



# SAFETY DATA SHEET

## 1. Identification

|   |  |                 |  |
|---|--|-----------------|--|
| <b>Product identifier</b>                                     | <b>Glucagon™</b>   |                 |  |
| <b>Other means of identification</b>                          |  |                 |  |
| <b>Item Code</b>  | MS8009, VL0660, VL7519, VL7286, AM0668, UC9527, AM7220, MS8085, AM0666, MS8031, VL7166, VL7220, MS8030, VL0666, MS8239, AM7078, VL7529 |                 |  |
| <b>Recommended use</b>  | Pharmaceutical   |                 |  |
| <b>Recommended restrictions</b>                               | None known.  |                 |  |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |  |                 |  |
| <b>Manufacturer</b>   |  |                 |  |
| <b>Company name</b>   | Eli Lilly and Company  |                 |  |
| <b>Address</b>  | Lilly Corporate Center<br>Indianapolis, IN 46285<br>United States  |                 |  |
| <b>Telephone</b>  | Phone:   | +1-317-276-2000 |  |
| <b>E-mail</b>   | lilly_msds@lilly.com   |                 |  |
| <b>Emergency phone number</b>                                 | CHEMTREC:  | +1-800-424-9300 |  |

## 2. Hazard(s) identification

|  |  |
|--|--|
| <b>Physical hazards</b>                          | Not classified.  |
| <b>Health hazards</b>                            | Not classified.  |
| <b>OSHA defined hazards</b>                      | Not classified.  |
| <b>Label elements</b>                            |  |
| <b>Hazard symbol</b>                             | None.  |
| <b>Signal word</b>                               | None.  |
| <b>Hazard statement</b>                          | The mixture does not meet the criteria for classification. |
| <b>Precautionary statement</b>                   |  |
| <b>Prevention</b>                                | Not available.   |
| <b>Response</b>                                  | Not available.   |
| <b>Storage</b>                                   | Not available.   |
| <b>Disposal</b>                                  | Not available.   |
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.  |
| <b>Supplemental information</b>                  | Not applicable.  |

## 3. Composition/information on ingredients

| <b>Mixtures</b>      |                                 |                   |          |
|----------------------|---------------------------------|-------------------|----------|
| <b>Chemical name</b> | <b>Common name and synonyms</b> | <b>CAS number</b> | <b>%</b> |
| Glucagon             |                                 | 16941-32-5        | 2        |

**Composition comments** Remaining components of this product are non-hazardous and/or are present at concentrations below reportable levels.

## 4. First-aid measures

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Remove to fresh air. If breathing stops, provide artificial respiration. Get medical attention immediately.  |
| <b>Skin contact</b> | Wash off immediately with plenty of water for at least 15 minutes. Immediately take off all contaminated clothing. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse. |

|   |   |
|---|---|
| <b>Eye contact</b>  | Immediately flush eye(s) with plenty of water. Get medical attention. |
| <b>Ingestion</b>  | Consult a physician.  |
| <b>Most important symptoms/effects, acute and delayed</b> | None known.   |

## 5. Fire-fighting measures

|  |  |
|--|--|
| <b>Suitable extinguishing media</b>                                  | Carbon dioxide, dry chemical or water.                           |
| <b>Unsuitable extinguishing media</b>                                | None known.  |
| <b>Specific hazards arising from the chemical</b>                    | Hazardous decomposition products formed under fire conditions.   |
| <b>Special protective equipment and precautions for firefighters</b> | Wear self-contained breathing apparatus and protective clothing. |

## 6. Accidental release measures

|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Wear suitable protective clothing, gloves and eye/face protection. See Section 8 of the SDS for Personal Protective Equipment.                                    |
| <b>Methods and materials for containment and cleaning up</b>               | Do not sweep. Collect spill using a vacuum cleaner with a HEPA filter. If vacuum is not available, lightly mist/wet material and remove by mopping or wet wiping. |
| <b>Environmental precautions</b>   | Avoid discharge into drains, water courses or onto the ground.  |

## 7. Handling and storage

|   |   |
|---|---|
| <b>Precautions for safe handling</b>                                | See Section 8 of the SDS for Personal Protective Equipment.       |
| <b>Conditions for safe storage, including any incompatibilities</b> | Keep container tightly closed in a dry and well-ventilated place. |

