# Optimate™ Sustain
Safety Data Sheet

## 1. Identification of Substance & Company

### Product

| | |
|---|---|
| **Product name** | Optimate™ Sustain |
| **Product code** | NA |
| **HSNO approval** | HSR002521. |
| **Approval description** | Animal Nutritional and Animal Care Products Group Standard 2020 |
| **UN number** | NA |
| **Proper Shipping Name** | NA |
| **Packaging group** | NA |
| **Hazchem code** | NA |
| **Uses** | Feed additive |

### Company Details

| | |
|---|---|
| **Company** | **Blue Pacific Minerals** |
| **Address** | 11-17 Huttloc Drive,<br>Tokoroa<br>3420<br>New Zealand |
| **Website** | www.bpmnz.co.nz |
| **Telephone** | +64 7 885 0550 |
| **Email** | info@bpmnz.co.nz |

**Emergency Telephone Number: +64 274 573007**

## 2. Hazard Identification

### Approval

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002521., Animal Nutritional and Animal Care Products Group Standard 2017, and is classified as follows:

| HSNO Classes | Hazard Statements |
|---|---|
| 6.3A | H315 - Causes skin irritation. |
| 6.4A | H320 - Causes eye irritation. |

**SYMBOLS**

**WARNING**

### Other Classifications

Zeolite and Bentonite may contain crystalline silica. The following classification ONLY applies to this substance if it is in the form of a fine respirable dust in an occupational (chronic exposure) setting. This substance is in the form of granules.

| | |
|---|---|
| 6.7A* | H350 - May cause cancer. |
| 6.9A* | H372 - Causes damage to organs through prolonged or repeated exposure. |

### GHS classification – effective after 30 August 2021

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002521., Animal Nutritional and Animal Care Products Group Standard 2020, and is classified as follows:

| GHS Classes | Hazard Statements |
|---|---|
| Skin irritation Cat 2 | H315 - Causes skin irritation. |
| Eye irritation Cat 2B | H320 - Causes eye irritation. |

Zeolite and Bentonite may contain crystalline silica. The following classification ONLY applies to this substance if it is in the form of a fine respirable dust in an occupational (chronic exposure) setting.:

| | |
|---|---|
| Carcinogen. cat 1* | H350 - May cause cancer. |
| STOT RE cat 1* | H372 - Causes damage to organs through prolonged or repeated exposure. |

### Precautionary Statements

P103 - Read label before use.
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/eye protection.
P281 - Use personal protective equipment as required.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P332+P313 - If skin irritation occurs: Get medical advice/ attention.
P362 - Take off contaminated clothing and wash before re-use.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P308+P313 - IF exposed or concerned: Get medical advice/ attention.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local/regional/national/international regulation.

## 3. Composition / Information on Ingredients

| Component | CAS/ Identification | Concentrate |
|---|---|---|
| Zeolite – crystalline aluminosilicates may contains oxides including silica and aluminium oxide: | 1318-02-1 | 20-40 |
| Bentonite – may contain crystalline silica | 1302-78-9 | 1-10% |
| Non hazardous minerals containing magnesium, calcium, phosphates | mixture | 30-60% |
| Flavour | Proprietary | <0.1% |
| Silica component may include | | |
| Cristobalite | 14464-46-1 | <10 |
| Quartz (crystalline silica) | 14808-60-7 | <10 |

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

## 4. First Aid

### General Information

If medical advice is needed, have product container or label at hand. 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). IF exposed or concerned: Get medical advice/ attention.

**Recommended first aid facilities** Ready access to running water is required. Accessible eyewash is required.

### Exposure

**Swallowed** Do NOT induce vomiting. Give a glass of water to drink. Contact a doctor.
**Eye contact** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. If eye irritation persists: Get medical advice.
**Skin contact** IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention. Take off contaminated clothing and wash before re-use.
**Inhaled** IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor. If experiencing respiratory symptoms: Immediately call a POISON CENTER or doctor/physician.

