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1 -PRODUCT IDENTIFICATION AND COMPANY

Product Identification: Fetal Bovine Serum

Usage: Biotechnology Industry / Research / For professional use only

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

Classification of substance or mixture: The product is not classified as dangerous (Directive 67/548/EC and Directive 1999/45/EC)

Labelling elements: NON-EDIBLE PRODUCT

Other hazards that do not result in a classification: Not applicable

3- COMPOSITION AND INFORMATION ON INGREDIENTS

Organic compound

Common or technical chemical name: Fetal Bovine Serum

CAS record number: no.

4- FIRST-RATE MEASURES -RESCUES

Consult the doctor in case of discomfort with the Safety Sheet.

Inhalation: Move the affected person to a cool/ventilated air site.

Skin contact: In case of contact, it is recommended to clean the affected area with water and neutral soap. If you experience redness, rashes, blisters, etc. Consult the doctor with this Safety Sheet.

Eye contact: Wash with water until the product has been eliminated. In case of problems, consult a doctor with this Security Sheet.

Ingestion: In case of consumption in large quantities, it is recommended to seek the doctor with this Safety Sheet.


5- FIRE FIGHTING MEASURES

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 case of continuous combustion as a result of improper handling, storage or use of any type of agent, any type of extinguisher can be used (ABC Powder, water)

Specific hazards of substance or mixture: Due to non-flammable nature, the product is at risk of arson under normal storage, handling and use conditions.

Rescue measures of the firefighting team: Have available a minimum of emergency facilities or equipment (fireblankets, portable first aid kit, etc...)

Check the Internal Emergency Plan and information on the actions to be taken after one accident or another.

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6- CONTROL MEASURES FOR SPILLAGE OR LEAKAGE

Personal precautions, protective equipment and emergency procedures: Isolate leaks if there is no additional risk to people performing this task.

Precautions to environments:

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

Methods and materials for containment and cleaning:

Absorb the pouring with sand or inert absorbent and move to a safe place. Do not absorb in sawdust or other absorbent fuel.

7- HANDLING AND STORAGE

Precautions for safe handling:

Comply with existing legislation on the prevention of industrial risks regarding the manipulation of weights manually.

Maintain order, cleanse, and destroy using safe methods (Item 6).

Technical recommendations for the prevention of fires and explosions

It is recommended to transfer at a slow speed to prevent the creation of flammable electrostatic loads that can affect the product. Refer to item 10 for the conditions and materials that should be avoided.

Technical recommendations to prevent ergonomic and toxicological risks

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

Technical recommendations to prevent environmental risks It is not necessary to take special measures to avoid environmental risks. For more information see item 6.

Safe storage conditions, including any incompatibility:

Conservation technical measures store in a cool, dry and well-ventilated place

General additions to storage avoid heat sources, radiation, static electricity and food contact. For additional information, see item 10.

Specific end use(s):

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

8- EXPOSURE CONTROL AND INDIVIDUAL PROTECTION


Control parameters:

Substances whose occupational exposure limits must be monitored in the workplace

There are no environmental limits for the substances contained in the product

Workers: Not applicable

Population: Not applicable

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Exposure control:

-General measures of safety and hygiene in the workplace

As a preventive measure, it is recommended to use basic equipment of individual protection, with the corresponding CA (Certificate of Approval). For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, protection class, etc...) consult the package leaflet provided by the manufacturer.

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

Eye/face protection: Not applicable

Skin protection: Not applicable

Respiratory protection: The use of protective equipment will be necessary and form mist or if the limits of professional exposure are exceeded.

Thermal hazards: Not applicable

Additional emergency measures

There is no need to take additional emergency measures.

Environmental exposure control: This product does not contain hazardous substances for the environment, although it is recommended not to spill it.

9- PHYSICAL AND CHEMICAL PROPERTIES

Physical state at 20°C: liquid

Color: amber

Odor: odorless

pH: 6.8 - 7.8

Melting Point/Freezing Point: Not applicable (*)

Initial boiling point and boiling temperature range: not applicable (*)

Flash point: not applicable (*)

Evaporation rate: not applicable (*)

Flammability (solid; gas): not applicable (*)

Lower/upper limit of flammability or explosiveness: not applicable (*)

Steam Pressure: not applicable (*)

Steam density: not applicable (*)

Relative density: 1.02

Solubility: not applicable (*)


Partition coefficient-n-octanol/water: not applicable (*)

Self-ignition temperature: not applicable (*)

Decomposition temperature: not applicable (*)

Viscosity: not applicable (*)

(*) Not relevant due to the nature of the product, there is no property information of its hazards.

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10- STABILITY AND REACTIVITY

Reactivity: Does not present dangerous reactions

Chemical stability: Chemically stable in storage conditions, handling and use.

