautions and Protective Equipment:** Refer to section 8 for appropriate personal protection.
- Environmental Precautions:** No special environmental precautions are required.
- Methods for Clean Up:** Absorb liquid with disposable laboratory towel or other absorbent material and then place in a closed container for disposal. Wash spill site after liquid cleanup is complete with cleansers appropriate for the spill site surface material.

---

## SECTION 7 – HANDLING AND STORAGE

---

- Precautions for Handling:** Refer to section 8 for appropriate personal protection. Avoid contact with eyes, skin or clothing. Product may cause allergic reaction in sensitized individuals. Do not pipet by mouth.
- Storage:** Keep container tightly closed. Store at -20°C or below. Protect from light.

---

## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

---

- Exposure limits:** Not listed on the OSHA Occupational Chemical database.
- Engineering Controls:** Eye wash stations are required.
- Ventilation:** Area ventilation is generally adequate.
- Personal Protective Equipment:**
- Respiratory:** Respirator is not required.
- Hand:** Chemical resistant gloves required.
- Eye:** Safety glasses or goggles required.
- Clothing:** Laboratory coat recommended.
- 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 above ~0° C.
- Upper/lower flammability or Explosive limits:** No data available
- Odor:** Odorless
- Vapor pressure:** No data available
- Odor threshold:** No data available

# Safety Data Sheet

**Vapor density:** No data available  
**pH:** Neutral  
**Relative density:** No data available  
**Freezing point:** ~0° C  
**Solubility:** Completely soluble in water  
**Boiling point:** ~100° C  
**Flash point:** No data available  
**Evaporation rate:** No data available  
**Flammability:** Not flammable  
**Upper/lower flammability or explosive limits:** No data available  
**Relative density:** ~1 at 20° C  
**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  
**Hazardous decomposition products:** Carbon oxides may be released in a fire.

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## SECTION 11 – TOXICOLOGICAL INFORMATION

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**Likely routes of exposure:** Ingestion, skin, eye contact.

### Acute toxicity

**Oral LD50:** No data available  
**Inhalation LC50:** No data available  
**Dermal LD50:** No data available  
**Other:** No data available

**Chronic toxicity:** No data available

**Skin corrosion:** No data available  
**Eye damage:** No data available  
**Sensitization (Respiration or Skin):** No data available  
**Germ cell mutagenicity:** No data available  
**Carcinogenicity:** No data available  
**Reproductive toxicity:** No data available  
**Teratogenicity:** No data available

### Carcinogenicity

**NTP:** not listed  
**IARC:** not listed  
**OSHA:** not listed

# Safety Data Sheet

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## SECTION 12 – ECOLOGICAL INFORMATION

---

**Ecotoxicity:** No data available  
**Persistence/Degradability:** No data available  
**Bioaccumulation Potential:** No data available  
**Mobility in Soil:** No data available. Expected to be mobile because it is an aqueous solution.

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## SECTION 13 – DISPOSAL CONSIDERATIONS

---

**RCRA hazardous waste code:** Not listed as a hazardous waste.  
**Appropriate disposal containers:** No specific restrictions on waste container type.  
**Appropriate Method of Disposal:** Clean up and dispose of waste in accordance with all federal, state and local environmental regulations.

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## SECTION 14 – TRANSPORT INFORMATION

---

**UN number:** N/A  
**Proper Shipping Name:** None.  
**DOT:** Non-hazardous for transport.  
**IMDG:** Non-hazardous for transport.  
**IATA:** Non-hazardous for transport.

---

## SECTION 15 – REGULATORY INFORMATION

---

**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:** Not a hazardous substance or mixture

**Massachusetts Right to Know Components:** No components are subject to Massachusetts Right to Know Act.

**Pennsylvania Right to Know Components:**  
Water CAS number: 7732-18-5

**New Jersey Right to Know Components:** No components are subject to New Jersey Right to Know Act.

**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

---

### Preparation information:

**Prepared by:** Quality Department  
**Date Prepared:** January 21, 2015  
**Replaced Version date:** July 30, 2012

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# Safety Data Sheet

## LIFELINE CELL TECHNOLOGY SAFETY DATA SHEET

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### SECTION 1 – PRODUCT AND COMPANY INFORMATION

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**Product Name:** Ascorbic Acid  
**Product Number:** LS-1005  
**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/Tissue culture

---

### SECTION 2 – HAZARDS IDENTIFICATION

---

**Hazardous Components:** Not a hazardous substance or mixture

---

### SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

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**Principal Components:** L-Ascorbic Acid Phosphate Magnesium Salt    CAS number: 113170-55-1  
Water    CAS number: 7732-18-5

**Composition:** The item formulation is a solution of the above form of Ascorbic Acid and water. The solution contains approximately 5% L-Ascorbic Acid Phosphate Magnesium Salt in water.

