

Safety Data Sheet

Revision date 25-Dec-2023

Version 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

Product code EG23507
Product name LightNing® Hpal1

Company/undertaking identification

Jiangsu Yugong Biotech Co., Ltd.
Building E, International Pharmaceutical Innovation Industrial Park,
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China (Jiangsu) Pilot Free Trade Zone.
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For Research Use Only. Not for use in diagnostic procedures.

SECTION 2: Hazards identification

GHS Classification

Signal Word None
Health hazards Not classified
Physical hazards Not classified
Hazard Statements Not Applicable
Precautionary Statements Not Applicable

Principle Routes of Exposure

Potential Health Effects

Eyes May cause eye irritation with susceptible persons
Skin May cause skin irritation in susceptible persons
Inhalation May be harmful by inhalation.
ingestion May be harmful if swalloweed

Specific effects

Carcinogenic effects None

Mutagenic effects	None
Reproductive toxicity	None
Sensitization	None
Target Organ Effects	None under normal use conditions

Other hazards

Not Applicable

HMIS

Health	0
Flammability	0
Reactivity	0

SECTION 3: Composition/information on ingredients

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m ³ 5 mg/m ³	None	None	None

The product contains no substances which at their given concentration, are considered to be hazardous to health. We recommend handling all chemicals with caution.

SECTION 4: First aid measures

Description of first aid measures

Inhalation	Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact	Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.
Ingestion	Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice
Note to physicians	Treat symptomatically.

Most important symptoms and effects, both acute and delayed

Not Applicable.

Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

Special protective equipment for firefighters

Wear self-contained breathing apparatus and protective suit.

Special hazards arising from the substance or mixture

Not known

Advice for firefighters

Standard procedure for chemical fires.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Always wear recommended Personal Protective Equipment

Use personal protection equipment

See section 8 for more information

Environmental precautions

Prevent further leakage or spillage if safe to do so

Methods and material for containment and cleaning up

Soak up with inert absorbent material.

Reference to other sections

See section 8 for more information.

SECTION 7: Handling and storage

Precautions for safe handling

Use personal protective equipment as required. No special handling advices are necessary.

Storage Conditions

Store at -25°C to -15°C.

Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure Limits	Contains no substances with occupational exposure limit values.
Engineering measures	Ensure adequate ventilation, especially in confined areas

Exposure controls

Personal Protective Equipment

Respiratory protection	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.
Hand protection	Wear suitable gloves. Glove material: Compatible chemical-resistant gloves.
Eye protection	Tight sealing safety goggles
Skin and Body Protection	Wear suitable protective clothing.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls	No special environmental precautions required.
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SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	liquid
Color	Transparent
Odor	No data
Molecular Weight	No data
Melting point / melting range	No data
Boiling point / boiling range	No data
Flammability (solid, gas)	No data
Lower explosion limit	No data
Upper explosion limit	No data
Flash point	No data
Autoignition Temperature	No data
Decomposition temperature	No data
pH	No data
Evaporation rate	No data
Viscosity	No data
Solubility	No data
Partition coefficient: n-octanol/water	No data

Vapor Pressure	No data
Specific gravity	No data
Relative density	No data
Vapor density	No data
Explosive properties	No data
Oxidizing properties	No data
Particle characteristics	No data

Other information

Information with regard to physical hazard classes

No information available

Other safety characteristics

No information available

SECTION 10: Stability and reactivity

Reactivity	None known.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous reaction has not been reported.
Conditions to avoid	No information available.
Incompatible materials	Strong acids and oxidizing agents. Acetic anhydride. Isocyanates. Ammonia. Bases.
Hazardous decomposition products	Carbon oxides.

SECTION 11: Toxicological information

Acute Toxicity

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570 mg/m ³ (Rat)

Information on toxicological effects

There is no evidence available indicating acute toxicity.

Principal Routes of Exposure

Acute toxicity	Data are conclusive but insufficient for classification.
Skin corrosion/irritation	May cause skin irritation in susceptible persons.

Serious eye damage/irritation	May cause eye irritation with susceptible persons.
Respiratory or skin sensitization	Data are conclusive but insufficient for classification.
Specific target organ toxicity (STOT)–single exposure	None under normal use conditions.
Specific target organ toxicity (STOT)–repeated exposure	None under normal use conditions..
Carcinogenicity	None.
Germ cell mutagenicity	Data are conclusive but insufficient for classification.
Reproductive toxicity	None.
Aspiration hazard	Data are conclusive but insufficient for classification.

SECTION 12: Ecological information

Toxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Mobility in soil	see log Pow.
Persistence and degradability	No information available.
Bioaccumulative potential	Material does not bioaccumulate. .

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other adverse effects	No information available
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SECTION 13: Disposal considerations

Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in according to approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulation

UN number or ID number	Not Applicable
UN proper shipping name	No dangerous good in sense of these transport regulations
Transport hazard class(es)	Not Applicable
Packing group	Not Applicable

Environmental hazards Not Applicable

Special precautions for user Not Applicable

Maritime transport in bulk according to IMO instruments

Not Applicable

SECTION 15: Regulatory information**US Federal Regulations****SARA 313**

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain HAPs.

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

National Regulations – Brazil

Not regulated.

SECTION 16: Other information**References**

- ECHA: <http://echa.europa.eu/>
- TOXNET: <http://toxnet.nlm.nih.gov/>
- eChemPortal: <http://www.echemportal.org/>
- LOLI database: <https://www.chemadvisor.com/loli-database>

Abbreviations and acronyms

TWA - Time-Weighted Average

OELs - Occupational Exposure Limits

STEL - Short Term Exposure Limit

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

KECL - Korean Existing and Evaluated Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

CEPA - Canadian Environmental Protection Act

EPA - Environmental Protection Agency

OSHA - Occupational Safety and Health Administration of the US Department of Labor

IATA - International Air Transport Association

DOT - Department of Transportation

IMDG - International Maritime Dangerous Goods

ACGIH - American Conference of Governmental Industrial Hygienists

NIOSH - National Institute for Occupational Safety and Health

AIHA - American Industrial Hygiene Association

HMIS - Department of Defense Hazardous Materials Information System

NTP - National Toxicology Program

IARC - International Agency for Research on Cancer

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein.

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End of Safety Data Sheet