## Section 1 - IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### 1.1 Product Identifier:
Primary Human Skeletal Muscle Derived Cells (SkMDC)

**Synonyms**
- SkMDC

**Substance Registration Number(s)**
This material is imported in amounts <1 ton/year. The substances in this product are not subject to REACH registration requirements.

### 1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

**Identified Uses**
- Research use only

**Uses Advised Against**
- None known.

**Manufacturer's Part Number:** SK-1111

### 1.3 Details of the supplier of the safety data sheet

Cook MyoSite, Inc.  
105 Delta Drive  
Pittsburgh, PA, U.S.A  15238  
Mfg Contact: researchsales@cookmedical.com

### 1.4 Emergency Telephone Number
+45 56868686

## Section 2 - HAZARDS IDENTIFICATION

### 2.1 Classification of the Substance or Mixture

**Classification according to Regulation (EC) No 1272/2008**
No classification is assigned, based on classification criteria. Review the entire data sheet for any additional information which did not result in a GHS classification.

**Classification according to Directives 67/548/EEC and/or 1999/45/EC**
No classification is assigned based on classification criteria.

### 2.2 Label Elements

**Labeling according to Regulation (EC) 1272/2008:**
- None needed according to classification criteria.

**Symbol(s)**
- None needed according to classification criteria.

**Signal Word**
- None needed according to classification criteria.

**Hazard Statement(s)**
- None allocated.

**Precautionary Statement(s)**
- Prevention
  - None allocated.
- Response
  - None allocated.
- Storage
  - Store at temperatures not exceeding -80°C.
Disposal
None allocated.

Labelling according to Directive 67/548/EEC and/or 1999/45/EC
None needed according to classification criteria.

2.3 Other Hazards
No additional information is available.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>EC No</th>
<th>Registration No</th>
<th>67/548 EEC (DSD)</th>
<th>1272/2008 (CLP)</th>
<th>Percent</th>
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<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>67-548 EEC</td>
<td>200-664-3</td>
<td></td>
<td></td>
<td>7-13</td>
</tr>
</tbody>
</table>

4.1 Description of First Aid Measures

Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin
Wash thoroughly after handling. Wear protective clothing to minimize skin contact. Wash contaminated clothing before reuse.

Eyes
Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/physician.

Ingestion
If swallowed, get medical attention.

4.2 Most Important Symptoms and Effects, both Acute and Delayed

Acute
No information on significant adverse effects.

Delayed
No information on significant adverse effects.

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed
No special instructions.

5.1 Extinguishing Media
Use carbon dioxide, regular dry chemical, regular foam or water.

Unsuitable Extinguishing Media
None known.

5.2 Special Hazards Arising from the Substance or Mixture
Negligible fire hazard.

Thermal Decomposition Products
Combustion: oxides of carbon, oxides of sulfur

5.3 Advice for Firefighters
Fire Fighting Measures
No data available.

Protective Equipment and Precautions for Firefighters
Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.
**Section 6 - ACCIDENTAL RELEASE MEASURES**

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

6.2 Environmental Precautions

Prevent entry into sewers, drains, ditches, underground or confined spaces and waterways.

6.3 Methods and Material for Containment and Cleaning up

Collect spilled material in appropriate container for disposal. Bleach and wash with water. Dispose in accordance with all applicable regulations.

6.4 Reference to Other Sections

See Section 7 for Handling and Storage. See Section 8 for Personal Protective Equipment. See Section 13 for Disposal Guidance.

**Section 7 - HANDLING AND STORAGE**

7.1 Precautions for Safe Handling

Products contain human source material. Treat as potentially infectious. Handle at Biological Safety Level 2 to minimize exposure to potentially infectious agents. Each donor tissue, prior to cell isolation, is tested for the presence of HIV-1, Hepatitis B and Hepatitis C virus. Testing cannot offer complete assurance that the tested virus are absent. Avoid contact with skin and eyes. Wash thoroughly after handling. Wear protective gloves/clothing and eye/face protection.