**Synonym:** Phospitan C, AA2P, Ascorbyl PM, (Vitamin C)

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### SECTION 4 – FIRST AID MEASURES

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**Potential Health Effects:**

**Eye:** May cause irritation of the eye.

**Skin:** May cause skin irritation.

**Ingestion:** May be harmful if swallowed.

**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

**First aid measures:**

**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.

# Safety Data Sheet

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## SECTION 5 – FIRE FIGHTING MEASURES

---

- General Fire hazard:** Product does not present any special fire hazard. Carbon 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 if necessary.

---

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

---

- Personal Precautions and Protective Equipment:** Refer to section 8 for appropriate personal protection.
- Environmental Precautions:** No special environmental precautions are required.
- Methods for Clean Up:** Absorb liquid with disposable laboratory towel or other absorbent material and then place in a closed container for disposal. Wash spill site after liquid cleanup is complete with cleansers appropriate for the spill site surface material.

---

## SECTION 7 – HANDLING AND STORAGE

---

- Precautions for Handling:** Refer to section 8 for appropriate personal protection. Avoid contact with eyes, skin or clothing. Product may cause allergic reaction in sensitized individuals. Do not pipet by mouth.
- Storage:** Keep container tightly closed. Store at -20°C or below. Protect from light.

---

## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

---

- Exposure limits:** Not listed on the OSHA Occupational Chemical database.
- Engineering Controls:** Eye wash stations are required.
- Ventilation:** Area ventilation is generally adequate.
- Personal Protective Equipment:**
- Respiratory:** Respirator is not required.
- Hand:** Chemical resistant gloves required.
- Eye:** Safety glasses or goggles required.
- Clothing:** Laboratory coat recommended.
- General Hygiene Measures:** Wash hands thoroughly after handling.

---

## SECTION 9 – PHYSICAL / CHEMICAL PROPERTIES

---

- Appearance:** Frozen, clear liquid above ~0° C.
- Upper/lower flammability or Explosive limits:** No data available
- Odor:** Odorless
- Vapor pressure:** No data available
- Odor threshold:** No data available

# Safety Data Sheet

**Vapor density:** No data available  
**pH:** No data available  
**Relative density:** No data available  
**Freezing point:** ~0° C  
**Solubility:** Completely soluble in water  
**Boiling point:** ~100° C  
**Flash point:** No data available  
**Evaporation rate:** No data available  
**Flammability:** Not flammable  
**Upper/lower flammability or explosive limits:** No data available  
**Relative density:** 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

---

**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  
**Hazardous decomposition products:** Carbon oxides may be released in a fire.

---

## SECTION 11 – TOXICOLOGICAL INFORMATION

---

**Likely routes of exposure:** Ingestion, skin, eye contact.

### Acute toxicity

**Oral LD50:** No data available  
**Inhalation LC50:** No data available  
**Dermal LD50:** No data available  
**Other:** No data available

**Chronic toxicity:** No data available

**Skin corrosion:** No data available  
**Eye damage:** No data available  
**Sensitization (Respiration or Skin):** No data available  
**Germ cell mutagenicity:** No data available  
**Carcinogenicity:** No data available  
**Reproductive toxicity:** No data available  
**Teratogenicity:** No data available

### Carcinogenicity

**NTP:** not listed  
**IARC:** not listed  
**OSHA:** not listed



# Safety Data Sheet

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## SECTION 12 – ECOLOGICAL INFORMATION

---

**Ecotoxicity:** No data available  
**Persistence/Degradability:** No data available  
**Bioaccumulation Potential:** No data available  
**Mobility in Soil:** No data available. Expected to be mobile because it is an aqueous solution.