### Advice to Doctor

Treat symptomatically

## 5. Firefighting Measures

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|---|---|
| **Fire and explosion hazards:** | There are no specific risks for fire/explosion for this chemical. It is non-flammable. |
| **Suitable extinguishing substances:** | Carbon dioxide, extinguishing powder or water jet. Fight larger fires with water jet or alcohol resistant foam. |
| **Unsuitable extinguishing substances:** | Unknown. |
| **Products of combustion:** | Product does not burn. Dust may form irritating atmosphere. |
| **Protective equipment:** | No special measures are required. |
| **Hazchem code:** | NA |

## 6. Accidental Release Measures

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|---|---|
| **Containment** | If greater than 1000kg is stored, secondary containment is required. Emergency plans to manage any potential spills must be in place. Prevent spillage from spreading or entering soil, waterways or drains. |
| **Emergency procedures** | In the event of large spillage (>100kg) of the dry product alert the fire brigade to location and give brief description of hazard.<br>Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain spill. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. |
| **Clean-up method** | Collect product avoiding any dust formation, and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services. |
| **Disposal** | Vacuum 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. |
| **Precautions** | Wear protective equipment to prevent skin and eye contamination and the inhalation of dust. Work up wind or increase ventilation. |

## 7. Storage & Handling

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| **Storage** | Stable under normal use and storage conditions. |
| **Handling** | Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Do not breathe dust. |

## 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$^3$ for respirable particulates and 10mg/m$^3$ for inhalable particulates when limits have not otherwise been established.

| NZ Workplace Exposure Stds | Ingredient | WES-TWA* | WES-STEL |
|---|---|---|---|
| | Silicon dioxide | see crystalline silica | data unavailable |
| | Aluminium oxide | 10mg/m$^3$ | data unavailable |
| | Iron (II) Oxide | 5mg/m$^3$ (as Fe) | data unavailable |
| | Magnesium oxide | 10mg/m$^3$ (fume) | data unavailable |
| | Calcium oxide | 2mg/m$^3$ | data unavailable |
| | Titanium dioxide | 10mg/m$^3$ | data unavailable |
| | Crystalline Silica – all forms | 0.05mg/m$^3$ | data unavailable |

### 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 dust is likely. |
| **Skin** | Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves. Replace frequently. Gloves should be checked for tears or holes before use. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking. Wash contaminated clothing before re-use. |

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| **Respiratory** |  | Use of a P2 dust mask or fine particulate half or full face respirator with an effective seal is recommended when airborne concentrations approach the WES (section 8). Fit testing and clear guidelines and training for use and maintenance of PPE are necessary. |

### WES Additional Information

Not applicable

## 9. Physical & Chemical Properties

| | |
|---|---|
| **Appearance** | Briquettes |
| **Odour** | no odour |
| **pH** | 8.65 (10% aqueous suspension) |
| **Vapour pressure** | NA |
| **Viscosity** | NA |
| **Boiling point** | NA |
| **Volatile materials** | no data |
| **Freezing / melting point** | NA |
| **Solubility** | not soluble in water |
| **Specific gravity / density** | no data |
| **Flash point** | no data |
| **Danger of explosion** | NA |
| **Auto-ignition temperature** | NA |
| **Upper & lower flammable limits** | NA |
| **Corrosiveness** | non corrosive |

## 10. Stability & Reactivity

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|---|---|
| **Stability** | Stable |
| **Conditions to be avoided** | Containers should be kept closed in order to avoid contamination. Avoid the creation of dust. |
| **Incompatible groups** | Avoid contact with strong oxidsing agents and hydrogen fluoride. |
| **Hazardous decomposition products** | None known |
| **Hazardous reactions** | Zeolites will react with hydrogen fluoride (HF) acid. Avoid contact with strong oxidsing agents. |

## 11. Toxicological Information

### Summary

IF IN EYES: Fine dust may cause irritation when in direct contact.
IF ON SKIN: Material may cause drying out of skin.
IF INHALED: May cause respiratory irritation. Also see chronic effects.
IF SWALLOWED: No adverse effects anticipated under normal use conditions.
CHRONIC EFFECTS: The adverse health effects from respirable crystalline silica exposure-silicosis, cancer, scleroderma, tuberculosis, and nephrotoxicity- are chronic effects.

### Supporting Data

| | | |
|---|---|---|
| **Acute** | **Oral** | Not considered acutely toxic if swallowed. |
| | **Dermal** | Not considered acutely toxic by dermal contact. |
| | **Inhaled** | The substance is not considered acutely toxic if inhaled, however there may be irritation of the respiratory tract if dust is inhaled. Short term (acute) silicosis (see “systemic” below) can also occur with one-off exposures to extremely high levels of fine crystalline silica dust. Other short term effects include irritation, choking and difficulty breathing. |
| | **Eye** | The mixture is not considered to be an eye irritant. Dust may be an eye irritant (mechanical irritation). |
| | **Skin** | The mixture is considered to be a mild skin irritant. |
| **Chronic** | **Sensitisation** | No ingredient present at concentrations > 0.1% is considered a sensitizer. |
| | **Mutagenicity** | No ingredient present at concentrations > 0.1% is considered a mutagen. |
| | **Carcinogenicity** | Zeolites have been classed by IARC as group 3 – cannot be evaluated as to their carcinogenicity to humans. However, there is evidence that this material does contain quartz and cristobalite. Crystalline silica inhaled in the form of quartz or cristobalite from |

