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1 -PRODUCT IDENTIFICATION AND COMPANY

1.1 Product identifier:

Bovine serum

1.2 Relevant identified uses of the substance or mixture and unadvised uses:

Relevant uses: Biotechnology industry. For professional use only.

Unadvised uses: All unspecified uses are present in this section or section 7.3.

1.3 Identification of the security data sheet provider:

Company: Bio Nutrientes do Brasil Ltda

Address: Estrada Municipal KM 02, Bairro Timburí – Distrito Industrial - Taciba/SP

Phone: +55 18 3345-1047

E-mail: lucas@bionutrientes.com.br - Lucas Tadeu de Amorim Cardoso

2- IDENTIFICATION OF HAZARDS

2.1 Classification of the substance or mixture:

Regulation CLP (EC) No 1272/2008:

The product is not classified as dangerous in accordance with the CLP Regulation (EC) on 1272/2008.

2.2 Label elements:

Regulation CLP (EC) No 1272/2008:

See sections 11 and 12.

2.3 Other hazards

Not applicable.

3- COMPOSITION AND INFORMATION ON INGREDIENTS

3.1 Chemical description

Organic compound


In accordance with Annex II to Regulation (EC) No 1907/2006 (paragraph 3), the product contains:

Identification	Chemical name/classification	Concentration
CAS: Not applicable	bovine serum Unclassified Regulation 1272/2008	100%
EC: Not applicable		
Index: Not applicable		
REACH: Not applicable		

For more information on the risk of the substance refer to sections 8, 11, 12, 15 and 16.

3.2 Mixing

Not applicable.

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4- FIRST AID MEASURES

4.1 Description of first aid measures

In case of discomfort, consult a doctor. Please have this safety data sheet ready.

Inhalation

In case of symptoms, move the affected person to an airy place.

Skin contact

In case of contact, it is recommended to clean the affected area with water and neutral soap. In case of skin changes (stings, redness, rashes, blisters, ...), consult the doctor with this safety data sheet.

Eye contact:

Rinse with water until the product has been disposed of. In case of problems, consult a doctor with the safety sheet of this product.

Ingestion/Aspiration

In case of consumption in large quantities, it is recommended to seek medical assistance.

4.2 Most important symptoms and effects, both acute and retarded:

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indications on urgent medical care and special treatments required:

Not applicable.

5- FIRE FIGHTING MEASURES

5.1 Means of extinction:

The product is non-flammable and low risk of fire due to the characteristics of flammability of the product under normal storage, handling and use conditions. In the event of continuous combustion as a result of handling, storage or improper use, any type of extinguisher agent can be used (ABC Powder, water, ...)

5.2 Special hazards arising from the substance or mixture:


Due to its non-flammable nature, the product does not present a risk of fire under normal storage, handling and use conditions.

5.3 Precautions for firefighters:

Depending on the magnitude of the fire, complete protection and individual breathing equipment may be required. Minimum emergency facilities and equipment must be available (fire blankets, portable first aid kit, ...) in accordance with Directive 89/654/EC.

Additional provisions:

Act according to the Internal Emergency Plan and the information sheets on the actions to be taken after an accident or other emergencies. Destroy any ignition source. In the event of a fire, cool storage containers and reservoirs for inflaming-sensitive products, explosion as a result of high temperatures. Avoid spillage of products used to put out fire in an aqueous medium.

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6- CONTROL MEASURES FOR SPILLAGE OR LEAKAGE

6.1 Individual precautions, emergency protection equipment and procedures:

Isolate leaks if there is no additional risk to people who perform this task.

6.2 Environmental precautions:

This product is not classified as dangerous to the environment. Keep the product away from pipes, surface and groundwater.

6.3 Containment and cleaning materials and methods:

It is recommended:

Absorb the spill with sand or inert absorbent and transfer to a safe place. Do not absorb with sawdust or other fuel absorbent. For any concern stemming from deletion see section 13.

6.4 Remission to other sections:

See sections 8 and 13.

7- HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe handling

Comply with existing legislation on the prevention of industrial risks. Keep the containers hermetically closed. Control spills and waste with safe methods (section 6). Avoid leaks in the container. Maintain order and cleanliness, where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

It is recommended to transfer at a slow speed in order to avoid the creation of electrostatic loads that can affect flammable products. See section 10 for the conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, wash your hands after use with suitable cleaning products.

D.- Technical recommendations for environmental risk prevention

Special measures are not necessary to avoid environmental risks. For more information see subsection 6.2.


7.2 Safe storage conditions, including possible incompatibilities:

A.- Technical conservation measures

Store in a dry, cool and ventilated place.

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and food contact. For additional information, see subsection 10.5.

