SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifier

Product name: LAUNCHER GRANULAR SOYBEAN

Product Identifier:

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Peat-based inoculant product containing nitrogen-fixing *Bradyrhizobium* bacteria.

1.3 Details of the supplier of the Safety Data Sheet

RIZOBACTER ARGENTINA S.A.

Avda. Presidente. Dr. Arturo Frondizi Nº 1150, Parque Industrial,
(2700) Pergamino, Buenos Aires, Argentina.
P: +54 2477 40 9400 / 9428 - F: +54 2477 43 2893

1.4 Emergency telephone number

Emergency phone (24 hours)	CIQUIME 0800 222 2933 (Argentina only) +54 11 4552 8747 (other countries)

SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to the Globally Harmonized System

This product does not meet the criteria for classification in any hazard class according to Globally Harmonized System of Classification and Labelling of Chemicals.

2.2 Label elements

Pictogram: NO SYMBOL

Signal word: NO SIGNAL WORD

Hazard statements:

No hazard statement.

Precautionary statements:

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves.
P501 - Dispose of contents and/or container in accordance with national and international regulations.

2.3 Other hazards

There are no other additional hazards of consideration in the classification.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance

Does not apply.

3.2 Mixtures

IDENTIFICATION NAME	CAS No.	Content
Bradyhizobium japonicum	-	$1x10^8$ viable CFU/g

SECTION 4 - FIRST AID MEASURES

4.1 Description of first aid measures

General advice: Avoid exposure to the product, taking appropriate protective measures. Get medical advice.

Inhalation: For those providing assistance, avoid exposure. Use proper protection if necessary. Move victim and get fresh air. Keep calm. If not breathing, give artificial respiration. Get medical advice.

Skin contact: Wash immediately after contact with soap and water for at least 15 minutes. Remove contaminated clothing and wash before reuse.

Eye contact: Immediately flush with water for at least 15 minutes, holding eyelids apart to ensure that all eye and lid tissues rinsed. Washing eyes within several seconds is essential to achieve maximum effectiveness. If you have contact lenses, remove them after the first 5 minutes, then continue rinsing eye. Get medical advice.

Ingestion: DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to an unconscious person. Get medical advice.
If vomiting occurs spontaneously, place victim on side to reduce the risk of aspiration.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: possible respiratory damage after repeated or prolonged inhalation.
Contact with the skin: it is not considered a dangerous product. However, prolonged contact can cause irritation.
Eye contact: may cause eye irritation
Ingestion: Small amounts are unlikely to be ingested as a result of industrial handling.

4.3 Indication of any immediate medical attention and special treatment needed

Medical advice: Provide symptomatic treatment. For more information, contact a Poison Control Center.

SECTION 5 – FIREFIGHTING MEASURES

5.1 Extinguishing media

Use dry chemical, foam, sand or water spray. Use the product according to surrounding materials. DO NOT USE water jets. For class A fires, the use of carbon dioxide is not recommended because of its low heat removal.

5.2 Special hazards arising from the substance or mixture

The product and its packaging can burn but do not ignite easily.

5.3 Advice for firefighters

5.3.1 Firefighting instructions

Spray the packaging with water to avoid ignition or to keep them cool if exposed to excessive heat or fire.
Remove the packages if they have not yet been reached by the flames, and you can do so without risk.

Cool containers with water until the fire is extinguished, removing the remains until the embers are cold. Contain fire water for later disposal. Do not disperse the material.

5.3.2 Protective clothing

Use self-contained breathing apparatus. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it may not be effective in spill situations.
For large spills wear protective clothing against chemicals, which is specifically recommended by the manufacturer. It may provide little or no thermal protection.

5.3.3 Hazardous combustion products

In case of fire may release irritating and/or toxic fumes and gases, such as carbon monoxide and other substances derived from incomplete combustion.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Evacuate personnel to a ventilated area.

6.1.2 For emergency responders

Eliminate all ignition sources (no smoking, do not use flares, sparks or flames in immediate area). Evacuate personnel to a ventilated area. Ventilate immediately, especially where product may accumulate. Do not allow reuse of spilled product.

6.2 Environmental precautions

Contain the product and avoid its dispersion to the environment.
Prevent the product from reaching water courses.

6.3 Methods and material for containment and cleaning up

Collect the product with shovel and place it in an appropriate container. Clean the affected area completely.

6.4 Reference to other sections

See Section 8 - Exposure Controls and Personal Protection, and Section 13 – Disposal considerations.

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Do not eat, drink or smoke during handling. Avoid contact with eyes, skin and clothing. Wash after handling.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions:	Store in a clean, dry, well-ventilated area. Protect from sunlight. Keep containers/packages closed. Store and transport at a temperature between 4 °C and 25 °C, and a relative humidity between 40% and 80%. Do not exceed 26 °C, otherwise there will be a decrease in bacterial viability.
Packaging materials:	Supplied by the manufacturer.
Incompatibilities:	Keep away from Strong oxidizing agents, acids and bases.

