

## 1. Identification of Substance & Company

### Product

<b>Product name</b>	Biostart N
<b>Other names</b>	no other names
<b>Product codes</b>	NA
<b>HSNO approval</b>	non hazardous
<b>Approval description</b>	non hazardous
<b>UN number</b>	NA
<b>DG class</b>	NA
<b>Proper Shipping Name</b>	NA
<b>Packaging group</b>	NA
<b>Hazchem code</b>	NA
<b>Uses</b>	Non-pathogenic free-living nitrogen-fixing bacterium. Used as a fertilizer or soil enrichment product

### Company Details

<b>Company</b>	<b>Biostart LTD</b>	<b>Biostart Brands PTY Ltd</b>
<b>Address</b>	17 Reta Crescent Kerepehi 3671 New Zealand	L1/109 Jessie St Armidale NSW 2350 Australia
<b>Telephone</b>	0800 116 229	1800 359 555
<b>Website</b>	biostart.co.nz	biostart.com.au

## 2. Hazard Identification

### Approval in New Zealand

This product is not considered hazardous under the Hazardous Substances and New Organisms Act (HSNO), according to the criteria in the Hazardous substances (Hazard Classification) Notice 2020.

Classes	Hazard Statements
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none

### SYMBOLS

none

### Australian GHS Classification

This product is not considered hazardous under GHS.

### Precautionary Statements

none

## 3. Composition / Information on Ingredients

Component	CAS/ Identification	Conc (%)
Azotobacter chroococcum 49-12 ferment	Not assigned	>10 <sup>11</sup> CFU/L
Ingredients not contributing to HSNO classes	Mixture	Balance

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

## 4. First Aid

### General Information

You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

**Recommended first aid facilities** Ready access to running water is recommended.

**Exposure**

<b>Swallowed</b>	Do NOT induce vomiting. Give a glass of water to drink. Contact a doctor if concerned.
<b>Eye contact</b>	If product gets in eyes, wash material from them with running water for several minutes. If symptoms persist, seek medical advice.
<b>Skin contact</b>	Flush immediately with large amounts of water. Remove all contaminated clothing. Contact a doctor if experiencing symptoms
<b>Inhaled</b>	Generally, inhalation of vapours/mists is unlikely to result in adverse health effects. If coughing, dizziness or shortness of breath is experienced, remove the patient to fresh air immediately. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor.

**Advice to Doctor**

Treat symptomatically

**5. Firefighting Measures**

<b>Fire and explosion hazards:</b>	There are no specific risks for fire/explosion for this chemical. It is not classed as flammable.
<b>Suitable extinguishing substances:</b>	Carbon dioxide, extinguishing powder, foam, fog sprays, water jets.
<b>Unsuitable extinguishing substances:</b>	Unknown.
<b>Products of combustion:</b>	Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
<b>Protective equipment:</b>	No special measures are required.
<b>Hazchem code:</b>	NA

**6. Accidental Release Measures**

<b>Containment</b>	There is no current legal requirement for containment of this product.
<b>Emergency procedures</b>	Generally, the containers size will limit a large spill from occurring. If a significant spill occurs: Stop leak if safe or necessary. Isolate area. Collect spill, see below. Transfer to container for disposal. Dispose of according to guidelines below (Section 13).
<b>Clean-up method</b>	This product is not considered flammable or ecotoxic. Small spills do not require any special clean up method. Larger spills (e.g., greater than 10kg) should be mopped up and collected.
<b>Disposal</b>	Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
<b>Precautions</b>	No special protective clothing is normally necessary.

**7. Storage & Handling**

<b>Storage</b>	Avoid storage of harmful substances with food. Store the product at 4°C. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10.
<b>Handling</b>	Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements.

**8. Exposure Controls / Personal Protective Equipment**

**Workplace Exposure Standards**

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m<sup>3</sup> for respirable particulates and 10mg/m<sup>3</sup> for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds	Ingredient	WES-TWA	WES-STEL
	No ingredients listed		

**Exposure Standards - Australia**

**Australian Exposure Standards** No ingredients listed

**Engineering Controls**

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

**Personal Protective Equipment**

**Eyes** Protective eyewear is not normally necessary when using this product. However, it always prudent to use protective eyewear if splashes are likely.