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### Lilly (LEG)

#### Components

|                           | Type         | Value      |
|---------------------------|--------------|------------|
| Glucagon (CAS 16941-32-5) | STEG (15min) | 1400 ug/m3 |
|                           | TWA (12hrs)  | 640 ug/m3  |
|                           | TWA (8hrs)   | 640 ug/m3  |

|   |   |
|---|---|
| <b>Occupational exposure limits</b>     | No exposure limits noted for ingredient(s).   |
| <b>Biological limit values</b>          | No biological exposure limits noted for the ingredient(s).  |
| <b>Appropriate engineering controls</b> | Open handling is not recommended. Use appropriate control measures such as fume hood, ventilated enclosure, local exhaust ventilation, or down-draft booth. |

### Individual protection measures, such as personal protective equipment

|                               |   |
|-------------------------------|---|
| <b>Eye/face protection</b>    | Wear goggles/face shield.   |
| <b>Skin protection</b>        |   |
| <b>Hand protection</b>        | Chemical-resistant gloves and impermeable body covering to minimize skin contact.   |
| <b>Other</b>                  | Not available.  |
| <b>Respiratory protection</b> | Use an approved respirator. Select appropriate respirator for physical characteristics of material. Select respirator with appropriate protection factor. |
| <b>Thermal hazards</b>        | Not available.  |

## 9. Physical and chemical properties

### Appearance

|                       |                   |
|-----------------------|-------------------|
| <b>Physical state</b> | Solid.            |
| <b>Form</b>           | Lyophilized cake. |
| <b>Color</b>          | White             |
| <b>Odor</b>           | Odorless          |

|   |  |
|---|--|
| <b>Odor threshold</b>                               | No data available.                                       |
| <b>pH</b>   | No data available.                                       |
| <b>Melting point/freezing point</b>                 | No data available.                                       |
| <b>Initial boiling point and boiling range</b>      | No data available.                                       |
| <b>Flash point</b>                                  | Not applicable.  |
| <b>Evaporation rate</b>                             | Not applicable.  |
| <b>Flammability (solid, gas)</b>                    | No test data available.                                  |
| <b>Upper/lower flammability or explosive limits</b> |  |
| <b>Flammability limit - lower (%)</b>               | No data available.                                       |
| <b>Flammability limit - upper (%)</b>               | No data available.                                       |
| <b>Explosive limit - lower (%)</b>                  | No data available.                                       |
| <b>Explosive limit - upper (%)</b>                  | No data available.                                       |
| <b>Vapor pressure</b>                               | No data available.                                       |
| <b>Vapor density</b>                                | No data available.                                       |
| <b>Relative density</b>                             | No data available.                                       |
| <b>Solubility(ies)</b>                              |  |
| <b>Solubility (water)</b>                           | Soluble.   |
| <b>Partition coefficient (n-octanol/water)</b>      | No data available.                                       |
| <b>Auto-ignition temperature</b>                    | No data available.                                       |
| <b>Decomposition temperature</b>                    | No data available.                                       |
| <b>Viscosity</b>                                    | Not applicable.  |
| <b>Other information</b>                            |  |
| <b>Density</b>                                      | No data available.                                       |
| <b>Explosive properties</b>                         | Not explosive  |
| <b>Oxidizing properties</b>                         | The substance or mixture is not classified as oxidizing. |
| <b>VOC (Weight %)</b>                               | Not applicable.  |
| <b>9.2. Other information</b>                       |  |
| <b>Minimum Ignition Temperature</b>                 | No data available.                                       |

## 10. Stability and reactivity

|   |  |
|---|--|
| <b>Reactivity</b>                         | Not water reactive.  |
| <b>Chemical stability</b>                 | Material is stable under normal conditions.                    |
| <b>Possibility of hazardous reactions</b> | Hazardous polymerization does not occur.                       |
| <b>Conditions to avoid</b>                | None known.  |
| <b>Incompatible materials</b>             | Strong oxidizing substances.                                   |
| <b>Hazardous decomposition products</b>   | Hazardous decomposition products formed under fire conditions. |

