


**1. IDENTIFICATION**

- |                            |   |
|----------------------------|---|
| 1.1. Product Name          | Stemgent® hES Cell Cloning & Recovery Supplement  |
| 1.2. Catalog Number        | 01-0014-500   |
| 1.3. Uses and restrictions | For research use only. Not for use in diagnostic or therapeutic applications  |
| 1.4. Manufacturer/Supplier | Stemgent, Inc.<br>51 Moulton St.<br>Cambridge, MA 02138 USA<br>(617) 245-0000   |
| 1.5. In Case of Emergency  | <ul style="list-style-type: none"><li>• For medical emergencies, contact your local emergency center.</li><li>• For transportation emergencies, contact your local transportation authorities.</li><li>• For other non-medical or non-environmental emergencies please call (617) 245-0030, 8:00 am-4:00 pm EST, Monday – Friday.</li></ul> |

**2. HAZARDS IDENTIFICATION**

- |  |   |
|--|---|
| 2.1. Classification  | GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) <ul style="list-style-type: none"><li>• Flammable liquids (Category 4), H227</li><li>• Acute toxicity, Oral (Category 4), H302</li></ul>   |
| 2.2. Signal Word   | Warning   |
| 2.3. Symbol  |   |
| 2.4. Hazard Statement(s)   | Combustible liquid.<br>Harmful if swallowed.  |
| 2.5. Precautionary Statement(s)                                    | Keep away from heat/sparks/open flames/hot surfaces. No smoking.<br>Wash skin thoroughly after handling.<br>Do not eat, drink, or smoke when using this product.<br>IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.<br>Wear protective gloves/protective clothing/eye protection/face protection.<br>Rinse mouth.<br>In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.<br>Store in a well-ventilated place. Keep cool.<br>Dispose of contents/container to an approved waste disposal plant. |
| 2.6. Hazards not otherwise classified (HNOC) or not covered by GHS | None.   |

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

3.1. Chemical Name	3.2. Synonyms	3.3. Chemical Formula	3.4. Molecular Weight	3.5. CAS Number
Dimethyl Sulfoxide	DMSO	C <sub>2</sub> H <sub>6</sub> OS	78.13 g/mol	67-68-5
Thiazovivin	N-benzyl-2-(pyrimidin-4-ylamino)thiazole-4-carboxamide	C <sub>22</sub> H <sub>24</sub> N <sub>2</sub> O <sub>8</sub> •HCL•1/2 (H <sub>2</sub> O)•1/2 (C <sub>2</sub> H <sub>6</sub> O)	311.36 g/mol	1226056-71-8

**HAZARDOUS COMPONENTS WITHIN MIXTURE**

Component	CAS-No./EC-No.	Classification	Concentration
Dimethyl Sulfoxide CAS-No: 67-685	CAS-No: 67-68-5 EC-No: 200-664-3	Flam. Liq. 4; H227	N/A
Thiazovivin CAS-No: 1226056-71-8	CAS-No: 1226056-71-8 EC-No: N/A	Acute Toxicity 4; H302	2 mM

**4. FIRST AID MEASURES**
**4.1. First Aid Instructions**

- **General Advice** Move out of exposure area. Consult a physician.
- **Eyes** Check for and remove contact lenses immediately and flush thoroughly with water for at least 15 minutes. Call a physician.
- **Skin** Immediately flush skin with copious amounts of water. Remove contaminated clothing and shoes and wash before use. Wash off with soap.
- **Ingestion** If swallowed, wash mouth out with water provided person is conscious. Do not induce vomiting. Loosen tight clothing. Contact a physician.
- **Inhalation** If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, call a physician.
- **Puncture Wounds** Wash thoroughly with soap and water. Allow wound to bleed freely. Contact a physician.

