# Safety Data Sheet



## 1. Identification

**Product identifier**

**PRISTINE®**

**Recommended uses and restrictions on use (if any)**

Recommended use:
crop protection product, fungicide.

Restricted use:
not applicable

**Manufacturer / Supplier**

BASF New Zealand Limited
5E City Works Depot,
77 Cook Street
Auckland 1010
NEW ZEALAND
Phone: + 64 9 255 4300
0800 932 273
E-mail address: reception@basf-nz.co.nz

**Emergency telephone number**

National Poisons Centre: 0800 764 766
BASF Emergency Advice Number: 0800 944 955 (24 hour advice in an emergency only)

## 2. Hazard Identification

**Classification of the substance or mixture**

| | | |
|---|---|---|
| Acute oral toxicity | : | Category 4 |
| Specific target organ toxicity - repeat exposure | : | Category 2 |
| Aquatic environment – acute | : | Category 1 |
| Aquatic environment - chronic | : | Category 1 |

**GHS Label Elements, including Precautionary Statements:**

Signal Word:
WARNING.

Pictograms:

GHS Hazard Statements

| | | |
|---|---|---|
| H302 | : | Harmful if swallowed. |
| H373 | : | May cause damage to organs (liver) through prolonged or repeated exposure. |
| H400 | : | Very toxic to aquatic life. |
| H410 | : | Very toxic to aquatic life with long lasting effects. |

GHS Precautionary Statements (Prevention)

| | | |
|---|---|---|
| P102 | : | Keep out of reach of children. |
| P103 | : | Read label before use. |
| P260 | : | Do not breathe mist, vapours and spray. |
| P264 | : | Wash hands and face thoroughly after handling. |
| P270 | : | Do not eat, drink or smoke when using this product. |

GHS Precautionary Statements (Response)

| | | |
|---|---|---|
| P101 | : | If medical advice is needed, have product container or label at hand. |
| P301 + P312 | : | IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell. |
| P330 | : | Rinse mouth. |
| P314 | : | Get medical advice / attention if you feel unwell. |
| P391 | : | Collect spillage. |

GHS Precautionary Statements (Storage)

No specific storage requirements.

GHS Precautionary Statements (Disposal):

| | | |
|---|---|---|
| P501 | : | Dispose of contents/container to hazardous or special waste collection point. Information regarding disposal considerations can be found in section 13. |

**According to UN GHS criteria**

Hazard determining component(s) for labelling: boscalid, pyraclostrobin

**Other hazards**

No other hazards known.

See section 12 - Results of PBT and vPvB assessment.

To avoid risks to human health and the environment, comply with the instructions for use.

## 3. Composition/Information on Ingredients

**Substances**
Not applicable

**Mixtures**
Hazardous ingredients (GHS)
According to UN GHS criteria

Boscalid (ISO)
Content (W/W): 25.2%
CAS Number: 188425-85-6

Pyraclostrobin (ISO)
Content (W/W): 12.8%
CAS Number: 175013-18-0

Ammonium sulphate
Content (W/W): <20%
CAS Number: 7783-20-2

Alkyl-naphthalene and condensated with formaldehyde, sodium salt

Content (W/W): <15%
CAS Number: 68425-94-5

Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt
Content (W/W): <10%
CAS Number: 9084-06-4

Silica gel, precipitated, crystalline free
Content (W/W): <20%
CAS Number: 112926-00-8

Lignosulfonic acid, sodium salt
Content (W/W): <15%
CAS Number: 8061-51-6

Kaolin
Content (W/W): <10%
CAS Number: 1332-58-7

Sodium sulphate
Content (W/W): <5%
CAS Number: 7757-82-6

## 4. First-Aid Measures

**Description of necessary first aid measures**

General advice:
First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:
Wash thoroughly with soap and water.

On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

**Most important symptoms and effects, both acute and delayed**

Symptoms:
Information, i.e. additional information on symptoms and effects may be included in the GHS labelling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far.