7.2 Conditions for Safe Storage, Including any Incompatibilities

Keep frozen. Store at temperatures not exceeding -80°C. Do not reuse containers. Discard all empty containers.

7.3 Specific End Use(s)

Research use only

**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

8.1 Control Parameters

Component Exposure Limits

Dimethyl sulfoxide (67-68-5)

Austria: 50 ppm TWA; 160 mg/m3 TWA

Denmark: 50 ppm TWA; 160 mg/m3 TWA

Estonia: 50 ppm TWA; 150 mg/m3 TWA

Finland: 50 ppm TWA

Germany (DFG): 50 ppm TWA MAK; 160 mg/m3 TWA MAK

Lithuania: 50 ppm TWA; 150 mg/m3 TWA

Slovenia: 160 mg/m3 TWA

Sweden: 50 ppm LLV; 150 mg/m3 LLV

Potential for cutaneous absorption

Germany (DFG): 100 ppm Peak; 320 mg/m3 Peak

skin notation

Lithuania: 150 ppm STEL; 500 mg/m3 STEL

Slovenia: 150 ppm STEL; 500 mg/m3 STEL

Derived No Effect Levels (DNELs)

No DNELs available.

Predicted No Effect Concentrations (PNECs)

No PNECs available.
8.2 Exposure Controls

Appropriate Engineering Controls
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels to a minimum. Ensure compliance with applicable exposure limits.

Personal Protective Equipment

Eye / Face Protection
Wear splash resistant safety goggles with a faceshield.

Skin Protection
Lab coat or apron. Protective clothing must be changed when it shows signs of contamination.

Glove Recommendations
Wear appropriate gloves.

Respiratory Protection
Approved respirators should be worn when airborne concentrations are expected to exceed occupation exposure limits.

Environmental Exposure Controls
Prevent entry into sewers, drains, ditches, underground or confined spaces and waterways.

9.1 Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Solid</th>
<th>Appearance:</th>
<th>cloudy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>amber</td>
<td>Physical Form:</td>
<td>Frozen Solid</td>
</tr>
<tr>
<td>Odor:</td>
<td>odorless to slight odor</td>
<td>Odor Threshold:</td>
<td>Not available</td>
</tr>
<tr>
<td>pH:</td>
<td>7.0-7.6</td>
<td>Melting Point:</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>Not available</td>
<td>Flash Point:</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Not available</td>
<td>LEL:</td>
<td>Not available</td>
</tr>
<tr>
<td>UEL:</td>
<td>Not available</td>
<td>Vapor Pressure:</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density (air = 1):</td>
<td>Not available</td>
<td>Density:</td>
<td>1 g/cm³</td>
</tr>
<tr>
<td>Specific Gravity (water = 1):</td>
<td>Not available</td>
<td>Water Solubility:</td>
<td>soluble</td>
</tr>
<tr>
<td>Log KOW:</td>
<td>Not available</td>
<td>Coeff. Water/Oil Dist:</td>
<td>Not available</td>
</tr>
<tr>
<td>KOC:</td>
<td>Not available</td>
<td>Viscosity:</td>
<td>Med-Ideal</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>Not flammable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9.2 Other Information
No additional information.

10.1 Reactivity
No reactivity hazard is expected.

10.2 Chemical Stability
Stable below -60°C.

10.3 Possibility of Hazardous Reactions
Hazardous polymerization will not occur.

10.4 Conditions to Avoid
Avoid contact with heat. Avoid elevated temperatures above -60°C.

10.5 Incompatible Materials
acid chlorides, strong acids, strong oxidizing materials, strong reducing agents

10.6 Hazardous Decomposition Products

Thermal Decomposition Products
Combustion: oxides of carbon, oxides of sulfur
**Section 11 - TOXICOLOGICAL INFORMATION**

11.1 Information on Toxicological Effects

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and no selected endpoints have been identified.

Irritation / Corrosivity

No information available for the product.

Respiratory Sensitization

No data available.

Skin Sensitization

No data available.

Germ Cell Mutagenicity

No data available.