**Skin** Protective gloves and clothing are not normally necessary. However, it is prudent to wear gloves when handling chemicals in bulk or for an extended period of time.

**Respiratory** Respirator is not required under normal use. Ensure adequate natural ventilation. If product is being used in confined conditions, the use of a mask or respirator may be preferred.

**WES Additional Information**

Not applicable

**9. Physical & Chemical Properties**

<b>Appearance</b>	Light black liquid
<b>Odour</b>	mild characteristic odour
<b>Odour Threshold</b>	no data
<b>pH</b>	6.0-7.5
<b>Freezing/melting point</b>	no data
<b>Boiling Point</b>	no data
<b>Flashpoint</b>	no data
<b>Flammability</b>	no data
<b>Upper &amp; lower flammable limits</b>	no data
<b>Vapour pressure</b>	no data
<b>Vapour density</b>	no data
<b>Specific gravity/density</b>	1.0g/cm <sup>3</sup>
<b>Solubility</b>	soluble in water
<b>Partition coefficient</b>	no data
<b>Auto-ignition temperature</b>	no data
<b>Decomposition temperature</b>	no data
<b>Viscosity</b>	no data
<b>Particle Characteristics</b>	no data

**10. Stability & Reactivity**

<b>Stability</b>	Stable
<b>Conditions to be avoided</b>	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
<b>Incompatible groups</b>	Strong acids and bases, oxidisers.
<b>Substance Specific Incompatibility</b>	none known
<b>Hazardous decomposition products</b>	Oxides of carbon
<b>Hazardous reactions</b>	none known

## 11. Toxicological Information

### Summary

IF SWALLOWED: no known effect.  
 IF IN EYES: not irritating.  
 IF ON SKIN: does not result in skin irritation.  
 IF INHALED: no known effects. Substance has a very low vapour pressure.  
 CHRONIC TOXICITY: no known effects.

### Supporting Data

<b>Acute</b>	<b>Oral</b>	Using LD <sub>50</sub> 's for ingredients, the estimated LD <sub>50</sub> (oral, rat) for the mixture is >5,000 mg/kg.
	<b>Dermal</b>	No evidence of dermal toxicity.
	<b>Inhaled</b>	No evidence of inhalation toxicity.
	<b>Eye</b>	The mixture is not considered to be an eye irritant.
	<b>Skin</b>	The mixture is not considered to be a skin irritant.
<b>Chronic</b>	<b>Sensitisation</b>	No ingredient present at concentrations > 0.1% is considered a sensitizer.
	<b>Mutagenicity</b>	No ingredient present at concentrations > 0.1% is considered a mutagen.
	<b>Carcinogenicity</b>	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	<b>Reproductive / Developmental</b>	No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	<b>Systemic</b>	No ingredient present at concentrations > 1% is considered a target organ toxicant.
	<b>Aggravation of existing conditions</b>	None known.

## 12. Ecological Data

### Summary

This mixture is not considered ecotoxic.

### Supporting Data

<b>Aquatic</b>	Using EC <sub>50</sub> 's for ingredients, the estimated EC <sub>50</sub> for the mixture is > 100 mg/L.
<b>Bioaccumulation</b>	No evidence
<b>Degradability</b>	Not considered degradable, but will biodegrade. Log Kow 3.9-6 (estimates).
<b>Soil</b>	No evidence of soil toxicity.
<b>Terrestrial vertebrate</b>	Not considered ecotoxic towards terrestrial vertebrates (see acute toxicity)
<b>Terrestrial invertebrate</b>	No evidence of toxicity towards terrestrial invertebrates.
<b>Biocidal</b>	no data
<b>Environmental effect levels</b>	No EELs are available for this mixture or ingredients

## 13. Disposal Considerations

<b>Restrictions</b>	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
<b>Disposal method</b>	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority.
<b>Contaminated packaging</b>	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

## 14. Transport Information

### Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

There are no specific restrictions for this product (not a dangerous good).

