

Safety data sheet

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Date / Revised: 31.01.2025
Product: **P.I.**

Version: 4.0

(30501541/SDS_CPA_SG/EN)

Date of print: 09.05.2026

1. Substance/preparation and manufacturer/supplier identification

Product name:

P.I.

Use: crop protection product, insecticide

Manufacturer/supplier:

BASF South East Asia Pte Ltd.
128 Beach Road #18-01
Guoco Midtown, 189773, Singapore
Telephone: +65 8322 4420
Telefax number: +65 6 334-0330
E-mail address: benny.zou@basf.com

Emergency information:

Singapore Emergency Toll-Free Number:
Telephone: +65 31638374
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:

Aspiration hazard: Cat.1

Acute toxicity: Cat.4 (Inhalation - mist)

Specific target organ toxicity — single exposure: Cat.3 (May cause drowsiness and dizziness.)

Specific target organ toxicity — single exposure: Cat.3 (irritating to respiratory system)

Hazardous to the aquatic environment - acute: Cat.1

Hazardous to the aquatic environment - chronic: Cat.1

Aerosols: Cat.1

Label elements and precautionary statement:

Pictogram:

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Signal Word:
Danger

Hazard Statement:

H222	Extremely flammable aerosol.
H229	Pressurized container: May burst if heated.
H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statement:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.

Precautionary Statements (Prevention):

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271	Use only outdoors or in a well-ventilated area.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P262	Do not get in eyes, on skin, or on clothing.
P261	Avoid breathing mist or vapour or spray.

Precautionary Statements (Response):

P312	Call a POISON CENTER or physician if you feel unwell.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or physician.
P391	Collect spillage.
P331	Do NOT induce vomiting.

Precautionary Statements (Storage):

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.
P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.
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Other hazards which do not result in classification:

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

Repeated exposure may cause skin dryness or cracking. May cause paraesthesia. Contains:

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PYRETHRINS

3. Composition/information on ingredients

Chemical nature

Substance nature: mixture

crop protection product, insecticide

Hazardous ingredients

Piperonylbutoxide

Content (W/W): 4 %
CAS Number: 51-03-6

Aquatic Acute: Cat. 1
Aquatic Chronic: Cat. 1
Eye Dam./Irrit.: Cat. 2A
STOT SE: Cat. 3 (irr. to respiratory syst.)
M-factor acute: 1
M-factor chronic: 1

Pyrethrins and Pyrethroids

Content (W/W): 0.5 %
CAS Number: 8003-34-7

Flam. Liq.: Cat. 4
Acute Tox.: Cat. 4 (oral)
Acute Tox.: Cat. 4 (Inhalation - mist)
Acute Tox.: Cat. 4 (dermal)
Aquatic Acute: Cat. 1
Aquatic Chronic: Cat. 1
M-factor acute: 100
M-factor chronic: 100

2-Propanone

Content (W/W): < 60 %
CAS Number: 67-64-1

Asp. Tox.: Cat. 2
Flam. Liq.: Cat. 2
Eye Dam./Irrit.: Cat. 2A
STOT SE: Cat. 3 (drowsiness and dizziness)
STOT SE: Cat. 3 (irr. to respiratory syst.)

Distillates (petroleum), hydrotreated light

Content (W/W): < 20 %
CAS Number: 64742-47-8

Asp. Tox.: Cat. 1

propane

Content (W/W): < 10 %
CAS Number: 74-98-6

Flam. Gas: Cat. 1A
Press. Gas: Cat. Liquef. Gas

butane

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Content (W/W): < 10 %
CAS Number: 106-97-8

Flam. Gas: Cat. 1A
Press. Gas: Cat. Liquef. Gas

carbon dioxide

Content (W/W): < 10 %
CAS Number: 124-38-9

Press. Gas: Cat. Compr. Gas

4. 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:

Immediately wash thoroughly with soap and water, seek medical attention.

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. Do not induce vomiting due to aspiration hazard.

Note to physician:

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

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

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

5. Fire-Fighting Measures

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

Specific hazards:

carbon monoxide, carbon dioxide, nitrogen oxides

The substances/groups of substances mentioned can be released in case of fire. Aerosol container contains flammable gas under pressure.

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

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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:

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 for cleaning up or taking up:

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Wear suitable protective equipment.

7. Handling and Storage

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:

Vapours may form ignitable mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Storage

Segregate from foods and animal feeds.

Further information on storage conditions: Protect from direct sunlight. Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame.

Protect from temperatures above: 50 °C

The packed product must be protected against exceeding the indicated temperature.