---

## SECTION 13 – DISPOSAL CONSIDERATIONS

---

**RCRA hazardous waste code:** Not listed as a hazardous waste.  
**Appropriate disposal containers:** No specific restrictions on waste container type.  
**Appropriate Method of Disposal:** Clean up and dispose of waste in accordance with all federal, state and local environmental regulations.

---

## SECTION 14 – TRANSPORT INFORMATION

---

**UN number:** N/A  
**Proper Shipping Name:** None.  
**DOT:** Non-hazardous for transport.  
**IMDG:** Non-hazardous for transport.  
**IATA:** Non-hazardous for transport.

---

## SECTION 15 – REGULATORY INFORMATION

---

**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:** Not a hazardous substance or mixture

**Massachusetts Right to Know Components:** No components are subject to Massachusetts Right to Know Act.

**Pennsylvania Right to Know Components:**

L-Ascorbic Acid Phosphate Magnesium Salt	CAS number:	113170-55-1
Water	CAS number:	7732-18-5

**New Jersey Right to Know Components:** No components are subject to New Jersey Right to Know Act.

**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.

---

## SECTION 16 – OTHER INFORMATION

---

**Preparation information:**

**Prepared by:** Quality Department  
**Date Prepared:** January 22, 2015  
**Replaced Version date:** July 30, 2012

**Disclaimer:** This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Lifeline Cell Technology. The data on this sheet relate only to the specific materials designated herein and shall only be used as a guide. Lifeline Cell Technology assumes no legal responsibility for the use or reliance upon these data.

# Safety Data Sheet

## LIFELINE CELL TECHNOLOGY SAFETY DATA SHEET

---

### SECTION 1 – PRODUCT AND COMPANY INFORMATION

---

**Product Name:** rh EGF  
**Product Number:** LS-1015  
**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/Tissue culture

---

### SECTION 2 – HAZARDS IDENTIFICATION

---

**Hazardous Components:** Not a hazardous substance or mixture

---

### SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

---

<b>Principal Components:</b>	recombinant human EGF	CAS number:	N/A
	Water	CAS number:	7732-18-5

---

**Composition:** The item formulation is a mixture of recombinant human EGF (rh EGF), water and stabilizing agents. With the exception of purified water, all ingredients are in concentrations of less than 1%.

**Synonym:** Epidermal Growth Factor, Urogastrone, URG

---

### SECTION 4 – FIRST AID MEASURES

---

#### Potential Health Effects:

**Eye:** May cause irritation of the eye.

**Skin:** May cause skin irritation.

**Ingestion:** May be harmful if swallowed.

**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

#### First aid measures:

**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.

# Safety Data Sheet

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## SECTION 5 – FIRE FIGHTING MEASURES

---

- General Fire hazard:** Product does not present any special fire hazard. Carbon 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 if necessary.

---

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

---

- Personal Precautions and Protective Equipment:** Refer to section 8 for appropriate personal protection.
- Environmental Precautions:** No special environmental precautions are required.
- Methods for Clean Up:** Absorb liquid with disposable laboratory towel or other absorbent material and then place in a closed container for disposal. Wash spill site after liquid cleanup is complete with cleansers appropriate for the spill site surface material.

---

## SECTION 7 – HANDLING AND STORAGE

---

- Precautions for Handling:** Refer to section 8 for appropriate personal protection. Avoid contact with eyes, skin or clothing. Product may cause allergic reaction in sensitized individuals. Do not pipet by mouth.
- Storage:** Keep container tightly closed. Store at -20°C or below. Protect from light.

---

## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

---

- Exposure limits:** Not listed on the OSHA Occupational Chemical database.
- Engineering Controls:** Eye wash stations are required.
- Ventilation:** Area ventilation is generally adequate.
- Personal Protective Equipment:**
- Respiratory:** Respirator is not required.
- Hand:** Chemical resistant gloves required.
- Eye:** Safety glasses or goggles required.
- Clothing:** Laboratory coat recommended.
- General Hygiene Measures:** Wash hands thoroughly after handling.