**Indication of any immediate medical attention and special treatment needed**

Treatment:
Treat according to symptoms (decontamination, vital functions), no known specific antidote.

Medical advice:
Contact the National Poisons and Hazardous Chemicals Information centre.
Phone 0800 POISON (0800 764 766).

## 5. Fire-Fighting Measures

**Suitable extinguishing media**
Water spray, dry powder, foam

**Unsuitable extinguishing media for safety reasons**
Carbon dioxide

**Specific hazards**
carbon monoxide, hydrogen chloride, carbon dioxide, nitrogen oxides, sulfur oxides, organochloric compounds, silica compounds.
The substances/groups of substances mentioned can be released in case of fire.

Avoid dust formation. Dust can form an explosive mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

**Special protective equipment for fire-fighters**
Wear self-contained breathing apparatus and chemical-protective clothing.

**Precautions for fire-fighters**
In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

## 6. Accidental Release Measures

**Personal precautions, Protective equipment and Emergency procedures**

Avoid dust formation.
Use personal protective clothing.
Avoid contact with the skin, eyes and clothing.

**Environmental precautions**

Do not discharge into the subsoil/soil.
Do not discharge into drains/surface waters/groundwater.

**Methods and material for containment and cleaning up**

For small amounts: Contain with dust binding material and dispose of.

For large amounts: Sweep / shovel up.
Avoid raising dust. Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labelled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

## 7. Handling and Storage

**Precautions for safe handling**
No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

**Conditions for safe storage, including any incompatibilities**
Segregate from foods and animal feeds.

Further information on storage conditions:
Keep away from heat. Protect against moisture. Protect from direct sunlight.

Storage stability: 48 months.

Protect from temperatures above 40°C.
Changes in the properties of the product may occur if substance / product is stored above indicated temperature for extended periods of time.

## 8. Exposure Controls/Personal Protection

**Control parameters**

Occupational exposure limits

| | |
|---|---|
| Component: | Kaolin |
| CAS Number: | 1332-58-7 |
| TWA Value: | 2 mg/m$^3$ respirable fraction (source: ACGIHTLV), The value is for particulate matter containing no asbestos and <1% crystalline silica. |
| TWA Value: | 10 mg/m$^3$ inhalable dust (source: WES 2022) |
| TWA Value: | 2 mg/m$^3$ respirable dust (source: WES 2022) |

| | |
|---|---|
| Component: | silica gel, precipitated, crystalline free |
| CAS Number: | 112926-00-8 |
| TWA Value: | 10 mg/m$^3$ (source: WES 2022) |

**Engineering controls**

Maintain air concentrations below occupational exposure standards.

**Personal protective equipment**

Respiratory protection:
Suitable respiratory protection for higher concentrations or long-term effect: Particulate filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2).

Hand protection:
Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other.

Eye protection:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures
The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

## 9. Physical and Chemical Properties

| | |
|---|---|
| Form: | Granules, extrudates |
| Colour: | Brown |
| Odour: | Moderate odour, smoky |
| Odour threshold: | Not determined due to potential health hazard by inhalation |

| | |
|---|---|
| pH value: | Approx. 6 - 8 (1% (m), 20°C) (as suspension) |
| Melting range: | Approx. 50°C |
| Boiling point: | The product has not been tested |
| Flash point: | Not applicable, the product is a solid. |
| Evaporation rate: | Not applicable |
| Flammability: | Not highly flammable |
| Lower explosion limit: | As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use. |
| Upper explosion limit: | As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use. |
| Thermal decomposition: | 150°C, 350 kJ/kg<br>No decomposition if stored and handled as prescribed. |
| Self ignition temperature: | 328°C |
| Self heating ability: | Not tested on account of the low melting-point. |
| Explosion hazard: | Not explosive |
| Fire promoting properties: | Not fire-propagating |
| Vapour pressure: | Not applicable |
| Density: | Approx. 1.51 g/cm$^3$ (20°C) |
| Bulk density: | 600 kg/cm$^3$<br>689 kg/m$^3$<br>Apparent density after tamping |
| Relative vapour density (air): | Not applicable |
| Solubility in water: | Dispersible |
| Partitioning coefficient n-octanol/water (log Kow): | Not applicable |
| Viscosity, dynamic: | Not applicable, the product is a solid. |