8. Exposure controls and personal protection

Components with occupational exposure limits

acetone, 67-64-1;

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TWA value 250 ppm (ACGIHTLV)
STEL value 500 ppm (ACGIHTLV)
TWA value 1,780 mg/m³ ; 750 ppm (OEL (SG))
STEL value 2,380 mg/m³ ; 1,000 ppm (OEL (SG))

propane, 74-98-6;

(ACGIHTLV)

D: Simple asphyxiant, EX: Explosion hazard

butane, 106-97-8;

TWA value 1,900 mg/m³ ; 800 ppm (OEL (SG))
STEL value 1,000 ppm (ACGIHTLV)
Explosion hazard.

carbon dioxide, 124-38-9;

TWA value 5,000 ppm (ACGIHTLV)
STEL value 30,000 ppm (ACGIHTLV)
TWA value 9,000 mg/m³ ; 5,000 ppm (OEL (SG))
STEL value 54,000 mg/m³ ; 30,000 ppm (OEL (SG))

Distillates (petroleum), hydrotreated light, 64742-47-8;

TWA value 200 mg/m³ (ACGIHTLV), Non-aerosol

Measured as: total hydrocarbon vapor

Application restricted to conditions in which there are negligible aerosol exposures.

Skin Designation (ACGIHTLV), Non-aerosol

Measured as: total hydrocarbon vapor

Danger of cutaneous absorption

Personal protective equipment

Respiratory protection:

Suitable respiratory protection for lower concentrations or short-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic, alkaline compounds and toxic particles (e. g. EN 14387 Type ABEK-P3)

Hand protection:

Suitable chemical resistant safety gloves (EN ISO 374-1) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.

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).

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General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. 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	
Colour:	pale straw yellow	
Odour:	characteristic, of acetone	
Odour threshold:	Not determined since harmful by inhalation.	
pH value:	approx. 6 - 8 (23 °C)	
Melting point:	approx. -95 °C Information applies to the solvent.	
Boiling point:	approx. 56 °C (1,013 hPa) Information applies to the solvent.	
Flash point:	-20 °C Information applies to the solvent.	(Tag closed cup)
Evaporation rate:	not applicable	
Flammability (solid/gas):	Extremely flammable.	
Lower explosion limit:	2.2 %(V)	(air)
Upper explosion limit:	9.5 %(V)	(air)
Ignition temperature:	approx. 465 °C Information applies to the solvent.	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
SADT:	No data available.	
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	
Vapour pressure:	approx. 246 hPa (20 °C) Information applies to the solvent.	
Density:	approx. 0.80 g/cm ³ (20 °C)	
Relative density:	No data available.	
Relative vapour density (air):	not applicable	

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Solubility in water: dispersible
Partitioning coefficient n-octanol/water (log Pow):
not applicable for mixtures

Viscosity, dynamic: approx. 0.83 mPa.s
(22 °C)

Viscosity, kinematic:
No data available.

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form. -

Specific Surface Area:
No data available.

Particle Shape:
No data available.

Dustiness:
No data available.

10. Stability and Reactivity

Conditions to avoid:

See SDS section 7 - Handling and storage.

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Substances to avoid:

strong bases, strong acids, strong oxidizing agents

Hazardous reactions:

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

Hazardous decomposition products:

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

Chemical stability:

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

Reactivity:

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

11. Toxicological Information

Routes of exposure

Acute oral toxicity

Experimental/calculated data:

LD50rat (oral): > 5,000 mg/kg

Acute inhalation toxicity

LC50 rat (by inhalation): > 2.04 mg/l

Acute dermal toxicity

LD50 rat (dermal): > 2,000 mg/kg
No mortality was observed.

Assessment of acute toxicity

Of moderate toxicity after short-term inhalation. Virtually nontoxic after a single ingestion. Virtually nontoxic 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.

Symptoms

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

Irritation

Assessment of irritating effects:

Not irritating to eyes and 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 rabbit: non-irritant

Respiratory/Skin sensitization

Assessment of sensitization:

No sensitizing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

Buehler test guinea pig: Non-sensitizing.

Germ cell mutagenicity

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.

Experimental/calculated data:

No data available.

Information on: Distillates (petroleum), hydrotreated light

Assessment of carcinogenicity:

Long-term exposure to highly irritating concentrations resulted in skin tumors in animals. A carcinogenic effect in humans can be excluded after brief skin contact. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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.

Experimental/calculated data:

No data available.

Developmental toxicity

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.

Specific target organ toxicity (single exposure)

Possible narcotic effects (drowsiness or dizziness). Causes temporary irritation of the respiratory tract.

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.

Experimental/calculated data:

No data available.

Information on: Piperonylbutoxide

Assessment of repeated dose toxicity:

The substance may cause damage to the liver after repeated ingestion of high doses, as shown in animal studies. The substance may cause damage to the liver after repeated inhalation of high doses. Repeated dermal uptake of the substance did not cause substance-related effects.

