1. Identification

Product identifier: Collagenase

Other means of identification: None.

Recommended use: DNA sample preparation for sequencing

Recommended restrictions: Use in accordance with supplier's recommendations.

Manufacturer/Importer/Supplier/Distributor information

Company Name: Dovetail Genomics, LLC
Address: 2161 Delaware Ave
Santa Cruz, CA 95060
United States of America
Telephone: (831) 713-4465
Website: dovetailgenomics.com
Emergency phone number: +1 866 519 4752 (access code: 334943)

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Sensitization, respiratory Category 1

Environmental hazards: Not classified.

Label elements

Hazard symbol: None.

Signal word: None.

Hazard statement: May cause allergy or asthma symptoms or breathing difficulties if inhaled. The mixture does not meet the criteria for classification.

Precautionary statement

Prevention: Avoid breathing mist or vapor. In case of inadequate ventilation wear respiratory protection.

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/doctor.

Storage: Not assigned.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards: None known.

Supplemental information: None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collagenase</td>
<td>9001-12-1</td>
<td>&lt; 1</td>
</tr>
</tbody>
</table>

Composition comments: All concentrations are in percent by weight unless otherwise indicated.

4. First-aid measures

Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Skin contact: Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact: Rinse with water. Get medical attention if irritation develops and persists.

Ingestion: Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed

Difficulty in breathing.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions

Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling

Avoid breathing mist or vapor. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Recommended storage temperature: -20°C

8. Exposure controls/personal protection

Occupational exposure limits

No exposure limits noted for ingredient(s).

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear suitable protective clothing.

Respiratory protection

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Wear approved respiratory protection when working with this material unless ventilation is adequate to keep airborne concentrations below recommended exposure standards.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
- Physical state: Liquid.
- Form: Clear liquid.
- Color: Not available.
- Odor: Not available.
- Odor threshold: Not available.
- pH: Not available.
- Melting point/freezing point: Not available.
- Initial boiling point and boiling range: Not available.
- Flash point: Does not flash.
- Flammability (solid, gas): Not applicable.

Upper/lower flammability or explosive limits
- Flammability limit - lower (%): Not available.
- Flammability limit - upper (%): Not available.

Vapor pressure: Not available.
Vapor density: Not available.
Relative density: Not available.
Solubility(ies)
- Solubility (water): Not available.
- Partition coefficient (n-octanol/water): Not available.

Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.
Other information
- Explosive properties: Not explosive.
- Oxidizing properties: Not oxidizing.

10. Stability and reactivity

Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability: Material is stable under normal conditions.
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.
Conditions to avoid: Contact with incompatible materials.
Incompatible materials: Strong oxidizing agents.
Hazardous decomposition products: No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure
- Inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact: No adverse effects due to skin contact are expected.
- Eye contact: Direct contact with eyes may cause temporary irritation.
- Ingestion: Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics

Information on toxicological effects

Acute toxicity
- Not expected to be acutely toxic.

Skin corrosion/irritation
- Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation
- Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization
- Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin sensitization: This product is not expected to cause skin sensitization.

Germ cell mutagenicity
- No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity
- Not classifiable as to carcinogenicity to humans.

Reproductive toxicity
- This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure
- Not classified.

Specific target organ toxicity - repeated exposure
- Not classified.

Aspiration hazard
- Not an aspiration hazard.

Further information
- None known.

12. Ecological information

Ecotoxicity
- The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability
- No data is available on the degradability of this product.

Bioaccumulative potential
- No data available for this product.

Mobility in soil
- No data available.

Other adverse effects
- No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions
- Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations
- Dispose in accordance with all applicable regulations.

Hazardous waste code
- The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products
- Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging
- Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG
- Not regulated as dangerous goods.

IATA
- Not regulated as dangerous goods.

IMDG
- Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- Not established.

15. Regulatory information

Canadian regulations
- This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.
Controlled Drugs and Substances Act
Not regulated.

Export Control List (CEPA 1999, Schedule 3)
Not listed.

Greenhouse Gases
Not listed.

Precursor Control Regulations
Not regulated.

International regulations
Stockholm Convention
Not applicable.
Rotterdam Convention
Not applicable.
Kyoto protocol
Not applicable.
Montreal Protocol
Not applicable.
Basel Convention
Not applicable.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
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<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
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<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
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<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
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</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
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<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
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<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
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<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
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</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
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</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
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</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date 18-February-2018
Revision date 27-March-2018
Version # 02

List of abbreviations
CAS: Chemical Abstract Service.
IATA: International Air Transport Association.
IBC: Intermediate Bulk Container.
IMDG: International Maritime Dangerous Goods.
TDG: Transportation of Dangerous Goods.

Disclaimer
Dovetail Genomics, LLC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.