## 10. Stability and Reactivity

**Reactivity**
No hazardous reactions if stored and handled as prescribed/indicated.

**Chemical stability**
The product is stable if stored and handled as prescribed/indicated.

**Possibility of hazardous reactions**
No hazardous reactions if stored and handled as prescribed/indicated.

**Conditions to avoid**
See SDS section 7 - Handling and storage.

Thermal decomposition: 150°C, 350 kJ/kg (DSC)
Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

**Incompatible materials / Substances to avoid**
Strong acids, strong bases, strong oxidizing agents

**Hazardous decomposition products**
No hazardous decomposition products if stored and handled as prescribed/indicated.

## 11. Toxicological Information

### Acute toxicity

Assessment of acute toxicity:
Of moderate toxicity after single ingestion. Virtually non-toxic by inhalation. Virtually non-toxic after a single skin contact. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

| | |
|---|---|
| LD50 rat (oral): | 1,490 mg/kg |
| LC50 rat (by inhalation): | >5.4 mg/l 4 h<br>No mortality was observed. |
| LD50 rat (dermal): | >2,000 mg/kg<br>No mortality was observed. |

### Skin Corrosion / Irritation

Assessment of irritating effects:
Not irritating to the skin. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant

### Serious Eye Damage / Irritation

Assessment of irritating effects:
May cause slight irritation to the eyes. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:
Serious eye damage/irritation rabbit: slight-irritant.

### Respiratory or Skin sensitization

Assessment of sensitization:
There is no evidence of a skin-sensitising potential. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Germ cell mutagenicity

Assessment of mutagenicity:
Mutagenicity tests revealed no genotoxic potential. The product has not been tested. The statement has been derived from the properties of the individual components.

### Carcinogenicity

Assessment of carcinogenicity:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Boscalid (ISO)
Assessment of carcinogenicity:
In long term studies in rats the substance induced thyroid tumors. The effect is caused by an animal specific mechanism that has no human counterpart. In long-term studies in mice in which the substance was given by feed, a carcinogenic effect was not observed.

Information on: Kaolin
Assessment of carcinogenicity:
Indication of possible carcinogenic effect in animal tests. However, the relevance of this result for humans is unclear.

**Reproductive toxicity**

Assessment of reproduction toxicity:
The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from the properties of the individual components.

**Developmental toxicity**

Assessment of teratogenicity:
Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals. The product has not been tested. The statement has been derived from the properties of the individual components.

**Specific target organ toxicity (single exposure)**

Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

**Repeated dose toxicity and Specific target organ toxicity (repeated exposure)**

Assessment of repeated dose toxicity:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Boscalid (ISO)
Assessment of repeated dose toxicity:
Adaptive effects were observed after repeated exposure in animal studies.

Information on: Pyraclostrobin (ISO)
Assessment of repeated dose toxicity:
After repeated exposure the prominent effect is local irritation. The substance may cause damage to the olfactory epithelium after repeated inhalation.

Information on: Kaolin
Assessment of repeated dose toxicity:
Repeated inhalative uptake of particles / dust reaching the alveoli may cause damage to the lungs.

Information on: Silica gel, precipitated, crystalline free
Assessment of repeated dose toxicity:
The substance may cause damage to the lungs after repeated inhalation of high doses.

**Aspiration hazard**

No aspiration hazard expected. The product has not been tested. The statement has been derived from the properties of the individual components.

**Other relevant toxicity information**

Misuse can be harmful to health.

## 12. Ecological Information

**Ecotoxicity - Aquatic**

Assessment of aquatic toxicity:
Very toxic to aquatic life with long lasting effects.