Information on: carbon dioxide

Assessment of repeated dose toxicity:

Prolonged or repeated exposure by inhalation to high concentrations may cause circulatory insufficiency leading to headache, nausea, vomiting and potentially death.

Aspiration hazard

May also damage the lung at swallowing (aspiration hazard).

Other relevant toxicity information

Has a degreasing effect on skin.

Misuse can be harmful to health.

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

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

Toxicity to fish:

No data available.

Aquatic invertebrates:

No data available.

Aquatic plants:

No data available.

Microorganisms/Effect on activated sludge:

No data available.

Chronic toxicity to fish:

No data available.

Chronic toxicity to aquatic invertebrates:

No data available.

Information on: Piperonylbutoxide

Toxicity to fish:

LC50 (96 h) 3.49 mg/l, *Cyprinodon variegatus* (OECD Guideline 203, Flow through.)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

Information on: Pyrethrins and Pyrethroids

Toxicity to fish:

LC50 (96 h) 0.0052 mg/l, *Oncorhynchus mykiss*

Information on: Piperonylbutoxide

Aquatic invertebrates:

EC50 (48 h) 0.51 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, Flow through.)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

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No observed effect concentration (28 d) 0.063 mg/l, aquatic arthropod (other)
The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. Limit concentration test only (LIMIT test).

Information on: Pyrethrins and Pyrethroids
Aquatic invertebrates:
EC50 (96 h) 0.0014 mg/l, Mysidopsis bahia

Information on: Piperonylbutoxide
Aquatic plants:
EC50 (72 h) 3.89 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

No observed effect concentration (72 h) 0.824 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

Information on: Piperonylbutoxide
Chronic toxicity to fish:
No observed effect concentration (35 d) 0.18 mg/l, Pimephales promelas (OPP 72-4 (EPA-Guideline), Flow through.)
The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

Information on: Pyrethrins and Pyrethroids
Chronic toxicity to fish:
No observed effect concentration 0.0019 mg/l, Pimephales promelas

Information on: Piperonylbutoxide
Chronic toxicity to aquatic invertebrates:
No observed effect concentration (21 d), 0.03 mg/l, Daphnia magna (OPP 72-4 (EPA-Guideline), Flow through.)
The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

Information on: Pyrethrins and Pyrethroids
Chronic toxicity to aquatic invertebrates:
No observed effect concentration (28 d), 0.00086 mg/l, Daphnia magna

Mobility

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: Piperonylbutoxide
Assessment transport between environmental compartments:
Adsorption to solid soil phase is not expected.

Information on: Pyrethrins and Pyrethroids

Assessment transport between environmental compartments:

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

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: Piperonylbutoxide

Information on: Pyrethrins and Pyrethroids

Assessment biodegradation and elimination (H₂O):

Not readily biodegradable (by OECD criteria).

Bioaccumulation potential

Assessment bioaccumulation potential:

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

Information on: Piperonylbutoxide

Bioaccumulation potential:

Bioconcentration factor: 91 - 380 (28 d), *Lepomis macrochirus* (OECD Guideline 305 E)

Information on: Pyrethrins and Pyrethroids

Bioaccumulation potential:

Bioconcentration factor: 471

Accumulation in organisms is not to be expected.

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal Considerations

Must 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.

Emptied gas pressure vessels must not be opened.

14. Transport Information

Domestic transport:

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UN number or ID number: UN 1950
UN proper shipping name: AEROSOLS (ACETONE/DIMETHYLKETONE,
PIPERONYLBUTOXIDE)
Transport hazard class(es): 2.1, EHSM
Packing group: Not applicable
Environmental hazards: yes
Special precautions for user: None known

Sea transport

IMDG

UN number or ID number: UN 1950
UN proper shipping name: AEROSOLS (ACETONE/DIMETHYLKETONE,
PIPERONYLBUTOXIDE)
Transport hazard class(es): 2.1, EHSM
Packing group: Not applicable
Environmental hazards: yes
Marine pollutant: YES
Special precautions for user: EmS: F-D; S-U

Air transport

IATA/ICAO

UN number or ID number: UN 1950
UN proper shipping name: AEROSOLS, FLAMMABLE
Transport hazard class(es): 2.1
Packing group: Not applicable
Environmental hazards: No Mark as dangerous for the environment is needed
Special precautions for user: None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information

Other regulations

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

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The product contains a substance (Annex I / Annex II) regulated under Regulation (EU) 2019/1148 - "marketing and use of explosives precursors". This may result in obligations for your company according to the statutory requirements of the aforementioned regulation and the respective national implementing regulations.

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

16. Other Information

Vertical lines in the left hand margin indicate an amendment from the previous version.

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.