



SAFETY DATA SHEET

1. Identification

Product identifier	Glucagon™
Other means of identification	
Item Code	MS8009, VL0660, VL7519, VL7286, AM0668, UC9527, AM7220, MS8085, AM0666, MS8031, VL7166, VL7220, MS8030, VL0666, MS8239, AM7078, VL7529
LY Number	LY021411
Recommended use	Pharmaceutical
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Eli Lilly and Company		
Address	Lilly Corporate Center Indianapolis, IN 46285 United States		
Telephone	Phone:	+1-317-276-2000	
E-mail	lilly_sds@lilly.com		
Emergency phone number	CHEMTREC:	+1-800-424-9300	

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
OSHA defined hazards	Not classified.

Label elements

Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Not available.
Response	Not available.
Storage	Not available.
Disposal	Not available.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
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

Inhalation	Remove to fresh air. If breathing stops, provide artificial respiration. Get medical attention immediately.
Skin contact	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.
Eye contact	Immediately flush eye(s) with plenty of water. Get medical attention.

Ingestion Consult a physician.

Most important symptoms/effects, acute and delayed None known.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media Carbon dioxide, dry chemical or water.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical Hazardous decomposition products formed under fire conditions.

Special protective equipment and precautions for firefighters Wear self-contained breathing apparatus and protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Wear suitable protective clothing, gloves and eye/face protection. See Section 8 of the SDS for Personal Protective Equipment.

Methods and materials for containment and cleaning up 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.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling See Section 8 of the SDS for Personal Protective Equipment.

Conditions for safe storage, including any incompatibilities Keep container tightly closed in a dry and well-ventilated place.

8. Exposure controls/personal protection

Occupational exposure limits

Lilly (LEG)

Components

Components	Type	Value
Glucagon (CAS 16941-32-5)	STEG (15min)	1600 ug/m3
	TWA (12hrs)	160 ug/m3
	TWA (8hrs)	160 ug/m3

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

Appropriate engineering controls 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

Eye/face protection Wear goggles/face shield.

Skin protection

Hand protection Chemical-resistant gloves and impermeable body covering to minimize skin contact.

Other Not available.

Respiratory protection Use an approved respirator. Select appropriate respirator for physical characteristics of material. Select respirator with appropriate protection factor. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the respirator.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Lyophilized cake

Color White

Odor Odorless

Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not applicable.
Evaporation rate	Not available.
Flammability (solid, gas)	No test data available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Soluble.
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	The substance or mixture is not classified as oxidizing.

10. Stability and reactivity

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

11. Toxicological information

Information on toxicological effects

Acute toxicity Not expected to be active orally.

Components	Species	Test Results
Glucagon (CAS 16941-32-5)		
<u>Acute</u>		
Other		
	Mouse	300 mg/kg (Intravenous) (No mortality.)
	Rat	300 mg/kg Subcutaneous (No mortality)
		20 mg/kg Intravenous (No mortality)
Skin corrosion/irritation	Due to lack of data the classification is not possible.	
Serious eye damage/eye irritation	Due to lack of data the classification is not possible.	
Respiratory or skin sensitization		
Respiratory sensitization	Due to lack of data the classification is not possible.	
Skin sensitization	Due to lack of data the classification is not possible.	

Germ cell mutagenicity Negative in in vitro genetic toxicity assays. (Glucagon)
Due to inconclusive data the classification criteria are not met.

Carcinogenicity No carcinogenicity data available for this product.
Due to lack of data the classification is not possible.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity In pregnant rats given animal sourced glucagon twice-daily by injection at doses up to 2 mg/kg during the period of organogenesis, there was no evidence of increased malformations or embryofetal lethality. Studies in rats have shown that glucagon does not cause impaired fertility. (Glucagon)
Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure Due to lack of data the classification is not possible.

Specific target organ toxicity - repeated exposure 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)
Based on available data, the classification criteria are not met.

Aspiration hazard Not applicable.

Further information The following hazards may be associated with accidental or therapeutic injection: Elevated blood sugar levels.

12. Ecological information

Ecotoxicity Due to lack of data the classification is not possible.

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

Bioaccumulative potential No data available on bioaccumulation.

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions 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 Not available.

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.

Toxic Substances Control Act (TSCA)

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 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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.

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

Revision date 10-19-2021

Version # 06

List of abbreviations

ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road.
CEN: European Committee for Standardization.
DOT: Department of Transportation.
HEPA: High Efficiency Particulate Air.
IARC: International Agency for Research on Cancer.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
LEG: Lilly Exposure Guideline.
MARPOL: International Convention for the Prevention of Pollution from Ships.
NIOSH: National Institute for Occupational Safety & Health.
NTP: National Toxicology Program.
OSHA: Occupational Safety & Health Administration.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
SCT: Secretariat of Communications and Transportation (NOM-002-SCT/2011).
STEG: Short Term Exposure Guideline.
TWA: Time Weighted Average.

Disclaimer

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For additional information contact:

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Revision information

Product and Company Identification: Eli Lilly Info
Exposure controls/personal protection: Appropriate engineering controls