---

## SECTION 9 – PHYSICAL / CHEMICAL PROPERTIES

---

- Appearance:** Frozen, clear liquid above ~0° C.
- Upper/lower flammability or Explosive limits:** No data available
- Odor:** Odorless
- Vapor pressure:** No data available
- Odor threshold:** No data available

# Safety Data Sheet

**Vapor density:** No data available  
**pH:** Neutral  
**Relative density:** No data available  
**Freezing point:** ~0° C  
**Solubility:** Completely soluble in water  
**Boiling point:** ~100° C  
**Flash point:** No data available  
**Evaporation rate:** No data available  
**Flammability:** Not flammable  
**Upper/lower flammability or explosive limits:** No data available  
**Relative density:** ~1 at 20° C  
**Partition coefficient: n-octanol/water:** No data available  
**Auto-ignition temperature:** No data available  
**Viscosity:** No data available

---

## SECTION 10 – STABILITY AND REACTIVITY

---

**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  
**Hazardous decomposition products:** Carbon oxides may be released in a fire.

---

## SECTION 11 – TOXICOLOGICAL INFORMATION

---

**Likely routes of exposure:** Ingestion, skin, eye contact.

### Acute toxicity

**Oral LD50:** No data available  
**Inhalation LC50:** No data available  
**Dermal LD50:** No data available  
**Other:** No data available

**Chronic toxicity:** No data available

**Skin corrosion:** No data available  
**Eye damage:** No data available  
**Sensitization (Respiration or Skin):** No data available  
**Germ cell mutagenicity:** No data available  
**Carcinogenicity:** No data available  
**Reproductive toxicity:** No data available  
**Teratogenicity:** No data available

### Carcinogenicity

**NTP:** not listed  
**IARC:** not listed  
**OSHA:** not listed

# Safety Data Sheet

---

## SECTION 12 – ECOLOGICAL INFORMATION

---

**Ecotoxicity:** No data available  
**Persistence/Degradability:** No data available  
**Bioaccumulation Potential:** No data available  
**Mobility in Soil:** No data available. Expected to be mobile because it is an aqueous solution.

---

## SECTION 13 – DISPOSAL CONSIDERATIONS

---

**RCRA hazardous waste code:** Not listed as a hazardous waste.  
**Appropriate disposal containers:** No specific restrictions on waste container type.  
**Appropriate Method of Disposal:** Clean up and dispose of waste in accordance with all federal, state and local environmental regulations.

---

## SECTION 14 – TRANSPORT INFORMATION

---

**UN number:** N/A  
**Proper Shipping Name:** None.  
**DOT:** Non-hazardous for transport.  
**IMDG:** Non-hazardous for transport.  
**IATA:** Non-hazardous for transport.

---

## SECTION 15 – REGULATORY INFORMATION

---

**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:** Not a hazardous substance or mixture

**Massachusetts Right to Know Components:** No components are subject to Massachusetts Right to Know Act.

**Pennsylvania Right to Know Components:**

Water

CAS number: 7732-18-5

**New Jersey Right to Know Components:** No components are subject to New Jersey Right to Know Act.

**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.

---

## SECTION 16 – OTHER INFORMATION

---

**Preparation information:**

**Prepared by:** Quality Department  
**Date Prepared:** February 10, 2015  
**Replaced Version date:** July 30, 2012

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# Safety Data Sheet

## LIFELINE CELL TECHNOLOGY SAFETY DATA SHEET

---

### SECTION 1 – PRODUCT AND COMPANY INFORMATION

---

**Product Name:** FBS

**Product Number:** LS-1012

**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/Tissue culture

---

### SECTION 2 – HAZARDS IDENTIFICATION

---

**Hazardous Components:** Not a hazardous substance or mixture

---

### SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

---

**Principal Components:** Fetal Bovine Serum CAS number: N/A

**Composition:** The item formulation is 100% fetal bovine serum.

**Synonym:** Fetal Bovine Serum, Fetal Calf Serum, FCS

---

### SECTION 4 – FIRST AID MEASURES

---

**Potential Health Effects:**

**Eye:** May cause irritation of the eye.

**Skin:** May cause skin irritation.

**Ingestion:** May be harmful if swallowed.

**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

**First aid measures:**

**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.

# Safety Data Sheet

---

## SECTION 5 – FIRE FIGHTING MEASURES

---

- General Fire hazard:** Product does not present any special fire hazard. Carbon 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 if necessary.

