

Safety Data Sheet

PPST 2030 G Biofungicide

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1. Identification

Product identifier used on the label

PPST 2030 G Biofungicide

Recommended use of the chemical and restriction on use

Recommended use*: crop protection product, Biological beneficial agent
Recommended use*: soil/plant amendment

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Substance number: 826091
EPA Registration number: 71840-19
Synonyms: Bacillus amyloliquefaciens MBI600 + Bacillus Pumilus F33

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Label elements

The product does not require a hazard warning label in accordance with GHS criteria.

Micro-organisms may have the potential to provoke sensitising reactions.

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3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
	0.09 %	Bacillus amyloliquefaciens
	0.099 %	Bacillus Pumilus
56-81-5	1.0 - 3.0%	glycerol
1328-53-6	7.0 - 10.0%	C.I. Pigment Green 7
12001-26-2	10.0 - 15.0%	Mica-group minerals
13463-67-7	5.0 - 7.0%	Titanium dioxide

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

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

If on skin:

Wash thoroughly with soap and water.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

If swallowed:

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

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Note to physician

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

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

Special hazards arising from the substance or mixture

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Hazards during fire-fighting:
carbon monoxide, carbon dioxide,
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

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. In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. 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

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

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.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Suitable materials for containers: High density polyethylene (HDPE)

Further information on storage conditions: Keep away from heat. Protect from direct sunlight. Store protected against freezing.

Protect from temperatures below: 2 °C

Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.

Protect from temperatures above: 25 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

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8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Components with occupational exposure limits

glycerol	OSHA PEL	PEL 15 mg/m3 Total dust ; PEL 5 mg/m3 Respirable fraction ; TWA value 10 mg/m3 Total dust ; TWA value 5 mg/m3 Respirable fraction ;
C.I. Pigment Green 7	ACGIH TLV	TWA value 1 mg/m3 Dust and mist (copper (Cu)); TWA value 0.2 mg/m3 fumes/smoke (copper (Cu));
Mica-group minerals	OSHA PEL	TWA value 3 mg/m3 Respirable dust ; TWA value 20 millions of particles per cubic foot of air ;
	ACGIH TLV	TWA value 3 mg/m3 Respirable fraction ;
Titanium dioxide	OSHA PEL	PEL 15 mg/m3 Total dust ; TWA value 10 mg/m3 Total dust ;
	ACGIH TLV	TWA value 10 mg/m3 ;

Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) 21C air purifying respirator equipped with high efficiency particulate filter (HEPA) when particulates may be generated. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

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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:	liquid
Odour:	characteristic
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	product specific
pH value:	approx. 5 - 7 (20 °C) Information based on the main components.
Melting point:	approx. 0 °C Information applies to the solvent.
Boiling point:	approx. 100 °C Information applies to the solvent.
Flash point:	A flash point determination is unnecessary due to the high water content.
Flammability:	not applicable
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.
Autoignition:	Based on the water content the product does not ignite.
Vapour pressure:	approx. 23 hPa (20 °C) Information applies to the solvent.
Density:	approx. 1.0 g/cm ³ (20 °C)
Vapour density:	not applicable
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Information on: 1,2-benzisothiazol-3(2H)-one	
Partitioning coefficient n-octanol/water (log Pow):	0.64 (calculated) (25 °C)

Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	not determined
Solubility in water:	dispersible
Evaporation rate:	not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

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10. Stability and Reactivity

Reactivity

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

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

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 MSDS section 7 - Handling and storage.

Incompatible materials

strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

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

Thermal decomposition:

No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

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

Oral

Type of value: LD50

Species: rat (female)

Value: > 5,000 mg/kg

No mortality was observed.

Inhalation

Type of value: LC50

Species: rat (male/female)

Value: > 5 mg/l

Dermal

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Type of value: LD50
Species: rat (male/female)
Value: > 5,000 mg/kg
No mortality was observed.

