1. Identification

Product identifier used on the label

P.I..

Recommended use of the chemical and restriction on use
Recommended use*: insecticide

* The “Recommended use” identified for this product is provided solely to comply with a US 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)

Registrant:
Whitmire Micro-Gen Research Laboratories, Inc.
3568 Tree Court Industrial Blvd.
St. Louis, MO 63122

Other means of identification
Substance number: 413986
EPA Register number: 499-444
Synonyms: Pyrethrins + piperonyl butoxide

2. Hazards Identification

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

Classification of the product

Asp. Tox.	1	Aspiration hazard
Acute Tox.	4 (Inhalation - vapour)	Acute toxicity

Aquatic Acute	1	Hazardous to the aquatic environment - acute
Aquatic Chronic	1	Hazardous to the aquatic environment - chronic
Flam. Aerosol	1	Flammable aerosol

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

CAUTION:
EXTREMELY FLAMMABLE.
KEEP OUT OF REACH OF CHILDREN.
KEEP OUT OF REACH OF DOMESTIC ANIMALS.
HARMFUL IF ABSORBED THROUGH SKIN.
Avoid contact with the skin, eyes and clothing.
Wash thoroughly after handling.
Aerosol container contains flammable gas under pressure.

3. Composition / Information on Ingredients

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

CAS Number	Content (W/W)	Chemical name
8003-34-7	0.5 %	Pyrethrins
51-03-6	4.0 %	Piperonylbutoxide
68476-40-4	> 10.0 %	Hydrocarbons, C3-4
67-64-1		Acetone
64742-47-8		Distillates (petroleum), hydrotreated light
		Carbon dioxide, liquid

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Content (W/W)	Chemical name
8003-34-7	0.5 %	Pyrethrins
51-03-6	4.0 %	Piperonylbutoxide
68476-40-4	> 10.0 %	Hydrocarbons, C3-4
67-64-1		Acetone
64742-47-8		Distillates (petroleum), hydrotreated light
		Carbon dioxide, liquid
	>= 85.0 %	Proprietary ingredients

4. First-Aid Measures

Description of first aid measures

General advice:
First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:
Remove the affected individual into fresh air and keep the person calm.

If on skin:
Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:
Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:
Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Do not give solids or liquids.

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 important symptoms and effects are so far not known.
Hazards: Vomiting may cause aspiration pneumonia due to the ingredients.

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. Aspiration of this product during induced emesis can result in lung injury. If evacuation of stomach contents is considered necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
foam, dry powder, carbon dioxide, water spray

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon monoxide, carbon dioxide,
Aerosol container contains flammable gas under pressure. Pressure inside container is increased when heated, and may cause explosion. If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water. A spill of or in excess of the reportable quantity requires notification to state, local and national emergency authorities. This product is regulated by CERCLA ('Superfund').

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. 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

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect against heat. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Provide means for controlling leaks and spills. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:
Aerosol container contains flammable gas under pressure. The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme heat. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Conditions for safe storage, including any incompatibilities

Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Further information on storage conditions: Protect containers from physical damage. Store in a cool, dry, well-ventilated area. Avoid all sources of ignition: heat, sparks, open flame.

Storage stability:
May be kept indefinitely if stored properly.
If an expiry date is mentioned on the packaging/label this takes priority over the statements on storage duration in this safety data sheet.
Protect from temperatures above: 130 °F
Explosive at or above indicated temperature.

8. Exposure Controls/Personal Protection

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

Advice on system design:
Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

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) organic vapour/particulate respirator. 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.