7.3 Specific end use(s)

Peat-based inoculant product containing nitrogen-fixing *Rhizobium* bacteria.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

TLV-TWA (ACGIH):	N/D
TLV-STEL (ACGIH):	N/D
PEL (OSHA):	N/D
IDLH (NIOSH):	N/D
PNEC (WATER):	N/D
PNEC (SEA WATER):	N/D
PNEC-STP:	N/D

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Keep workplace ventilated. The normal routine ventilation is usually adequate. Local hoods should be used for operations that produce or release large amounts of product. In low or confined areas should be provided mechanical ventilation. Provide showers and eyewash stations.

8.2.2. Individual protection measures, such as personal protective equipment

Eye and face protection:	When necessary, wear chemical splash-proof safety glasses (complying with EN 166).
Skin protection:	When necessary, wear impermeable protective natural rubber gloves (complying with standards EN 374), clothes and safety footwear resistant to chemicals.
Respiratory protection:	When necessary, wear an appropiate respirator. Special attention to oxygen levels in the air should be paid. If large releases occur, wear self-contained breathing apparatus (SCBA).

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:	Granules.
Color:	Dark brown.
Odour:	Normal.
Odour threshold:	N/D
pH:	6,0 - 7,5
Melting point:	N/D
Boiling point:	N/D
Flammability:	The product is not flammable.
Flash point:	Not flammable.
Evaporation rate:	N/D
Auto-ignition temperature:	N/D
Explosive limits:	N/D
Decomposition temperature:	N/D
Vapour pressure (20°C):	N/D
Vapour density (air=1):	N/D

Relative density (20°C):	0,5 - 0,6 g/cm³
Solubility (20°C):	Insoluble in water.
Henry constant (20°C):	N/D
Partition coefficient (logKo/w):	N/D
Viscosity (40°C):	N/D
Explosive properties:	Not explosive. According to column 2 of Annex VII of REACH, this study is not required because in the molecule no chemical groups are associated with explosive properties.
Oxidizing properties:	According to column 2 of Annex XVII of REACH, this study is not necessary because the substances present in the product, due to their chemical structures, are incapable of reacting exothermically with combustible materials.

9.2 Other information

Other properties: None.

SECTION 10 – STABILITY AND REACTIVITY

10.1. Reactivity

It is not expected that product reactions or decomposition may occur under normal storage conditions. It does not contain organic peroxides. It is not corrosive to metals. Does not react with water.

10.2. Chemical stability

The product is chemically stable and does not require stabilizers.

10.3. Possibility of hazardous reactions

No hazardous polymerization is expected.

10.4. Conditions to avoid

Do not freeze the product. Avoid temperatures above 25 °C.

10.5. Incompatible materials

Strong oxidizing agents, acids and bases.

10.6. Hazardous decomposition products

The material does not decompose at room temperature. In case of fire, see Section 5.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:
The product does not present an acute hazard based on known or supplied information.
Skin irr. (rabbit, estim.): not irritant
Eye irr. (rabbit, estim.): not irritant
Skin sens (Guinea pig, estim.): not sensitising
Resp. sens (Guinea pig, estim.): not sensitizing

Carcinogenicity, mutagenicity and reproductive toxicity:
Carcinogenicity: Contains no components in concentrations greater than or equal to 0.1% that are classified as carcinogens by the International Agency for Research on Carcinogens.
Mutagenicity: No specific or relevant data available for evaluation.
Tox. Repr .: No specific or relevant data available for evaluation.
Teratogenicity: No specific or relevant data available for evaluation.

Routes of exposure: Inhalation, skin and eye contact.

Inhalation: possible respiratory damage after repeated or prolonged inhalation.
Contact with the skin: it is not considered a dangerous product. However, prolonged contact can cause irritation.
Eye contact: may cause eye irritation
Ingestion: Small amounts are unlikely to be ingested as a result of industrial handling.
STOT-SE: No specific or relevant data available for evaluation.
STOT-RE: No specific or relevant data available for evaluation.
Aspiration: The GHS aspiration hazard criteria is not applicable because the product is a solid.

SECTION 12 – ECOLOGICAL INFORMATION

12.1. Toxicity

The product does not present an acute hazard based on known or supplied information.

12.2. Persistence and degradability

BIODEGRADABILITY (-): No test data available.

12.3. Bioaccumulative potential

Log Ko/w (OCDE 107 o 117): N/D
BIOCONCENTRATION FACTOR - BCF (OCDE 305): N/D

12.4. Mobility in soil

HENRY CONSTANT (20°C): N/D
LogKoc: N/D
DISTRIBUTION (%): *Rhizobium* bacteria have low mobility in soils, so they do not move far from their site of incorporation.

12.5. Results of PBT and vPvB assessment

This product does not meet the PBT criteria of Annex XIII of REACH. This product does not meet the vPvB criteria in Annex XIII of REACH.