Carcinogenicity

Component Carcinogenicity

None of this product's components are listed by IARC or DFG.

Reproductive Toxicity

None known.

Specific Target Organ Toxicity - Single Exposure

None known.

Specific Target Organ Toxicity - Repeated Exposure

None known.

Aspiration Hazard

No data available.

**Section 12 - ECOLOGICAL INFORMATION**

12.1 Toxicity

No data available.

Component Analysis - Aquatic Toxicity

Dimethyl sulfoxide (67-68-5)

Fish: 96 Hr LC50 Pimephales promelas: 34000 mg/L; 96 Hr LC50 Oncorhynchus mykiss: 33 - 37 g/L [static]; 96 Hr LC50 Lepomis macrochirus: >40 g/L [static]; 96 Hr LC50 Cyprinus carpio: 41.7 g/L

12.2 Persistence and Degradability

No information available.

12.3 Bioaccumulative Potential

No information available.

12.4 Mobility in Soil

No information available.

12.5 Results of PBT and vPvB Assessment

No information available.

EU - Interim Strategy for Management of PBT and vPvB Substances (PBT Assessments)

No components of this material are listed.

12.6 Other Adverse Effects

No information available.

**Section 13 - DISPOSAL CONSIDERATIONS**

13.1 Waste Treatment Methods

Dispose in accordance with all applicable local regulations. Dispose in a puncture-resistant biohazard container.
**Section 14 - TRANSPORT INFORMATION**

Transportation

Not regulated.

**Section 15 - REGULATORY INFORMATION**

15.1 Safety, Health and Environmental Regulations / Legislation Specific for the Substance or Mixture

EU - REACH (1907/2006) - Annex XIV List of Substances Subject to Authorisation

No components of this material are listed.

EU - REACH (1907/2006) - Article 59(1) Candidate List of Substances Subject to Authorisation

No components of this material are listed.

EU - REACH (1907/2006) - Annex XVII Restrictions of Certain Dangerous Substances, Mixtures and Articles

No components of this material are listed.

**Germany Regulations**

Germany Water Classification

Dimethyl sulfoxide (67-68-5)

ID Number 5050, hazard class 1 - low hazard to waters

**Denmark Regulations**

Environmental Protection Agency List of Undesirable Substances

No components of this material are listed.

**Substance Analysis - Inventory**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>EIN</td>
</tr>
</tbody>
</table>

**Section 16 - OTHER INFORMATION**

16.1 Indication of changes

New MSDS: 1.0000

16.2 Key / Legend to abbreviations and acronyms used in the safety data sheet

ACGIH - American Conference of Governmental Industrial Hygienists; CA - Canada; CAS - Chemical Abstracts Service; DOT - Department of Transportation; CLP - Classification, Labelling and Packaging; DFG - Deutsche Forschungsgemeinschaft; DSD - Dangerous Substances Directive (67/548/EEC); EC50 - Effective Concentration, 50%; EEC - European Economic Community; EPA - Environmental Protection Agency; EINECS - European Inventory of Existing Commercial Chemical Substances; LC50 - Lethal Concentration, 50%; LD50 - Lethal Dose, 50%; NIOSH - National Institute for Occupational Safety and Health; NTP - National Toxicology Program; OSHA - Occupational Safety and Health Administration; REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals; SARA = Superfund Amendments and Reauthorization Act.; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TWA - Time Weighted Average; WHMIS - Workplace Hazardous Materials Information System

16.3 Key literature references and sources for data

Available upon request

16.4 Methods used for classification of mixture according to Regulation (EC) No 1272/2008

Available upon request

16.5 Full text of R phrases in Section 3

None

16.6 Training Advice

Read the Safety Data Sheet before handling product.
16.7 Other Information
The information set forth in this Safety Data Sheet does not purport to be all-inclusive and should be used only as a guide. While the information and recommendations set forth herein are believed to be accurate, the company makes no warranty regarding such information and recommendations and disclaims all liability from reliance thereon.

End of Sheet CM-002-EU