General safety and hygiene measures:
RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	aerosol	
Odour:	characteristic, of acetone	
Odour threshold:		Not determined due to potential health hazard by inhalation.
Colour:	pale straw yellow	
pH value:	approx. 6 - 8	(approx. 23 °C)
Melting point:	-95 °C	Information applies to the solvent.
Boiling point:	56 °C	(1,013 hPa) Information applies to the solvent.
Flash point:	-20 °C	(Tag closed cup)
Flammability of Aerosol Products:	> 18 in	(ASTM D 3065

NFPA 30B flammability:		
	Level 3 Aerosol	
Lower explosion limit:	2.2 %(V)	(air)
Upper explosion limit:	9.5 %(V)	(air)
Vapour pressure:	approx. 6550 hPa	(approx. 20 °C)
		not applicable
Density:	approx. 0.80 g/cm3	(20 °C)
Vapour density:		not applicable
Information on: propane		
Partitioning coefficient n-octanol/water (log Pow):	1.81	(calculated) Study scientifically not justified.
Information on: Distillates (petroleum), hydrotreated light		
Partitioning coefficient n-octanol/water (log Pow):	> 3.0	(calculated)
Information on: Acetone		
Partitioning coefficient n-octanol/water (log Pow):	-0.24	(25 °C) (Calculation Hansch/Leo)

Thermal decomposition:	carbon monoxide, carbon dioxide Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released. To avoid thermal decomposition, do not overheat. 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.

10. Stability and Reactivity

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

Corrosion to metals:
Corrosive effects to metal are not anticipated.

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
The product is chemically stable.

Conditions to avoid
Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

Incompatible materials
No substances known that should be avoided.
strong bases, strong acids, strong oxidizing agents

Hazardous decomposition products

Decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated., Prolonged thermal loading can result in products of degradation being given off.
Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
Possible thermal decomposition products:
carbon monoxide, carbon dioxide
Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released. To avoid thermal decomposition, do not overheat.
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: Relatively nontoxic after single ingestion. Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

Oral
Type of value: LD50
Species: rat
Value: > 5,000 mg/kg

Inhalation
Type of value: LC50
Species: rat
Value: > 2.04 mg/l
No mortality was observed.

Dermal
Type of value: LD50
Species: rat
Value: > 2,000 mg/kg
No mortality was observed.

Irritation / corrosion
Assessment of irritating effects: May cause slight irritation to the eyes. May cause slight irritation to the skin.

Skin
Species: rabbit
Result: non-irritant

Eye
Species: rabbit

Result: non-irritant

Sensitization
Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

Buehler test
Species: guinea pig
Result: Skin sensitizing effects were not observed in animal studies.

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: Piperonyl butoxide
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: Acetone
Assessment of repeated dose toxicity: The substance may cause damage to the testes after repeated ingestion of high doses, as shown in animal studies. The substance may cause damage to the hematological system after repeated ingestion of high doses. The substance may cause damage to the kidney after repeated ingestion of high doses, as shown in animal studies.

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. The results of various animal studies gave no indication of a carcinogenic effect.

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

Information on: pyrethrum
Assessment of reproduction toxicity: No reproductive toxic effects reported.

Information on: Piperonyl butoxide
Assessment of reproduction toxicity: No reproductive toxic effects reported.
The results of animal studies gave no indication of a fertility impairing effect.

Information on: Acetone
Assessment of reproduction toxicity: As shown in animal studies, the product may cause damage to the testes after repeated high exposures that cause other toxic effects.

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 important symptoms and effects are so far not known.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Acutely toxic for fish.

Toxicity to fish

Information on: pyrethrum
LC50 (96 h) 0.0052 mg/l, Oncorhynchus mykiss (static)
LC50 (96 h) 0.01 mg/l, Lepomis macrochirus

Information on: Piperonyl butoxide
LC50 (96 h) 6.12 mg/l, Oncorhynchus mykiss (other)

Information on: Distillates (petroleum), hydrotreated light
LL50 (96 h) 2 - 5 mg/l, Oncorhynchus mykiss (OECD Guideline 203, semistatic)
The product has low solubility in the test medium. A saturated solution has been tested. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Nominal values (confirmed by concentration control analytics)

Information on: Acetone
LC50 (96 h) 6,210 mg/l, Pimephales promelas (OECD 203; ISO 7346; 84/449/EEC, C.1, Flow through.)
The statement of the toxic effect relates to the analytically determined concentration.
LC50 (96 h) 5,540 mg/l, Oncorhynchus mykiss (Fish test acute, static)
Nominal concentration.