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| | occupational sources is carcinogenic to humans (IARC Group 1). Crystalline Silica triggers 6.7A classification (confirmed carcinogen). The carcinogenicity of silica is related to long term (e.g., 10 years) inhalation of very fine particulate. Carcinogenicity of silica appears linked to development of silicosis (see systematic below) followed by complications and, eventually lung cancer. |
| **Reproductive / Developmental** | No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation. |
| **Systemic** | The respirable fraction of this product is considered to be a target organ toxicant, because of the presence of crystalline silica at greater than 1%. Crystalline silica triggers 6.9A classification if it is in the form of a fine respirable dust in an occupational (chronic exposure) setting. This is due to the development of silicosis which can occur following exposure to extremely high levels of fine silica dust. Silicosis is a type of pneumoconiosis – a disease of the lung that causes inflammation, scar tissue, lesions and fibrosis in the lung (alveolar). Symptoms include shortness of breath, cough, fever, loss of appetite and cyanosis (bluish skin). Silicosis can occur following prolonged exposure (e.g., 10 years) to relatively high levels of fine crystalline silica dust. |
| **Aggravation of existing conditions** | None known |

## 12. Ecological Data

### Summary

This product is not considered ecotoxic.

### Supporting Data

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|---|---|
| **Aquatic** | Not ecotoxic in the aquatic environment. |
| **Bioaccumulation** | No data |
| **Degradability** | No data |
| **Soil** | No consided ecotoxic in the soil environment. |
| **Terrestrial vertebrate** | Not toxic towards terrestrial vertebrates |
| **Terrestrial invertebrate** | Not toxic towards terrestrial invertebrates |
| **Biocidal** | Not biocidal |
| **Environmental effect levels** | No EELs are available for this mixture or ingredients |

## 13. Disposal Considerations

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|---|---|
| **Restrictions** | There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents. |
| **Disposal method** | 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. The substance must be treated and therefore rendered non-hazardous before discharge to the environment. |
| **Contaminated packaging** | 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

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

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| **UN number:** | NA | **Proper shipping name:** | NA |
| **Class(es)** | NA | **Packing group:** | NA |
| **Precautions:** | NA | **Hazchem code:** | NA |

## 15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002521. Animal Nutritional and Animal Care Products Group Standard 2017.

### Specific Controls

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| Key workplace requirements are: | |
| SDS | To be available within 10 minutes in workplaces storing any quantity. |
| 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.

## 16. Other Information

### Abbreviations

| | |
|---|---|
| **Approval Code** | Approval code: HSR002521. Animal Nutritional and Animal Care Products Group Standard 2017. EPA. www.epa.govt.nz |
| **CAS Number** | Unique Chemical Abstracts Service Registry Number |
| **$EC_{50}$** | Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species) |
| **EPA** | Environmental Protection Authority (New Zealand) |
| **GHS** | Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition, 2017, published by the United Nations. |
| **HAZCHEM Code** | Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters |
| **HSNO** | Hazardous Substances and New Organisms (Act and Regulations) |
| **IARC** | International Agency for Research on Cancer |
| **LEL** | Lower Explosive Limit |
| **$LD_{50}$** | Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats). |
| **$LC_{50}$** | Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats) |
| **NZIoC** | New Zealand Inventory of Chemicals |
| **MSDS (SDS)** | Material Safety Data Sheet (or Safety Data Sheet) |
| **STEL** | 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 |
| **STOT RE** | System Target Organ Toxicity – Repeated Exposure |
| **STOT SE** | System Target Organ Toxicity – Single Exposure |
| **TWA** | Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours) |
| **UEL** | Upper Explosive Limit |
| **UN Number** | United Nations Number |

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| **WES** | 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

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| **Data** | Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID). |
| **Controls** | EPA notices, www.epa.govt.nz, Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz |
| **WES** | The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz. |
| **Other References:** | EU ECHA, ingredients SDS's, ChemIDplus |

## Review

| **Date** | **Reason for review** |
|---|---|
| August 2021 | New SDS. |

## Disclaimer