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7.3 Specific uses:

Except for the instructions already specified, it is not necessary to provide any special recommendation on the use of this product.

8- EXPOSURE CONTROL AND INDIVIDUAL PROTECTION

8.1 Control parameters:

Substances to which occupational exposure limits must be monitored in the workplace. There are no environmental limits for the substances contained in the product

DNEL (Workers):

Not applicable

DNEL (General population):

Not applicable

PNEC:

Not applicable

8.2 Exposure control:

A.- General workplace safety and hygiene measures

As a preventive measure, it is recommended to use basic protective equipment, with the corresponding <<EC marking>>, in accordance with Directive 89/686/EC. For more information on personal protective equipment (storage, use, cleaning, maintenance, protection class, ...) refer to the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained in this document is recommendations that need some specification of the work risk prevention services, since it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

The use of respiratory protection equipment will be necessary if there is the formation of a mist or if the limits of professional exposure are exceeded.

C.- Hand-specific protection

Not applicable

D.- Facial and eye protection

Not applicable

E.- Body protection

Not applicable

F.- Additional emergency measures

It is not necessary to take additional emergency measures.

Environmental exposure control:

In accordance with Community environmental protection legislation, it is recommended to avoid environmental spillage of both the product and its container. For additional information, see subsection 7.1.d

**Volatile organic compounds:**

As regards Directive 2010/75/EU, this product has the following characteristics:

COVs (Provide): 0% weight

COVs with density at 20°C: 0 kg/m³

Average carbon number: Not applicable

Average molecular weight: Not applicable

9- PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

For complete information see the product factsheet

Appearance

Physical state at 20°C: Liquid.

Appearance: Fluid.

Color: Amber.

Odor: Not available.

Volatility

Boiling point in atmospheric pressure: Not applicable*

20°C steam pressure: Not applicable*

Steam pressure at 50°C: Not applicable*

Evaporation rate at 20°C: Not applicable*

Product description

Density at 20°C: Not applicable*

Density for 20°C: Not applicable*

Dynamic viscosity at 20°C: Not applicable*

Kinematic viscosity at 20°C: Not applicable*

Kinematic viscosity at 40°C: Not applicable*

Concentration: Not applicable*

pH: 7.4-8.5

Steam density at 20°C: Not applicable*

Partition coefficient n-octanol/water 20°C: Not applicable*

Solubility in water at 20°C: Not applicable*

Solubility properties: Not applicable*

Decomposition temperature: Not applicable*

Melting point/freezing point: Not applicable*

Flammability

Glow point: Not applicable (>60°C) *


Self-ignition temperature: Not applicable*

Lower Limit of Explosiveness (LIE): Not applicable*

Upper Limit of Explosiveness (LSE): Not applicable*

9.2 Other information

Surface voltage at 20°C: Not applicable*

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Refractive Index: Not applicable*

*Not relevant due to the nature of the product, not providing proprietary information of its hazards.

10- STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction expected if followed by technical instructions for storing chemicals.

10.2 Chemical stability

Chemically stable on the conditions of use and handling.

10.3 Possibility of dangerous reactions

Under the specified conditions, dangerous reactions that lead to excessive temperatures or pressures are not expected.

10.4 Conditions to avoid

Applicable for handling and storage at room temperature:

Friction and shock	Contact with air	Increase in temperature	Sunshine	Moisture
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

10.5 Incompatible materials

Acids	Water	Combustible materials	Other
Not applicable	Not applicable	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products

Depending on decomposition conditions, complex mixtures of chemicals can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

11- TOXICOLOGICAL INFORMATION

Toxicological effects information:

ORAL LD50 > 2000 mg/kg (rat)

Dangerous health implications:

In case of repetitive and prolonged exposure or at higher concentrations than recommended by occupational limit exposure, it may result in adverse health effects, depending on the means of exposure:

A - Ingestion

-Acute toxicity: Based on available data, classification criteria are not established.

-Corrosion/irritation: Based on available data, classification criteria are not established.


B.- Inhalation

-Acute toxicity: Based on available data, classification criteria are not established.

-Corrosion/irritation: Based on available data, classification criteria are not established.

C.- Contact with eyes and skin

In case of emergency seek medical attention

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-Eye contact: Based on available data, classification criteria are not established.
 -Tale with the skin: Based on available data, the classification criteria are not established.

D.- CMR effects (carcinogenicity, mutagenicity and toxic effects for reproduction):
 -Carcinogenicity: Based on available data, classification criteria are not established.
 -Mutagenicity: Based on available data, classification criteria are not established.
 -Reproductive toxicity: Based on available data, classification criteria are not established.

E.- Sensitizing effects
 -Respiratory: Based on available data, classification criteria are not established.
 -Cutaneous: Based on available data, classification criteria are not established.

