

Safety Data Sheet

LIVIN-SBP3

SDS No: SDS507/000
Effective Date: 22/09/2020
Next Revision Date: 22/09/2025
Revision no: 000
Product Code: 507

SECTION 1

COMPANY AND CHEMICAL PRODUCT IDENTIFICATION

Product Name: LIVIN-SBP3
Chemical Identifier: *Bradyrhizobium japonicum* WB74 (SARCC-340)
Product Use: Seed inoculant for improved nitrogen fixation
Restrictions on use: Agriculture

Supplier: Nutrico SA (Pty) Ltd. (Co. Reg. No. 2003/008663/07)
Cedar Lake Industrial Estate,
1 Harvest Place, Clayville, Olifantsfontein, 1666, Gauteng, RSA

Telephone: (011) 392 4072
Website: www.nutrico.co.za

Emergency Contact Numbers

Griffon Poison Information: +27 82 446 8946

SECTION 2

HAZARDS IDENTIFICATION

Classification as defined by Regulation (EC) 1272/2008 [CLP] EU & SANS 10234:2008

Hazard Classes	Hazard Category	Hazard Statement Code	Hazard Statements
Health			
Acute toxicity (oral)	-	-	-
Acute toxicity (dermal)	-	-	-
Acute toxicity (inhalation)	-	-	-
Skin corrosion/irritation	-	-	-
Serious eye damage/eye irritation	-	-	-
Reproductive toxicity	-	-	-
STOT RE	-	-	-
Environmental			
Aquatic (acute)	-	-	-
Aquatic (chronic)	-	-	-

Label elements: labelling as defined by Regulation (EC) 1272/2008 [CLP] EU & SANS 10234:2008

Hazard pictograms: None

Signal word - None

Precautionary statements

P101 If medical advice is needed, have product container or label at hand
P102 Keep out of reach of children
P103 Read label before use

Special labelling of certain mixtures – None known

Other hazards – None known

Toxicity: Classification according to GHS: Not classified

SECTION 3
COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

Declared Active Ingredients:

Ingredient name	CAS No.	EC No.	Conc. %w/w	Classification Regulation (EC) 1272/2008
<i>Bradyrhizobium japonicum</i> WB74 (SARCC-340)	-	-	-	-

SECTION 4
FIRST AID MEASURES

INHALATION: Remove affected person to fresh air. Consult a doctor if an allergic reaction is noticed.

SKIN: In case of excessive skin contact, it is advisable to take off the clothing or the equipment used and wash the parts exposed to the product with water and soap. If skin irritation occurs: Seek medical advice or attention.

EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Seek medical advice or attention.

INGESTION: Not dangerous, however, avoid the ingestion of this product as it is an agricultural product. Rinse mouth with water.

IMPORTANT ACUTE EFFECTS: None known

IMPORTANT DELAYED EFFECTS: None known

NOTE TO PHYSICIAN: This product contains *Bradyrhizobium japonicum* WB74, treat symptomatically and supportively.

SECTION 5
FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water spray, fog, alcohol resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.

Specific hazards: None known

Special Fire Fighting Procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from

maximum distance and use unmanned hose holder or monitor nozzles. Keep upwind. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.

Personal protective equipment: Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective gear.

SECTION 6

ACCIDENTAL RELEASE MEASURES

Personal Precautions: In case of spill: Evacuate the spill area, except for cleanup personnel. Clean-up personnel must wear personal protective equipment (PPE).

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert emergency personnel, evacuate unprotected personnel and animals.

Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. Any spillages or uncontrolled discharges into water sources should be reported immediately to the police and the Department of Water/Environmental Affairs.

Methods & Materials for Containment: Contain spilled product by diking area with sand or earth.

Methods & Materials for Clean-up: Control spill with adsorbent pads or brooms. Recover free liquid, for recovery or disposal, add inert absorbent (sand, earth, sawdust) to spill area. Once absorbed, sweep and put it inside plastic bags and then proceed with its disposal. Minimize use of water to prevent environmental contamination. Wash the spillage area with water. Water used for washing must be prevented from entering surface water drains and into soil/subsoil.

SECTION 7

HANDLING AND STORAGE

HANDLING

Precautions for safe handling: Ensure adequate ventilation when handling. Control spills and residues, disposing them with safe methods. Avoid leakages from the container.

General occupational hygiene: Practice good hygiene when using this material. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.

STORAGE

Conditions for safe storage: Store at temperatures between 10°C and 25°C and relative humidity between 40% and 80%. Do not expose to temperatures higher than 26°C as it can cause a decrease in bacterial viability. Do not store together with food, beverages or

animal feed. Keep in all cases the integrity of the original package. Do not expose to sunlight, rain or other meteorological agents that could alter the original characteristics of the product. Do not transport and/or store together with products that could emanate toxic fumes.

Shelf life

Maximum of six months.

Incompatible substances and mixtures: Refer to product label.

Packaging material: Packaged in plastic bags.

SECTION 8
EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration: No occupational exposure limits have been determined for the significant ingredients in this product.