Toxicity to fish:

| | |
|---|---|
| LC50 (96 h): | 0.042 mg/l, *Oncorhynchus mykiss* |
| NOEC (97 d) | 0.116 mg ai/l, *Oncorhynchus mykiss* (boscalid (ISO)) |
| NOEC (98 d) | 0.00235 mg ai/l, flow-through, *Oncorhynchus mykiss* (pyraclostrobin (ISO)) |

Aquatic invertebrates:

| | |
|---|---|
| EC50 (48 h) | 0.08 mg/l, *Daphnia magna* |
| NOEC (21 d) | 0.004 mg ai/l, *Daphnia magna* (Pyraclostrobin (ISO))<br>The details of the toxic effect relate to the nominal concentration. |
| NOEC (28 d) | 0.00128 mg ai/l, *Mysidopsis bahia* (Pyraclostrobin (ISO))<br>The details of the toxic effect relates to the analytically determined concentration. |

Aquatic plants:

| | |
|---|---|
| ErC50 (72 h) | 4.99 mg/l (growth rate) / *Pseudokirchneriella subcapitata* |
| EC10 (72 h) | 1.29 mg/l (growth rate) / *Pseudokirchneriella subcapitata* |

**Ecotoxicity - Terrestrial**

Assessment of terrestrial toxicity:
With high probability not acutely harmful to terrestrial organisms.
The product has not been tested. The statement has been derived from the properties of active ingredients, Boscalid and Pyraclostrobin.

Toxicity to birds:

| | |
|---|---|
| Acute LD50: | >2,000 mg ai/kg, Northern Bobwhite Quail (*Colinus virginianus)* (Boscalid) |
| Acute LD50: | >2,000 mg ai/kg, Northern Bobwhite Quail (*Colinus virginianus)* (Pyraclostrobin) |

Toxicity to soil organisms:

| | |
|---|---|
| LC50 | >1,000 mg ai/kg, Earthworms; *Eisenia fetida* (Boscalid) |
| LC50 | 556 mg ai/kg, Earthworms; *Eisenia fetida* (Pyraclostrobin) |

Toxicity to Pollinators:

| | |
|---|---|
| NOEC (oral): | >100 µg ai/bee, *Apis mellifera* (Boscalid) |
| NOEC (contact): | >100 µg ai/bee, *Apis mellifera* (Boscalid) |
| LD50 (48h, oral): | >100 µg ai/bee, *Apis mellifera* (Pyraclostrobin) |
| LD50 (48h, contact): | >100 µg ai/bee, *Apis mellifera* (Pyraclostrobin) |

**Persistence and degradability**

Assessment biodegradation and elimination (H2O):
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Boscalid (ISO)
Assessment biodegradation and elimination (H2O):
Not readily biodegradable.

Information on: Pyraclostrobin (ISO)
Assessment biodegradation and elimination (H2O):
Not readily biodegradable.

**Bioaccumulative potential**

Assessment bioaccumulation potential:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Boscalid (ISO)
Bioaccumulation potential:
Bioconcentration factor: 57-70 (28 d), *Oncorhynchus mykiss*
Does not accumulate in organisms.

Information on: Pyraclostrobin (ISO)
Bioaccumulation potential:
Bioconcentration factor: 379-507, *Oncorhynchus mykiss*
Accumulation in organisms is not to be expected.

**Mobility in soil**

Assessment transport between environmental compartments:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Boscalid (ISO)
Assessment transport between environmental compartments:
Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Information on: Pyraclostrobin (ISO)
Assessment transport between environmental compartments:
Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

**Results of PBT and vPvB assessment**

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

**Other adverse effects**

Other ecotoxicological advice:
Do not discharge product into the environment without control.
Do not apply onto or into water.

## 13. Disposal Considerations

**Container:**

Triple rinse empty container and add rinsate to the spray tank. Recycle through Agrecovery (0800 247 326, www.agrecovery.co.nz). Do not use container for any other purpose.

**Product:**

Dispose of this product only by using according to the label or at an approved facility. Do NOT burn product. Do NOT contaminate water with product or used container.
Waste product/packaging may be sent to a suitable incineration plant, observing local regulations.