F.- Toxicity to specific target organs (STOT) - Exposure time
 Based on available data, classification criteria are not established.

G.- Toxicity to specific target organs (STOT) - Repeated exposure
 Based on available data, classification criteria are not established.

H.- Danger of aspiration
 Based on available data, classification criteria are not established.

Other information:

Not applicable.

Information on specific toxicity on substances:

Not applicable.

12- ECOLOGICAL INFORMATION

Experimental information related to the toxicological echo properties of the product itself is not available.

12.1 Toxicity:

Not available.

12.2 Persistence and degradability:

Not available.

12.3 Bioaccumulation potential:

Not available.

12.4 Ground mobility:


Not available.

12.5 Results of the PBT and mPmB evaluation:

Not applicable.

12.6 Other adverse effects:

Undescribed.

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13- CONSIDERATIONS ON FINAL DESTINATION

Recommended methods for final destination:

General: Dispose of in a safe way according to local/regional regulations.

Consult authorized waste service agent in evaluation and disposal operations.

It is not recommended to despise in drains.

14- SHIPPING INFORMATION

14.1 UN number: Not applicable

14.2 UN appropriate name for boarding: Not applicable

14.3 Transport hazard class: Not applicable

Tags: Not applicable

14.4 Packing group: Not applicable

14.5 Hazards to the environment: Not applicable

14.6 Special precautions for the user

Special regulations: Not applicable

Tunnel restriction code: Not applicable

Physicochemical properties: See section 9

Limited quantities: Not applicable

14.7 Bulk transport in accordance with Annex II to the Marpol Convention and the IBC Code:

Not applicable

Transport of dangerous goods by sea:

As regards IMDG 37-14:

14.1 UN number: Not applicable

14.2 UN appropriate name for boarding: Not applicable

14.3 Transport hazard class: Not applicable


Tags: Not applicable

14.4 Packing group: Not applicable

14.5 Hazards to the environment: Not applicable

14.6 Special precautions for the user

Physicochemical properties: See section 9

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14.7 Bulk transport in accordance with Annex II to the Marpol Convention and the IBC Code:

Not applicable

15- REGULATIONS

15.1 Safety, health and specific regulations/laws for the substance or mixture:

Candidate substances for authorization under Regulation (EC) 1907/2006 (REACH): Not applicable

Substances included in Annex XIV to REACH ("Authorization List") and expiration date: Not applicable

Regulation (EC) 1005/2009 on substances affecting the ozone layer: Not applicable

Article 95, Regulation (EU) No 528/2012: Not applicable

Regulation (EU) No 649/2012 on the import and export of hazardous chemicals: Not applicable

Limitations on the marketing and use of certain hazardous substances and mixtures (Annex XVII, REACH):

Not applicable

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data as data used in a risk assessment of local circumstances in order to establish the risk prevention measures necessary for handling, use, storage and disposal of this product.

Respective instructions for use:

This product is collected from healthy animals declared suitable for human consumption by the slaughterhouse.

This product is produced in accordance with regulations to limit the risk of transmission of bovine spongiform encephalopathy.

Tests to detect certain viruses were done in the product (see the data sheet relevant to the list of tested viruses).

Other legislation:

The product may be affected by sectoral legislation.

15.2 Chemical safety assessment:

The supplier did not carry out chemical safety assessment.

16- OTHER INFORMATION

Legislation on safety data sheets:


This safety sheet was designed in accordance with Annex II-Guide for the preparation of safety forms of Regulation (EC) No 1907/2006 (Regulation (EU) No 453/2010, Regulation (EC) No 2015/830)

Modifications related to the previous security card, which concerns the forms of risk management:

Not applicable

Texts of the legislative phrases indicated in section 3:

The phrases indicated do not refer to the product itself; they are present only for informational purposes and refer to the individual components that appear in section 3

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Regulation CLP (EC) No 1272/2008:

Not applicable

Training-related advice:

A minimum of training is recommended to avoid industrial risks for personnel to use this product in order to facilitate their understanding and interpretation of the safety sheet as well as the product label.

Main bibliographic sources:

<http://esis.jrc.ec.europa.eu>

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

Abbreviations and Acronyms:

ADR: European Agreement on the international transport of dangerous goods by IMDG road: International Code of Dangerous Maritime Goods

IATA: International Air Transport Association ICAO: International Civil Aviation Cod Organization: Chemical Oxygen Demand

BOD5: 5 days of BCF biochemical oxygen demand: Bioconcentration factor

LD50: Lethal Dose 50

CL50: Lethal Concentration 50

EC50: Effective concentration 50

Log-POW: Koc Octanol-Water Partition Coefficient: Organic Carbon Partition Coefficient

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End of document

In case of emergency seek medical attention