Possibility of dangerous reactions: In the specified conditions, dangerous reactions are not expected that lead to excessive temperatures or pressures.

Conditions to avoid: Applicable for handling and storage at room temperature:

Shock and friction: not applicable

Air contact: not applicable

Temperature increase: not applicable

Sunlight: not applicable

Unit: not applicable

Incompatible materials:

Acids: not applicable

Water: not applicable

Combustible materials: not applicable

Others: not applicable

Dangerous decomposition products:

See item 10 to check for specific decomposition products. Depending on decomposition conditions, complex mixtures of chemicals can be released: carbondioxide (CO₂), carbon monoxide and other organic compounds.

11- TOXICOLOGICAL INFORMATIONS

Information on toxicological effects:

LD50 oral > 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:

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

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

-Severe eye injuries/eye irritation: Based on available data, classification criteria are not established.

-Respiratory or skin sensitization: Based on available data, classification criteria are not established.

-Germ cell mutagenicity: Based on available data, classification criteria are not established.


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

-Playback Toxicity: Based on available data, classification criteria are not established.

-Toxicity to specific target organs- unique exposure: Based on available data, classification criteria are not established.

-Toxicity to specific target organs- repeated exposure: Based on available data, classification criteria are not established.

-Hazard by aspiration: Based on available data, classification criteria are not established.

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Information on specific toxicity to substances: Not available

12- ECOLOGICAL INFORMATIONS

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

Ecotoxicity: not available

Persistence and degradability: not available

Bioaccumulative potential: not available

Ground mobility: not available

Other adverse effects: not described

13- CONSIDERATIONS ON TREATMENT AND WILLINGNESS

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

National and international regulations

Terrestrial: Not described

Waterway:

-UN number: not applicable

-UN appropriate name for boarding: not applicable

-Transport hazard class (es): not applicable

-Label: not applicable

-Packing group: not applicable

-Hazardous to the environment: no

-Special precautions for the user: Physicochemical properties: see item 9

-Limited Quantity: Non-applicable

-Bulk shipping in accordance with Annex II to the Marpol 73/78 Convention and the IBC Code: not applicable.

For product classified as dangerous for transport (as modal): not applicable.

Main and subsidy risk class/subclass, if any: not applicable.

Air:

Ref.: IATA / ICAO 2014:

-UN number: not applicable


-UN appropriate name for boarding: not applicable

-Transport hazard class (es): not applicable

-Label: not applicable

-Packing group: not applicable

-Hazardous to the environment: no

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-Special precautions for the user: Physical-chemical properties: see item 9
 -Bulk shipping in accordance with Annex II of the Marpol 73/78 Convention and the IBC Code: not applicable.

-For product classified as dangerous for transport (as modal): not applicable.

-Main and subsidiary risk class/subclass, if any: not applicable.

-Packing group: not applicable.

-Dangerous to the environment: no.

15- REGULATIONS

-Safety, health and environmental regulations / specific legislation for substance or mixing:

Regulation (EC) 649/2012 on the import and export of hazardous chemicals: Not applicable.

Substances to the requirements for which a decision not to include in Annex I (Regulation (EU) No 528/2012): Not applicable.

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

Substances applying for authorization under Regulation (EC) 1907/2006 (REACH): Not applicable.

-Limitations on the marketing and use of certain hazardous substances and mixtures (Annex XVII, REACH): Not applicable.

-Specific provisions in terms of the protection of persons or the environment

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

-Respective instructions for use

This product is collected from healthy animals declared suitable for human consumption at the time of slaughter.


This product is produced in accordance with regulations to limit the risk of transmission of bovine spongiform encephalopathy. Tests to detect certain viruses can be tested as (Foot-and-Mouth Disease Virus, Bovine Leukosis Virus, Blue Tongue Virus, Bovine Virus Diarrhea (BVD), Parainfluenza Virus (PI3), Infectious Bovine Rhinotracheitis Virus (IBR), etc.)

-Other legislation:

Not applicable

-Chemical safety assessment:

Supplier has not carried out chemical safety assessment

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16- OTHER INFORMATION

Modifications related to the previous Safety Sheet relating to the forms of risk management: Not applicable

Training:

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 this Safety Sheet as well as the product label.

Main bibliographic sources:

Annex II-Guide to the preparation of the Safety Sheets of Regulation (EC) No 1907/2006 Regulation (EC) No 453/2010)

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

<http://echa.europa.eu>

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

-IMDG: International Maritime Dangerous Goods

-IATA: International Air Transport Association

-ANTT: National Land Transport Agency

<http://www.biowest.net/products/serum/fetal-bovine-serum/8306-fetal-bovine-serum-fbs-south-america.html>

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