**4.2. Most Important Symptoms/effects, acute and immediate** Described in section 2.

**4.3. Indications of immediate medical attention and special treatment needed** No data available.

**5. FIRE FIGHTING MEASURES**

**5.1. Suitable extinguishing media.** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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- 5.2. Specific hazards arising from the chemical No data available.
- 5.3. Special protective equipment and precautions for fire-fighters Wear self contained breathing apparatus and full turnout gear for firefighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

- 6.1. Personal precautions, protective equipment, and emergency procedures Use personal protective equipment (see section 8). Avoid direct contact with skin or eyes and prevent inhalation of vapors. Ensure adequate ventilation.
- 6.2. Environmental Precautions Do not let product enter drain.
- 6.3. Methods and materials for containment and clean up Keep in suitable, closed containers for disposal. Dispose of absorbent material used to clean spills in accordance with local, state, and federal regulations.

## 7. HANDLING AND STORAGE

- 7.1. Precautions for safe handling
- Avoid inhalation, contact with eyes, skin, and clothing.
  - Keep in well ventilated area
  - For other precautions see section 2.5.
- 7.2. Conditions for safe storage, including any incompatibilities Store 4°C. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1. Control Parameters Dimethyl Sulfoxide, CAS-No. 67-68-5  
Dimethyl Sulfoxide Exposure Levels
- TWA: 250ppm – USA. Workplace Environmental Exposure Levels (WEEL)
- 8.2. Appropriate engineering controls Safety shower and eye bath. Mechanical exhaust required.
- 8.3. Protection measures and Personal Protective Equipment
- Respiratory Protection Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels are desired, use type N95 (US) or type P1 (EN 143) dust masks.
  - Eye Protection Chemical safety goggles.
  - Skin Protection Protective gloves and lab coat.

## 9. PHYSICAL/CHEMICAL PROPERTIES

- 9.1. Appearance Clear Liquid.
- 9.2. Odor No data available.
- 9.3. Odor Threshold No data available.
- 9.4. pH No data available.

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9.5. Melting point/freezing point	No data available.
9.6. Initial boiling point and boiling range	No data available.
9.7. Flash point	No data available.
9.8. Evaporation rate	No data available.
9.9. Flammability (solid, gas);	No data available.
9.10. Upper/lower flammability or explosive limits	No data available.
9.11. Vapor pressure	No data available.
9.12. Vapor density	No data available.
9.13. Relative density	No data available.
9.14. Solubility(ies)	No data available.
9.15. Partition coefficient: n-octanol/water	No data available.
9.16. Auto-ignition temperature	No data available.
9.17. Decomposition temperature	No data available.
9.18. Viscosity	No data available.
9.19. Explosive properties	No data available.
9.20. Oxidizing properties	No data available.

## 10. STABILITY/REACTIVITY

10.1. Reactivity	No data available.
10.2. Chemical Stability	This product is stable.
10.3. Possibility of hazardous reactions	No data available.
10.4. Conditions to Avoid	No data Available.
10.5. Incompatible materials	Acids and bases.
10.6. Hazardous decomposition products	Carbon dioxide, Carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

11.1. Toxicological effects	
• Acute toxicity	<ul style="list-style-type: none"><li>• Oral LD-50 (male rat): 14,500 – 28,300 mg/kg</li><li>• Inhalation LD-50 (rat): 4 hrs – 40250 ppm</li><li>• Dermal LD-50 (rat): 40,000 mg/kg</li></ul>
• Skin corrosion/irritation	<ul style="list-style-type: none"><li>• Skin irritation (human): Mild</li><li>• Repeated skin application (human): Slight irritation</li><li>• Skin sensitization (human): None by EC protocols</li></ul>
• Serious eye damage/eye irritation	<ul style="list-style-type: none"><li>• Eye irritation (human): None by EC protocols</li></ul>
• Respiratory or skin sensitization	No data available.

