

# Material Safety Data Sheet (MSDS)

Prepared according to Regulation EC No. 1907/2006

Revision date: 16/02/2023

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY

Product name: **Liga5™**

Product number: 1108-25, 1108-50, 1108-150, 1108-D

Relevant identified uses: laboratory chemical, for R&D use only.

Uses advised against: undefined

Supplier:

A&A Biotechnology

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Emergency number: 112

A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline

### Relevant identified uses of the substance or mixture and uses advised against:

Laboratory chemicals, Manufacture of substances

## 2. HAZARDS IDENTIFICATION

### Classification and labelling according to regulation (EC) No. 1272/2008

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

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Liga5™ enzyme in buffer with glycerol
Liga5™ buffer
Ultrapure water

No components need to be disclosed according to the applicable regulations.

## 4. FIRST AID MEASURES

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled:** If breathed in, move the person into fresh air. If not breathing, give artificial respiration.

**In case of skin contact:** Wash off with soap and plenty of water.

**In case of eye contact:** Flush eyes with water as a precaution.

**If swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water.

**Most important symptoms and effects, both acute and delayed:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Indication of any immediate medical attention and special treatment needed:** no data available

## 5. FIREFIGHTING MEASURES

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture:** No data available

**Advice for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Avoid dust formation. Avoid breathing vapours, mist or gas.

**Environmental precautions:** Do not let products enter drains.

**Methods and materials for containment and cleaning up:** Sweep up and shovel. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Avoid contact with skin and eyes. Avoid formation of aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

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

Recommended storage temperature: -20 °C

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Elements of control devices in the workplace

glycerol	CAS no. 56-81-5	NDS	10 mg/m <sup>3</sup>	On the highest permissible concentrations and intensities of factors harmful to health in the working environment
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### Appropriate engineering controls

General industrial hygiene practice.

It does not contain substances with concentration values acceptable in the work environment.

### Personal protective equipment

**Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Skin protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching the glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Body Protection:** Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Appropriate engineering controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Form: clear, viscous liquid
<b>Odour:</b>	no data available
<b>no data available</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>	no data available
<b>Evaporation rate</b>	no data available
<b>Flammability (solid, gas)</b>	no data available
<b>Upper/lower flammability or explosive limits</b>	no data available
<b>Vapour pressure</b>	no data available
<b>Vapour density</b>	no data available
<b>Relative density</b>	no data available
<b>Water solubility</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>Viscosity</b>	no data available
<b>Oxidizing properties</b>	no data available

**Other information:**

No data

**10. STABILITY AND REACTIVITY**

**Reactivity:** No data

**Stability:** The product is chemically stable when used and stored correctly.

**Possibility of hazardous reactions:** no data available

**Conditions to avoid:** no data available

**Incompatible materials:** Strong oxidizing agents

**Hazardous decomposition products:** Other decomposition products - no data available

**11. TOXICOLOGICAL INFORMATION**

**Information on toxicological effects**

<b>Acute toxicity:</b>	no data available
<b>Skin corrosion/irritation:</b>	no data available
<b>Serious eye damage/eye irritation:</b>	no data available
<b>Respiratory or skin sensitization:</b>	no data available
<b>Germ cell mutagenicity:</b>	no data available
<b>Carcinogenicity:</b>	
IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>Reproductive toxicity:</b>	no data available
<b>Specific target organ toxicity - single exposure:</b>	no data available
<b>Specific target organ toxicity - repeated exposure:</b>	no data available
<b>Aspiration hazard:</b>	no data available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### Endocrine disrupting properties

None of the ingredients are listed.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## 12. ECOLOGICAL INFORMATION

<b>Toxicity:</b>	no data available
<b>Persistence and degradability:</b>	no data available
<b>Bioaccumulative potential:</b>	no data available
<b>Mobility in soil:</b>	no data available
<b>Results of PBT and vPvB assessment:</b>	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher
<b>Endocrine disrupting properties:</b>	None of the ingredients are listed.
<b>Other adverse effects:</b>	no data available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods:** This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Waste treatment of containers/packaging:** It is a dangerous waste; only packages which are approved (e.g. acc. to ADR) may be used.

**Relevant provisions relating to waste:** The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. W

**Sewage disposal-relevant information:** Do not empty into drains. Avoid release to the environment.

**Remarks:** Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

## 14. TRANSPORT INFORMATION

### UN number or ID number

ADR/RID/ADN: -

IMDG: -

ICAO-TI: -

### UN proper shipping name

ADR/RID/ADN: -

IMDG: -

ICAO-TI: -

### Transport hazard class(es)

ADR/RID/ADN: -

IMDG: -

ICAO-TI: -

### Packing group

ADR/RID/ADN: -

IMDG: -

ICAO-TI: -

### Environmental hazards

ADR/RID/ADN: no

IMDG: Marine pollutant:no

ICAO-TI: no

**Special precautions for user:** no data available

**Maritime transport in bulk according to IMO instruments:** The cargo is not intended to be carried in bulk

## **15. REGULATORY INFORMATION**

This safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008.

Alignment to regulation: Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU

## **16. OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. A&A Biotechnology, shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

MSDS has been prepared in accordance with EC regulation 1272/2008/EC and other European Union legislation in force.

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

**DISCLAIMER: For R&D use only. Not for drug, household or other uses.**