Assessment other acute effects

Assessment of STOT single:

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

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

Irritation / corrosion

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

Skin

Result: non-irritant

Eye

Result: non-irritant

Sensitization

Assessment of sensitization: The product has not been tested. The statement has been derived from the properties of the individual components. Sensitization after skin contact possible.

Information on: maleic anhydride

Buehler test

Species: guinea pig

Result: sensitizing

Method: OECD Guideline 406

Information on: 1,2-benzisothiazol-3(2H)-one

Guinea pig maximization test

Species: guinea pig

Result: Caused skin sensitization in animal studies.

Method: OECD Guideline 406

Literature data.

Aspiration Hazard

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

Chronic Toxicity/Effects

Repeated dose toxicity

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: Titanium dioxide

Assessment of repeated dose toxicity: Repeated oral uptake of the substance did not cause substance-related effects. The substance may cause increase in lung mass and lung tissue changes after repeated inhalation.

Information on: glycerol

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Assessment of repeated dose toxicity: No adverse effects were observed after repeated oral exposure in animal studies. Repeated inhalation exposure to large quantities has shown upper respiratory tract irritation in experimental animals.

Information on: maleic anhydride

Assessment of repeated dose toxicity: The substance may cause damage to the olfactory epithelium after repeated inhalation. The substance may cause damage to the kidney after repeated ingestion of high doses, as shown in animal studies. After repeated exposure the prominent effect is local irritation.

Genetic toxicity

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

Carcinogenicity

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

Information on: Titanium dioxide

Assessment of carcinogenicity: IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans). In long-term studies in rats in which the substance was given by inhalation, a carcinogenic effect was observed. Tumors were only observed in rats after chronic inhalative exposure to high concentrations which caused sustained lung inflammation. In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. Dermal exposure is not expected to be carcinogenic.

Reproductive toxicity

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

Teratogenicity

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

Other Information

Misuse can be harmful to health.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., (Further) symptoms and / or effects are not known so far

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms.

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

Toxicity to fish

Information on: Bacillus amyloliquefaciens MBI600 (live bacterial spore)
LC50 (96 h) > 100 mg/l, Oncorhynchus mykiss

Information on: 1,2-benzisothiazol-3(2H)-one
LC50 (96 h) 1.6 mg/l, Oncorhynchus mykiss (Flow through.)
Literature data.

Aquatic plants

Information on: Bacillus amyloliquefaciens MBI600 (live bacterial spore)
EC50 (72 h) > 100 mg/l (growth rate), Pseudokirchneriella subcapitata

Information on: 1,2-benzisothiazol-3(2H)-one
EC50 (96 h) 0.110 mg/l, Pseudokirchneriella subcapitata (OECD Guideline 201, static)
No observed effect concentration (96 h) 0.040 mg/l, Pseudokirchneriella subcapitata (OECD Guideline 201, static)

Chronic toxicity to fish

Information on: Bacillus amyloliquefaciens MBI600 (live bacterial spore)
No observed effect concentration (30 d) 250 mg/l, Cyprinus carpio

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.

Assessment biodegradation and elimination (H2O)

Information on: 1,2-benzisothiazol-3(2H)-one

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential

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

Bioaccumulation potential

Information on: 1,2-benzisothiazol-3(2H)-one

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Mobility in soil

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Assessment transport between environmental compartments
not determined

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

Must be sent to a suitable incineration plant, observing local regulations.

Container disposal:

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

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations.

Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection TSCA, US released / exempt

Fertilizer TSCA, US released / listed

Chemical TSCA, US blocked / not listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

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Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including 4-VINYLCYCLOHEXENE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Labeling requirements under FIFRA

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION:

Prolonged or repeated skin contact may cause sensitization or allergic reactions.

Causes moderate eye irritation.

Avoid contact with the skin, eyes and clothing.

Wash thoroughly after handling.

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2019/03/26

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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