ENGINEERING CONTROLS: It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area, use a NIOSH approved air-purifying respirator.

Hand Protection: The use of chemically protective gloves is recommended to prevent against skin contact.

Eye Protection: Use tight-fitting safety goggles.

Skin and Body Protection: Gloves should be worn when mixing and handling the product.

Emergency eyewash: Where there is any possibility that a handler's eyes may be exposed to this substance; an eye wash fountain should be provided or appropriate alternative within the immediate work area for emergency use.

SECTION 9
PHYSICAL AND CHEMICAL PROPERTIES

Property	Value/description	Method
Physical state	Solid (Powder)	Visual
Colour	Brown	Visual
Odour	Soil	Organoleptic
pH (1% aqueous dilution)	6.185 ± 0.065	CIPAC MT 75.3
Melting/Freezing point	Not available	
Boiling point	Not applicable	
Flash point	No flash point	
Flammability	Not flammable	
Vapour pressure	Not available	
Relative Vapour Density	Not available	
Density	0.455 ± 0.035 g/ml	Pycnometer
Solubility	Non-soluble	

n-Octanol/Water partition coefficient	Not available	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
Viscosity	Not available	
Explosive properties	Not explosive	
Oxidising properties	Not oxidative	

SECTION 10

STABILITY AND REACTIVITY

Chemical Stability:	The product is stable under recommended storage conditions.
Reactivity:	None known.
Possibility of Hazardous Reactions:	Will not occur.
Conditions to Avoid:	Heat, exposure to flames, and incompatibles.
Incompatible Materials:	Some fungicides/chemicals may be harmful to the bacteria in this product. Please see product label for further information.
Hazardous Decomposition Products:	Oxides of Carbon

SECTION 11

TOXICOLOGICAL INFORMATION

GHS Classification: Not classified under GHS

Toxicity	Effective dose/ concentration	Value	Species	Method
Acute Oral	LD ₅₀	Not classified	-	GHS ATE calculation
Acute Dermal	LD ₅₀	Not classified	-	
Acute Inhalation	LC ₅₀	Not classified	-	
Skin damage/irritation	Not classified as causing damage/irritation to skin			
Eye damage/irritation	Not classified as causing damage/irritation to eyes			
Skin sensitization	Not classified as a skin sensitizer			
Respiratory sensitization	Not classified as a respiratory sensitizer			
Mutagenicity/Genotoxicity:	Not classified as a mutagen and not genotoxic			
Carcinogenicity	Not classified as a carcinogen			
Reproductive toxicity	Not classified as a reproductive toxicant			
Specific target organ toxicity:	Not classified as a specific target organ toxicant			
Chronic effects (e.g developmental)	None known			

SECTION 12

ECOLOGICAL INFORMATION

GHS Classification: Not classified under GHS

Toxicity	Effect dose/ concentration	Value	Test duration	Species	Method
Aquatic		Not classified	-	-	-
Fish	LC ₅₀				
	NOEC				
Crustacea	EC ₅₀				
	NOEC				
Algae	EC ₅₀				

Terrestrial		Not classified	-	-	-
Birds	LD ₅₀				
	LC ₅₀				
Bees	LD ₅₀ (contact)				
	LD ₅₀ (oral)				
Earthworms/Arthropods	-				

ENVIRONMENTAL EFFECTS

Persistence and degradability:

This product contains naturally occurring soil bacteria

Bio-accumulative Potential:

This product contains naturally occurring soil bacteria

Mobility in soil:

This product contains naturally occurring soil bacteria

Other adverse effects:

Not known.

SECTION 13 **DISPOSAL CONSIDERATIONS**

Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Waste:

Open dumping or burning of this product is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant.

Container:

Emptied containers retain product residues. Do not re-use the empty container for any other purpose. Triple rinse empty containers by inverting the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to a third of that of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner. Destroy the container by perforating and flattening and dispose of through an approved waste dump site, incineration plant or recycling company. Observe all labelled safeguards until container is destroyed.

SECTION 14 **TRANSPORT INFORMATION**

UN Number: Not regulated

Road Transport ADR/IRD:

Class: Not classified

Packaging group: Not applicable

UN Proper Shipping Name: Not applicable

Maritime Transport IMDG/IMO:

Class: Not classified

Packaging group: Not applicable

UN Proper Shipping Name: Not applicable

Marine Pollutant (Y/N): No

Air Transport IATA/ICAO:

Class: Not classified

Packaging group: Not applicable

UN Proper Shipping Name: Not applicable

Special/Environmental Precautions: None.

Transport in bulk (according to MARPOL 73/78, Annex II and the IBC code): Not available.

SECTION 15
REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture:

OHSA 1993 Regulations for Hazardous Chemical Substances.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

Other national regulations: None.

Chemical Safety Assessment carried out?

No chemical safety assessment was carried out for this product.

SECTION 16
OTHER INFORMATION

PACKAGING:

Packed in 150 g, 250 g, 500 g, 750 g, 1.5 kg, and 3 kg plastic bags, labelled according to South African regulations and guidelines.

DISCLAIMER:

The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.