<b>UN number:</b>	NA	<b>Proper shipping name:</b>	NA
<b>Class(es)</b>	NA	<b>Packing group:</b>	NA
<b>Precautions:</b>	NA	<b>Hazchem code:</b>	NA

**IMDG**

<b>UN number:</b>	NA	<b>Proper shipping name:</b>	Not regulated
<b>Class(es):</b>	NA	<b>Packing group:</b>	NA
<b>Precautions:</b>	NA	<b>EmS</b>	NA

**IATA**

<b>UN number:</b>	NA	<b>Proper shipping name:</b>	Not regulated
<b>Class(es):</b>	NA	<b>Packing group:</b>	NA
<b>Precautions:</b>	NA	<b>ERG Guide</b>	NA

**15. Regulatory Information**

**NZ regulations**

This substance is not considered to be hazardous under HSNO.  
All ingredients appear on the NZIoC.

**Specific Controls**

Key requirements are:

SDS	Not required (non hazardous), but best practice to have the SDS available.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Not required.
Certified handler	Not required.
Tracking	Not required.
Bunding & secondary containment	Not required.
Signage	Not required.
Location compliance certificate	Not required.
Flammable zone	Not required.
Fire extinguisher	Not required.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

**Other Legislation**

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

**Australian regulations**

<b>Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP)</b>	Not scheduled
<b>Applicable prohibitions and notifications/licensing requirements</b>	Not listed
<b>Agricultural and Veterinary Chemicals Act</b>	Not listed
<b>Listing in the Australian Inventory of Chemical Substances (AICS)</b>	Not applicable
<b>Additional information</b>	Not applicable

**16. Other Information**

**Abbreviations**

**Approval Code** Not applicable – non hazardous

<b>AICS</b>	Australian Inventory of Chemical Substances
<b>CAS Number</b>	Unique Chemical Abstracts Service Registry Number
<b>EC<sub>50</sub></b>	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
<b>EPA</b>	Environmental Protection Authority (New Zealand)
<b>GHS</b>	Globally Harmonised System of Classification and Labelling of Chemicals, 7 <sup>th</sup> revised edition, 2017, published by the United Nations.
<b>HAZCHEM Code</b>	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
<b>HSNO</b>	Hazardous Substances and New Organisms (Act and Regulations)
<b>IARC</b>	International Agency for Research on Cancer
<b>LEL</b>	Lower Explosive Limit
<b>LD<sub>50</sub></b>	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
<b>LC<sub>50</sub></b>	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
<b>NZIoC</b>	New Zealand Inventory of Chemicals
<b>STEL</b>	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
<b>STOT RE</b>	System Target Organ Toxicity – Repeated Exposure
<b>STOT SE</b>	System Target Organ Toxicity – Single Exposure
<b>TWA</b>	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
<b>UEL</b>	Upper Explosive Limit
<b>UN Number</b>	United Nations Number
<b>WES</b>	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

**References**

<b>Data</b>	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
<b>Controls</b>	EPA notices, <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> , Health and Safety at Work (Hazardous Substances) Regulations 2017, <a href="http://www.legislation.govt.nz">www.legislation.govt.nz</a>
<b>WES</b>	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – <a href="http://www.worksafe.govt.nz">www.worksafe.govt.nz</a> .
<b>ES</b>	Workplace Exposure standards for airborne contaminants – Safework Australia.
<b>Other References:</b>	Suppliers SDS, EU ECHA, ingredients SDS's, ChemIDplus

**Review**

<b>Date</b>	<b>Reason for review</b>
June 2019	Not applicable – new SDS
July 2023	HSNO to GHS 7, new address, logo
May 2024	New address

**Disclaimer**

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely GHS 7 classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email [info@datachem.co.nz](mailto:info@datachem.co.nz) or phone: +64 21 1040951.