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- Germ cell mutagenicity
  - Mouse
    - Lymphocyte
    - Cytogenetic analysis
    - Mutation in mammalian somatic cells
    - DNA damage
  - Rat
    - Cytogenetic analysis
- Carcinogenicity
  - IARC: No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.
  - ACGIH: No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
  - NTP: No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.
  - OSHA: No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
- Reproductive Toxicity
  - Reproductive toxicity – Rat – intraperitoneal
    - Effects on Fertility: Abortion.
    - Effects on Fertility: Post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants).
  - Reproductive toxicity – Rat – Subcutaneous
    - Effects on Fertility: Post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants).
    - Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth)
  - Reproductive – Mouse – Oral
    - Effects on Fertility: Pre-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea).
    - Effects on Embryo or Fetus: Fetotoxicity (except death, e.g. stunted fetus).
    - Specific developmental abnormalities: Musculoskeletal system.
  - Developmental Toxicity – Mouse – intraperitoneal
    - Effects on Embryo or Fetus: Fetotoxicity (except death, e.g. stunted fetus).  
Specific developmental abnormalities: Musculoskeletal system .
- Specific target organ toxicity - single exposure
  - No data available.
- Specific target organ toxicity - repeated exposure
  - No data available.
- Aspiration hazard
  - No data available.
- 11.2. Symptoms related to the physical, chemical and toxicological characteristics
  - Effects due to ingestion may include: Nausea, Fatigue, Headache.
- 11.3. Effects of Short-Term Exposure
  - No data available.

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11.4. Effects of Long-Term Exposure

- Oral study (13 weeks, rat): LOEL = 8800 mg/kg/day (minor target organ effects: liver) (reduced weight gain): NOEL = 1100 mg/kg/day
- Inhalation study (6 weeks, rat): NOEL = 60 ppm

11.5. Numerical measures of toxicity

No data available.

11.6. Other Information

Eyes – Eye disease – Based on Human Evidence

**12. ECOLOGICAL INFORMATION**

12.1. Toxicity

- LC50 – *Oryzias latipes* -> 1,000 mg/l – 48h
- LC50 – *Pimephales promelas* (fathead minnow) – 34,000 mg/l – 96h
- LC50 – *Oncorhynchus mykiss* (rainbow trout) – 35,000 mg/l – 96h
- EC50 – *Daphnia magna* (Water flea) – 24,600 mg/l – 48h
- EC50 – *Pseudokirchneriella subcapitata* (green algae) – 17,000 mg/l – 72h

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

**13. DISPOSAL CONSIDERATIONS**

13.1. Disposal Method

Waste must be disposed of in accordance with federal, state, and local environmental control regulations.

13.2. Personal safety

Refer to section 8.

**14. TRANSPORT INFORMATION**

- DOT (US)
  - NA-Number: 1993, Class: NONE, Packing group: III
  - Proper shipping name: Combustible liquid, n.o.s. (Dimethyl sulfoxide) (Dimethyl sulfoxide)
  - Poison Inhalation Hazard: No
- IMDG
- IATA

Not dangerous goods  
Not dangerous goods

**15. REGULATORY INFORMATION**

U.S. Federal Regulations

- SARA 313 components
- SARA 302 components
- SARA 311/312 Hazards

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels.  
Does not contain any components subject to reporting.  
Acute hazard, Fire hazard.

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<ul style="list-style-type: none"><li>Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see CFR 61)</li></ul>	Does not contain any components subject to reporting.
U.S. State Regulations	
<ul style="list-style-type: none"><li>California Proposition 65</li></ul>	Does not contain any components subject to reporting.
<ul style="list-style-type: none"><li>Massachusetts Right To Know Components</li></ul>	Does not contain any components subject to reporting.
<ul style="list-style-type: none"><li>Pennsylvania Right To Know Components</li></ul>	Dimethyl Sulfoxide, CAS No. 67-68-5 Thiazovivin, CAS No. CAS 1226056-71-8
<ul style="list-style-type: none"><li>New Jersey Right To Know Components</li></ul>	Dimethyl Sulfoxide, CAS No. 67-68-5 Thiazovivin, CAS. No. 1226056-71-8
WHMIS Hazard Class	Not controlled under WHMIS (Canada).

## 16. OTHER INFORMATION

### Notice

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Stemgent, Inc. shall not be held liable for any damage resulting from handling or from contact with the product. See Stemgent, Inc. website for terms and conditions of sale.

Preparation Date

May 27th, 2015

Version No.

1.1

Prepared by

Quality Control

END OF SAFETY DATA SHEET

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