## 11. Toxicological information

### Information on toxicological effects

|                       |                                   |
|-----------------------|-----------------------------------|
| <b>Acute toxicity</b> | Not expected to be active orally. |
|-----------------------|-----------------------------------|

| Components  | Species  | Test Results   |
|---|--|--|
| Glucagon (CAS 16941-32-5)   |  |  |
| <b>Acute</b>  |  |  |
| <i>Other</i>  |  |  |
|   | Mouse  | 300 mg/kg Intravenous (No mortality. No toxicity)                            |
|   | Rat  | 300 mg/kg Subcutaneous (No mortality)<br>20 mg/kg Intravenous (No mortality) |
| <b>Skin corrosion/irritation</b>                                      | Due to lack of data the classification is not possible.  |  |
| <b>Serious eye damage/eye irritation</b>                              | Due to lack of data the classification is not possible.  |  |
| <b>Respiratory or skin sensitization</b>                              |  |  |
| <b>Respiratory sensitization</b>                                      | Due to lack of data the classification is not possible.  |  |
| <b>Skin sensitization</b>   | Due to lack of data the classification is not possible.  |  |
| <b>Germ cell mutagenicity</b>   | Negative in in vitro genetic toxicity assays. (Glucagon)<br>Due to inconclusive data the classification criteria are not met.  |  |
| <b>Carcinogenicity</b>  | Not listed by IARC, NTP, ACGIH or OSHA.<br>No carcinogenicity data available for this product.<br>Due to lack of data the classification is not possible.  |  |
| <b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b> |  |  |
|   | Not listed.  |  |
| <b>Reproductive toxicity</b>  | Growth suppression in delivered offspring at large pharmacological doses. (Glucagon)<br>Based on available data, the classification criteria are not met.  |  |
| <b>Specific target organ toxicity - single exposure</b>               | Due to lack of data the classification is not possible.  |  |
| <b>Specific target organ toxicity - repeated exposure</b>             | Animal studies have reported the following effects: Change in heart rate or rhythm. Elevated blood sugar levels. Liver effects. Kidney effects. Lung effects. (Glucagon) (Subcutaneous)<br>Based on available data, the classification criteria are not met. |  |
| <b>Aspiration hazard</b>  | Not applicable.  |  |
| <b>Further information</b>  | The following hazards may be associated with accidental or therapeutic injection: Elevated blood sugar levels.   |  |

## 12. Ecological information

|                                      |  |
|--------------------------------------|--|
| <b>Ecotoxicity</b>                   | Not available.   |
| <b>Persistence and degradability</b> | No data is available on the degradability of this product. |
| <b>Bioaccumulative potential</b>     | No data available on bioaccumulation.                      |
| <b>Mobility in soil</b>              | Not available.   |
| <b>Other adverse effects</b>         | Not available.   |

## 13. Disposal considerations

|                              |  |
|------------------------------|--|
| <b>Disposal instructions</b> | Dispose in accordance with all applicable regulations. |
|------------------------------|--|

## 14. Transport information

### DOT

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** This substance/mixture is not intended to be transported in bulk.

## 15. Regulatory information

**US federal regulations** This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations**

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Not listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed.

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

Not Listed.

**International Inventories**

| Country(s) or region        | Inventory name                                | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| Canada                      | Domestic Substances List (DSL)                | No                     |
| Canada                      | Non-Domestic Substances List (NDSL)           | No                     |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | No                     |

\*A "Yes" indicates that all components of this product comply 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, including date of preparation or last revision

**Issue date** 11-18-2014  
**Version #** 01  
**Lilly Lab Code** Health: 0  
Fire: 1  
Reactivity: 0

**List of abbreviations**

STEG: Short Term Exposure Guideline

TWA: Time Weighted Average

**Disclaimer**

As of the date of issuance, we are providing available information relevant to the handling of this material in the workplace. All information contained herein is offered with the good faith belief that it is accurate. THIS MATERIAL SAFETY DATA SHEET SHALL NOT BE DEEMED TO CREATE ANY WARRANTY OF ANY KIND (INCLUDING WARRANTY OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE). In the event of an adverse incident associated with this material, this safety data sheet is not intended to be a substitute for consultation with appropriately trained personnel. Nor is this safety data sheet intended to be a substitute for product literature which may accompany the finished product.

For additional information contact:

Eli Lilly and Company

Hazard Communication

+1-317-651-9533