1 Identification

- **Product identifier**
- **Product name:** Bovine Fetuin Control (E4)
- **Product Code:** WS0048
- **CAS Number:**
  9014-81-7
- **EC number:**
  232-762-7
- **Application of the substance / the mixture** Research and Development
- **Details of the supplier of the safety data sheet**
  **Manufacturer/Supplier:**
  ProZyme, Inc
  3832 Bay Center Place
  HAYWARD, CA 94545
  USA
- **Issuing Department:** ProZyme Quality Assurance Department
- **Email:** info@prozyme.com
- **Fax number:** +1 510 638 6919
- **Phone number:** +1 510 638 6900
- **Emergency telephone number:** +1 760 476 3961

2 Classification(s) identification

- **Classification of the substance or mixture**
  The substance is not classified according to the Globally Harmonized System (GHS).

  - **Label elements**
  - **GHS label elements** Void
  - **Hazard pictograms** Void
  - **Signal word** Void
  - **Hazard statements** Void
  - **Precautionary statements**
    Do not breathe dust/fume/gas/mist/vapors/spray.
    Wear protective gloves/protective clothing/eye protection/face protection.
    If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
    If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
    If swallowed: Rinse mouth. Do NOT induce vomiting.
    IF ON SKIN: Wash with plenty of soap and water.
    Store in a dry place. Store in a closed container.
    Dispose of contents/container in accordance with local/regional/national/international regulations.

  - **Classification system**
  - **NFPA ratings (scale 0 - 4)**
    ![NFPA pictograms]
    Health = 0
    Fire = 0
    Reactivity = 0

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Product name: Bovine Fetuin Control (E4)

- HMIS-ratings (scale 0 - 4)
  - Health = 0
  - Fire = 0
  - Reactivity = 0

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- CAS No. Description
  - 9014-81-7 Bovine Fetuin
- Identification number(s)
- EC number: 232-762-7

4 First-aid measures

- Description of first aid measures
- General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
  - CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  - Wear protective gloves / eye protection / face protection.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- Reference to other sections
  - See Section 7 for information on safe handling.
7 Handling and storage

- **Handling:**
  - **Precautions for safe handling** Wear protective gloves / eye protection / face protection.
  - **Information about protection against explosions and fires:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - **Requirements to be met by storerooms and receptacles:** No special requirements.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:** None.
    - **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
  - **Control parameters**
  - **Components with limit values that require monitoring at the workplace:** Not required.
  - **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:** The usual precautionary measures for handling chemicals should be followed.
    - **Breathing equipment:** Not required.
    - **Protection of hands:**
      - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
      - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
    - **Material of gloves**
      - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
    - **Penetration time of glove material**
      - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
    - **Eye protection:** Wear eye protection / face protection.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - **Form:** Powder
      - **Color:** Beige
      - **Odor:** Characteristic
      - **Odor threshold:** Not determined.
    - **pH-value:** Not applicable.
**Product name:** Bovine Fetuin Control (E4)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in condition</td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>Undetermined</td>
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<tr>
<td>Boiling point/Boiling range</td>
<td>Undetermined</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gaseous)</td>
<td>Product is not flammable</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined</td>
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<tr>
<td>Auto igniting</td>
<td>Not determined</td>
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<tr>
<td>Danger of explosion</td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Explosion limits</td>
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<tr>
<td>Lower</td>
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<tr>
<td>Upper</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor pressure</td>
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</tr>
<tr>
<td>Density</td>
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<tr>
<td>Relative density</td>
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<tr>
<td>Vapor density</td>
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<tr>
<td>Evaporation rate</td>
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<td>Solubility in / Miscibility with water</td>
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<td>Partition coefficient (n-octanol/water)</td>
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<tr>
<td>Viscosity</td>
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<td>Dynamic</td>
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<tr>
<td>Kinematic</td>
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<td>Organic solvents</td>
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<tr>
<td>VOC content</td>
<td>0.0 g/l / 0.00 lb/gl</td>
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<tr>
<td>Solids content</td>
<td>100.0 %</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

**10 Stability and reactivity**

- **Reactivity** No further relevant information available.
- **Chemical stability**
  - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
  - **Possibility of hazardous reactions** No dangerous reactions known.
  - **Conditions to avoid** No further relevant information available.
  - **Incompatible materials:** No further relevant information available.
  - **Hazardous decomposition products:** No dangerous decomposition products known.
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - Primary irritant effect:
    - on the skin: May be harmful in contact with skin.
    - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    - When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
    - The substance is not subject to classification.

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    - Substance is not listed.
  - NTP (National Toxicology Program)
    - Substance is not listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    - Substance is not listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    - Water hazard class 1 (Self-assessment): slightly hazardous for water
    - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation: Smaller quantities can be disposed of with household waste.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.
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- Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- UN-Number
  - DOT, ADN, IMDG, IATA: not regulated

- UN proper shipping name
  - DOT, ADN, IMDG, IATA: not regulated

- Transport hazard class(es)
  - DOT, ADN, IMDG, IATA
  - Class: not regulated

- Packing group
  - DOT, IMDG, IATA: not regulated

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user: Not applicable.

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.

- UN "Model Regulation": not regulated

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara

  - Section 355 (extremely hazardous substances):
    - Substance is not listed.

  - Section 313 (Specific toxic chemical listings):
    - Substance is not listed.

  - TSCA (Toxic Substances Control Act):
    - Substance is not listed.

  - Proposition 65

    - Chemicals known to cause cancer:
      - Substance is not listed.

    - Chemicals known to cause reproductive toxicity for females:
      - Substance is not listed.

    - Chemicals known to cause reproductive toxicity for males:
      - Substance is not listed.

    - Chemicals known to cause developmental toxicity:
      - Substance is not listed.

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Product name: Bovine Fetuin Control (E4)

- Carcinogenic categories
  - EPA (Environmental Protection Agency)
    Substance is not listed.
  - TLV (Threshold Limit Value established by ACGIH)
    Substance is not listed.
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    Substance is not listed.

- GHS label elements Void
- Hazard pictograms Void
- Signal word Void
- Hazard statements Void
- Precautionary statements
  Do not breathe dust/fume/gas/mist/vapors/spray.
  Wear protective gloves/protective clothing/eye protection/face protection.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
  If swallowed: Rinse mouth. Do NOT induce vomiting.
  IF ON SKIN: Wash with plenty of soap and water.
  Store in a dry place. Store in a closed container.
  Dispose of contents/container in accordance with local/regional/national/international regulations.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Trademark ProZyme is a trademark or registered trademark of ProZyme in the United States and other countries.
- Supersedes Date: 06-March-2015
- Current Revision: AC