SAFETY DATA SHEET

07909 - Collagenase Type IV (1 mg/mL)

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name          Collagenase Type IV (1 mg/mL)

Other means of identification

Catalog Number        07909
Document Number       DX20987
Synonyms              None

Recommended use of the chemical and restrictions on use

Recommended Use       Laboratory reagent

STEMCELL TECHNOLOGIES INC.’S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Details of the supplier of the safety data sheet

Manufacturer/Supplier  STEMCELL Technologies Canada Inc.
                      Suite 500 - 1618 Station Street
                      Vancouver, British Columbia V6A 1B6 Canada

Emergency telephone number

Emergency Telephone   1-800-667-0322

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Respiratory sensitization

Category 1

Hazard not otherwise classified (HNOC)

Not applicable

Label elements

Danger
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Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
In case of inadequate ventilation wear respiratory protection

Precautionary statements - Response
IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing
If experiencing respiratory symptoms: Call a POISON CENTER or doctor

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other Information
Not applicable

Unknown acute toxicity
0 % of the mixture consists of ingredient(s) of unknown toxicity
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Not applicable.

Mixture

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collagenase</td>
<td>9001-12-1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.
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4. FIRST AID MEASURES

Description of first aid measures

General advice
Show this safety data sheet to the doctor in attendance.

Inhalation
May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical advice/attention.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact
Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

Ingestion
May produce an allergic reaction. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

Self-protection of the first aider
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms
May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/or wheezing. Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Note to physicians
May cause sensitization in susceptible persons. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact.

Explosion data
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Sensitivity to Mechanical Impact  None.
Sensitivity to Static Discharge None.

Special protective equipment for fire-fighters
Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

**Personal precautions**
Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other Information**
Refer to protective measures listed in Sections 7 and 8.

#### Environmental precautions

**Environmental precautions**
Prevent further leakage or spillage if safe to do so.

#### Methods and material for containment and cleaning up

**Methods for containment**
Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**
Pick up and transfer to properly labeled containers.

**Prevention of secondary hazards**
Clean contaminated objects and areas thoroughly observing environmental regulations.

### 7. HANDLING AND STORAGE

#### Precautions for safe handling

**Advice on safe handling**
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions**
Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear safety glasses with side shields (or goggles).

Hand protection
Wear suitable gloves.

Skin and body protection
Wear suitable protective clothing.

Respiratory protection
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations
Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
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</tr>
<tr>
<td>Appearance</td>
<td>Clear</td>
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</tr>
<tr>
<td>Color</td>
<td>red</td>
<td>None known</td>
</tr>
<tr>
<td>Odor</td>
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</tr>
<tr>
<td>Odor threshold</td>
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<tr>
<td>pH</td>
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<td>None known</td>
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<td>Melting point / freezing point</td>
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<td>None known</td>
</tr>
<tr>
<td>Property</td>
<td>Value</td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------------------</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
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<tr>
<td>Flash point</td>
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<td></td>
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<tr>
<td>Evaporation rate</td>
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<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
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<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
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<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
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<td></td>
</tr>
<tr>
<td>Lower flammability limit</td>
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<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
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<td></td>
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<tr>
<td>Vapor density</td>
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<td>Solubility in other solvents</td>
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<tr>
<td>Decomposition temperature</td>
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<tr>
<td>Kinematic viscosity</td>
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<tr>
<td>Dynamic viscosity</td>
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<td>Explosive properties</td>
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<td>Oxidizing properties</td>
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**Other Information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
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<td>Softening point</td>
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<tr>
<td>Molecular weight</td>
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<tr>
<td>Molecular formula</td>
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<tr>
<td>VOC Content (%)</td>
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</tr>
<tr>
<td>Liquid Density</td>
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</tr>
<tr>
<td>Bulk density</td>
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</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
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</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under normal conditions.</td>
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<tr>
<td>Possibility of hazardous reactions</td>
<td>None under normal processing.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>None known based on information supplied.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>None known based on information supplied.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>None known based on information supplied.</td>
</tr>
</tbody>
</table>

### 11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information on likely routes of exposure</td>
<td></td>
</tr>
<tr>
<td>Product Information</td>
<td></td>
</tr>
</tbody>
</table>
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Inhalation
Specific test data for the substance or mixture is not available. May cause sensitization in susceptible persons. (based on components).

Eye contact
Specific test data for the substance or mixture is not available.

Skin contact
Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).

Ingestion
Specific test data for the substance or mixture is not available. May cause additional affects as listed under "Inhalation".

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms
Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing.

Numerical measures of toxicity

Acute toxicity

Unknown acute toxicity
0 % of the mixture consists of ingredient(s) of unknown toxicity
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation
No information available.

Serious eye damage/eye irritation
No information available.

Respiratory or skin sensitization
May cause sensitization by inhalation.

Germ cell mutagenicity
No information available.

Carcinogenicity
No information available.

Reproductive toxicity
No information available.

STOT - single exposure
No information available.

STOT - repeated exposure
No information available.
Aspiration hazard  No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity  
Persistence and degradability  No information available.
Bioaccumulation  There is no data for this product.
Other adverse effects  No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Waste from residues/unused products  Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging  Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT  Not regulated
TDG  Not regulated
MEX  Not regulated
ICAO (air)  Not regulated
IATA  Not regulated
IMDG  Not regulated
RID  Not regulated
ADR  Not regulated
15. REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>International Inventories</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Does not comply</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>ENCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>IECSC</td>
<td>Does not comply</td>
</tr>
<tr>
<td>KECL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>PICCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>AICS</td>
<td>Does not comply</td>
</tr>
</tbody>
</table>

Legend:
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

- **Acute health hazard**: Yes
- **Chronic Health Hazard**: Yes
- **Fire hazard**: No
- **Sudden release of pressure hazard**: No
- **Reactive Hazard**: No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.
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US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

US State Regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
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</thead>
<tbody>
<tr>
<td>Water 7732-18-5</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Prepared By, Quality Control. STEMCELL Technologies Canada Inc.

Revision Date 23-May-2019

Revision Note No information available.

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. STEMCELL Technologies Inc. shall not be held liable for any damage resulting from handling or from contact with the product.

End of Safety Data Sheet