Toxicity to fish

Information on: pyrethrum
LC50 (96 h) 0.0052 mg/l, Oncorhynchus mykiss (static)
LC50 (96 h) 0.01 mg/l, Lepomis macrochirus

Information on: Piperonyl butoxide
LC50 (96 h) 6.12 mg/l, Oncorhynchus mykiss (other)

Aquatic invertebrates

Information on: pyrethrum
EC50 (48 h) 0.012 mg/l, Daphnia magna
No observed effect concentration (28 d) 0.00086 mg/l, Daphnia magna
EC50 (48 h) 0.0014 mg/l, Mysidopsis bahia

Information on: Piperonyl butoxide
EC50 (48 h) 0.51 mg/l, Daphnia magna (other)

Information on: Distillates (petroleum), hydrotreated light
EL50 (48 h) 1.4 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. A saturated solution has been tested. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Acetone
LC50 (48 h) 8,800 mg/l, Daphnia pulex (Daphnia test acute, static)
Nominal concentration.
LC50 (24 h) 2,100 mg/l, Artemia salina (Daphnia test acute, static)
Nominal concentration.

Aquatic plants

Information on: pyrethrum
No data available.

Information on: Piperonyl butoxide
EC50, Chlorella fusca (other)

Information on: Distillates (petroleum), hydrotreated light
EL50 (72 h) 1 - 3 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. A saturated solution has been tested. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.
No observed effect concentration (72 h) 1 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. A saturated solution has been tested. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Acetone
Toxic limit concentration (8 d) 530 mg/l (biomass), Microcystis aeruginosa (DIN 38412 Part 9, static)
Nominal concentration.

Information on: propane
EC50 (96 h) 7.71 mg/l, algae (calculated)
The product has not been tested. The statement has been derived from the structure of the product.

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: pyrethrum

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

Information on: Acetone

The substance will slowly evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

Additional information

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

13. Disposal considerations

Waste disposal of substance:
Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:
Do not cut, puncture, crush, or incinerate empty aerosol containers. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Empty aerosol cans may meet the definition of RCRA D003. Consult local and/or regional EPA for further guidance.

14. Transport Information

Land transport
USDOT

Hazard class:	2.1
ID number:	UN 1950
Hazard label:	2.1, EHSM
Proper shipping name:	AEROSOLS

Sea transport
IMDG

Hazard class:	2.1
ID number:	UN 1950
Hazard label:	2.1, EHSM
Marine pollutant:	YES
Proper shipping name:	AEROSOLS

Air transport
IATA/ICAO

Hazard class:	2.1
ID number:	UN 1950
Hazard label:	2.1
Proper shipping name:	AEROSOLS, FLAMMABLE

Further information
DOT: This product may be classified as ORM-D (Consumer Commodity) or Limited Quantity. After 12/31/2020, ORM-D will not apply.

15. Regulatory Information

Federal Regulations

Registration status:

Chemical	TSCA, US	blocked / not listed
Crop Protection	TSCA, US	released / exempt

EPCRA 311/312 (Hazard categories): Acute; Chronic; Fire; Sudden release of pressure

EPCRA 313:

CAS Number	Chemical name
51-03-6	Piperonylbutoxide

CERCLA RQ	CAS Number	Chemical name
5000 LBS	67-64-1	Acetone
1 LBS	8003-34-7	Pyrethrins

State regulations

State RTK	CAS Number	Chemical name
MA, NJ, PA	8003-34-7	Pyrethrins
NJ	51-03-6	Piperonylbutoxide
MA, NJ, PA	67-64-1	Acetone
MA, NJ, PA	64742-47-8	Distillates (petroleum), hydrotreated light
MA, NJ, PA		Carbon dioxide, liquid

NFPA Hazard codes:
Health : 1 Fire: 4 Reactivity: 1 Special:

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:
EXTREMELY FLAMMABLE.
KEEP OUT OF REACH OF CHILDREN.
KEEP OUT OF REACH OF DOMESTIC ANIMALS.
HARMFUL IF ABSORBED THROUGH SKIN.
Avoid contact with the skin, eyes and clothing.
Wash thoroughly after handling.
Avoid inhalation of mists/vapours.

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2014/09/10

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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