**Contaminated Packaging:**

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance / product.

## 14. Transport Information

**Commercial transport:**

Classified as dangerous good(s) for Land/rail (ADR/RID), sea (IMDG) and air transport (ICAO/IATA):

**Land / Rail / Road (ADR/RID):**

| | |
|---|---|
| UN number: | UN 3077 |
| UN proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains boscalid, pyraclostrobin) |
| Transport hazard class(es) / UN DG Class: | 9, (EHSM) |
| Packing group: | III |
| Environmental hazards: | Marine pollutant |
| HAZCHEM: | 2Z |
| IERG Number: | 47 |
| Special precautions when transporting the substance: | None known |

**Sea transport (IMDG):**

| | |
|---|---|
| UN number: | UN 3077 |
| UN proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains boscalid, pyraclostrobin) |
| Transport hazard class(es): | 9, (EHSM) |
| Packing group: | III |
| Environmental hazards: | Marine pollutant |
| Marine pollutant: | Yes |
| Special precautions when transporting the substance: | None known |

**Air transport (IATA / ICAO):**

| | |
|---|---|
| UN number: | UN 3077 |
| UN proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains boscalid, pyraclostrobin) |
| Transport hazard class(es): | 9, (EHSM) |
| Packing group: | III |
| Environmental hazards: | Marine pollutant |
| Special precautions when transporting the substance: | None known |

**Additional Information:**

The following provisions may apply for product in packages containing a net quantity of 5 kg or less ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2).

## 15. Regulatory Information

**HSNO Approval Number**

HSR007853.
See www.epa.govt.nz for approval conditions.

**Tolerable Exposure Limit or Environmental Exposure Limit**

| | |
|---|---|
| TEL: | None set |
| EEL: | None set |

**Relevant Regulatory Requirements**

| | |
|---|---|
| Qualifications: | Required. Refer to label. |
| Certified Handler: | Not required |
| Tracking: | Not required |
| Record Keeping: | Required. Refer to label. |
| Restricted to Workplace: | Not applicable |
| Controlled substance licence: | Not required |

**ACVM Registration**

P007595
See www.foodsafety.govt.nz/acvm for registration conditions.

**International Agreements related to the substance such as Montreal Protocol, the Stockholm Convention or Rotterdam Convention**

not applicable

## 16. Other Information

**Date of preparation of the SDS**

31 August 2023

**Key or legend to abbreviations and acronyms used**

| | |
|---|---|
| ACGIH | The American Conference of Governmental Industrial Hygienists |
| ACVM | Agricultural Compounds and Veterinary Medicines |
| ADN | International Carriage of Dangerous Goods by Inland Waterways (EU) |
| ADR/RID | Dangerous Goods for Road / Rail |
| DG | Dangerous Goods |
| EC50 | Median effective concentration |
| EEL | Environmental Exposure Limit |
| EHSM | Environmental Health and Safety Management |
| EPA | Environmental Protection Authority |
| EU | European Union |
| GHS | Globally Harmonised System |
| ICAO | International Civil Aviation Organisation |
| IATA | International Air Transport Association |
| IERG | International Emergency Response Guide |
| IMDG | International Maritime Dangerous Goods |
| LD50 | Lethal concentration to 50% of the test population |
| NOEC | No Observed Effect Concentration |
| N.O.S. | Not Otherwise Specified |
| OEL | Operator Exposure Limits |
| PBT or vPvP | Persistent / Bioaccumulative / Toxic or very Persistent/very Bioaccumulative |
| SDS | Safety Data Sheet |
| STOT | Specific Target Organ Toxicity |
| TDG | Transportation of Dangerous Goods |
| TEL | Tolerable Exposure Limit |
| TLVs | Threshold Limit Values |
| UN GHS | United Nations Globally Harmonised System |
| WES | Workplace Exposure Standards |
| 49CFR | Code of Federal Regulations Title 49 for Transportation |

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.