---

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

---

- Personal Precautions and Protective Equipment:** Refer to section 8 for appropriate personal protection.
- Environmental Precautions:** No special environmental precautions are required.
- Methods for Clean Up:** Absorb liquid with disposable laboratory towel or other absorbent material and then place in a closed container for disposal. Wash spill site after liquid cleanup is complete with cleansers appropriate for the spill site surface material.

---

## SECTION 7 – HANDLING AND STORAGE

---

- Precautions for Handling:** Refer to section 8 for appropriate personal protection. Avoid contact with eyes, skin or clothing. Product may cause allergic reaction in sensitized individuals. Do not pipet by mouth.
- Storage:** Keep container tightly closed. Store at -20°C or below. Protect from light.

---

## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

---

- Exposure limits:** Not listed on the OSHA Occupational Chemical database.
- Engineering Controls:** Eye wash stations are required.
- Ventilation:** Area ventilation is generally adequate.
- Personal Protective Equipment:**
- Respiratory:** Respirator is not required.
- Hand:** Chemical resistant gloves required.
- Eye:** Safety glasses or goggles required.
- Clothing:** Laboratory coat recommended.
- General Hygiene Measures:** Wash hands thoroughly after handling.

---

## SECTION 9 – PHYSICAL / CHEMICAL PROPERTIES

---

- Appearance:** Tan or straw colored, frozen liquid.
- Upper/lower flammability or Explosive limits:** No data available
- Odor:** Faint earthy or musky odor
- Vapor pressure:** No data available
- Odor threshold:** No data available

# Safety Data Sheet

**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  
**Relative density:** No data available  
**Partition coefficient: n-octanol/water:** No data available  
**Auto-ignition temperature:** No data available  
**Viscosity:** No data available

---

## SECTION 10 – STABILITY AND REACTIVITY

---

**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  
**Hazardous decomposition products:** Carbon oxides may be released in a fire.

---

## SECTION 11 – TOXICOLOGICAL INFORMATION

---

**Likely routes of exposure:** Ingestion, skin, eye contact.

### Acute toxicity

**Oral LD50:** No data available  
**Inhalation LC50:** No data available  
**Dermal LD50:** No data available  
**Other:** No data available

**Chronic toxicity:** No data available

**Skin corrosion:** No data available  
**Eye damage:** No data available  
**Sensitization (Respiration or Skin):** No data available  
**Germ cell mutagenicity:** No data available  
**Carcinogenicity:** No data available  
**Reproductive toxicity:** No data available  
**Teratogenicity:** No data available

### Carcinogenicity

**NTP:** not listed  
**IARC:** not listed  
**OSHA:** not listed



# Safety Data Sheet

---

## SECTION 12 – ECOLOGICAL INFORMATION

---

**Ecotoxicity:** No data available  
**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.

---

## SECTION 13 – DISPOSAL CONSIDERATIONS

---

**RCRA hazardous waste code:** Not listed as a hazardous waste.  
**Appropriate disposal containers:** No specific restrictions on waste container type.  
**Appropriate Method of Disposal:** Clean up and dispose of waste in accordance with all federal, state and local environmental regulations.

---

## SECTION 14 – TRANSPORT INFORMATION

---

**UN number:** N/A  
**Proper Shipping Name:** None.  
**DOT:** Non-hazardous for transport.  
**IMDG:** Non-hazardous for transport.  
**IATA:** Non-hazardous for transport.

---

## SECTION 15 – REGULATORY INFORMATION

---

**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:** Not a hazardous substance or mixture

**Massachusetts Right to Know Components:** No components are subject to Massachusetts Right to Know Act.

**Pennsylvania Right to Know Components:**  
Fetal Bovine Serum                      CAS number:    N/A

**New Jersey Right to Know Components:**  
Fetal Bovine Serum                      CAS number:    N/A

**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.

---

## SECTION 16 – OTHER INFORMATION

---

### Preparation information:

**Prepared by:** Quality Department  
**Date Prepared:** February 10, 2015  
**Replaced Version date:** July 30, 2012

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