12.6. Other adverse effects

AOX and metal containing: Does not contain organic halogens nor metals.

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of excess product and empty containers according to current legislation for the protection of the environment and hazardous waste. Disposal procedure: sewage treatment plant.

SECTION 14 – TRANSPORT INFORMATION

14.1 Transport by land

Proper Shipping Name:	NOT CLASSIFIED AS A DANGEROUS GOODS
UN/ID Number:	NOT CLASSIFIED AS A DANGEROUS GOODS
Hazard class:	NOT CLASSIFIED AS A DANGEROUS GOODS
Packing group:	NOT CLASSIFIED AS A DANGEROUS GOODS
Hazard identification number:	NOT CLASSIFIED AS A DANGEROUS GOODS
Excepted and limited quantity:	NOT CLASSIFIED AS A DANGEROUS GOODS

14.2 Air transport (ICAO/IATA)

Proper Shipping Name:	NOT CLASSIFIED AS A DANGEROUS GOODS
UN/ID Number:	NOT CLASSIFIED AS A DANGEROUS GOODS
Hazard class:	NOT CLASSIFIED AS A DANGEROUS GOODS

Packing group:	NOT CLASSIFIED AS A DANGEROUS GOODS
PAX and Cargo Packing instructions:	NOT CLASSIFIED AS A DANGEROUS GOODS
Cargo Packing instructions:	NOT CLASSIFIED AS A DANGEROUS GOODS
ERC:	NOT CLASSIFIED AS A DANGEROUS GOODS

14.3 Sea transport (IMO)

IMDG Code

Proper Shipping Name:	NOT CLASSIFIED AS A DANGEROUS GOODS
UN/ID N°:	NOT CLASSIFIED AS A DANGEROUS GOODS
Hazard class:	NOT CLASSIFIED AS A DANGEROUS GOODS
Packing group:	NOT CLASSIFIED AS A DANGEROUS GOODS
EMS:	NOT CLASSIFIED AS A DANGEROUS GOODS
Stowage and manipulation:	NOT CLASSIFIED AS A DANGEROUS GOODS
Segregation:	NOT CLASSIFIED AS A DANGEROUS GOODS
Marine pollutant:	NO
Proper Shipping Name:	NOT CLASSIFIED AS A DANGEROUS GOODS

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Not dangerous for the ozone layer.
Volatile organic compounds (VOC's): N/D

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16 – OTHER INFORMATION

16.1 Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists.
BCF: Bioconcentration Factor
CAS: Chemical Summary Service
EC50: Average Effective Concentration.
LC50: Average Lethal Concentration.
LD50: Mean lethal dose.
ATE: acute toxicity estimation.
IARC: International Agency for Research on Cancer
IDLH: Concentration immediately dangerous to life or health
INSHT: National Institute for Occupational Safety and Health.
N/A: the property is not applicable due to the physical chemical and toxicological characteristics of the product.
N/D: no information available at the time of the SDS.
NIOSH: National Institute for Occupational Safety and Health
OECD: Organization for Economic Cooperation and Development
PEL: Permisible Exposure Limit.
PNEC: Predicted no-effect concentration
REL: Recommended Exposure Limit.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TWA: Time Weighted Average.

16.2 Key literature references and sources for data

Globally Harmonized System of Classification and Labelling of Chemicals, fifth revised edition, 2013 (GHS 2013 - 'ST / SG / AC 10/30 / Rev.5'). The fifth edition is taken into consideration because it is the one valid for Argentina according to Resolution 801/2015 of the SRT. In any case, the information is contrasted with Revision 7 ('ST / SG / AC 10/30 / Rev.7') and clarification is made if required.

Agreement on Transport of Dangerous Products within the MERCOSUR, MERCOSUR\CMC\DEC N° 2/94.
European Agreement on the International Carriage of Dangerous Goods by Road (ADR 2019) and amendments.
Regulations concerning the International Carriage of Dangerous Goods by Rail (RID 2019) and amendments.
International Maritime Dangerous Goods Code (IMDG 2018 - Amendment 39-18), International Maritime Organization (IMO).
IBC Code 2016, IMO, IMO Resolution MSC.369 (93).
Regulations of the International Air Transport Association (IATA 60 ed., 2019) on the transport of dangerous goods by air.

16.3 Classification and procedure used to derive the classification for mixtures

The classification has been made based on information from the product manufacturer.
Control of changes: v.1 - Adaptation to the format.

16.4 Disclaimer

This information only concerns the above-mentioned product and is not to be valid for other (s) product (s) or in any process. This safety data sheet provides health and safety information. The information is to our best knowledge, correct and complete. It is given in good faith but without warranty. The product should be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other use, exposure should be evaluated so that they can implement appropriate handling practices and training programs to ensure safe operations in the workplace.
It remains the user's own responsibility that this information is appropriate and complete for the special use of this product.

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