



Material Safety Data Sheet

PyraPerm® (7-14-35) W-B Concentrate

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PyraPerm® (7-14-35) W-B Concentrate
EPA REGISTRATION NUMBER: 73049-342
CHEMICAL DESCRIPTION: Mixture; a.i.'s: pyrethrin, piperonyl butoxide & Permethrin
SYNONYM(S): None
PRODUCT DESCRIPTION: Only for formulation into an insecticide for the following uses: Domestic Outdoor, Indoor; Commercial/Industrial Uses, Terrestrial Non-Food and Treatment of Animals (livestock).

MANUFACTURER

Valent BioSciences Corporation
870 Technology Way
Libertyville, IL 60048

EMERGENCY TELEPHONE NUMBERS

HEALTH EMERGENCY OR SPILL (24 hr):
Within the United States: (877) 315-9819
Outside the United States: (651) 632-6184

PRODUCT INFORMATION

ENVIRONMENTAL SCIENCE PRODUCTS:
(866) 822-3731
www.valentbiosciences.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- CAUTION**
- Harmful if swallowed
 - Toxic to fish and other aquatic organisms.
 - Keep out of reach of children.

POTENTIAL HEALTH EFFECTS

Acute Toxicity (Primary Routes of Exposure): Ingestion and skin contact

Signs and Symptoms of Systemic Effects: May cause gastrointestinal effects such as nausea, vomiting and diarrhea. Ingestion of large quantities can result in nervous system effects such as dizziness, loss of coordination, tremors and loss of consciousness. Symptoms usually regress with no long lasting effects.

Acute Eye Contact: Minimally irritating.

Acute Skin Contact: Slightly irritating. Prolonged or repeated contact may result in contact dermatitis, which is characterized by dryness, chapping and reddening.

Acute Ingestion: Harmful if swallowed. Ingestion of small quantities are usually nonfatal unless aspiration occurs. If aspiration occurs during ingestion or vomiting it may cause mild to severe pulmonary injury, possibly progressing to death.

Acute Inhalation: This product may be harmful if inhaled.

Potentially Aggravated Medical Conditions: None known

For complete discussion of the toxicology data from which this evaluation was made, refer to Section 11. For Ecotox/Environmental Information, refer to Section 12. For Regulatory Information, refer to Section 15.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight/ Percent	Purpose
Permethrin	52645-53-1	14	Active Ingredient
Pyrethrin	8003-34-7	7	Active Ingredient
Piperonyl butoxide (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole)	51-03-6	35	Active Ingredient
Synthetic Isoparaffinic Hydrocarbon	64742-47-8	16.5	Alternate ingredient
Other ingredients	Various CAS#s	27.5	Other Ingredients

Other ingredients, which are maintained as trade secrets, are any substances other than an active ingredient contained in this product. Some of these may be hazardous, but their identity is withheld because they are considered trade secrets. The hazards associated with the other ingredients are addressed in this document. Specific information on other ingredients for the management of exposures, spills, or safety assessments can be obtained by a treating physician or nurse by calling **(877) 315-9819** (within the United States) or **(651) 632-6184** (outside the United States) at any time.

4. FIRST AID MEASURES

EYE CONTACT:

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

SKIN CONTACT:

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION:

Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

INHALATION:

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

NOTES TO PHYSICIAN:

This product contains a Pyrethroid pesticide. If a small amount is ingested (or if treatment is delayed) oral administration of large amounts of activated charcoal and a cathartic is probably sufficient therapy. If large amounts are ingested and vomiting has not occurred emesis should be induced with supervision. Keep patients head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered.

Do not administer milk, cream or other substance containing vegetable or animal fats, which enhance the absorption of lipophilic substances.

If localized paresthesia develops, the site should be thoroughly washed with soap and water. Cold cream can be applied to help diminish the effect.

Contains petroleum distillates - vomiting may cause aspiration pneumonia.

5. FIRE FIGHTING MEASURES

FLASH POINT: > 170° F (> 77° C)
FLASH POINT METHOD: TCC
EXTINGUISHING MEDIA: Water fog, carbon dioxide, foam, dry chemical
OSHA FLAMMABILITY CLASS: IIIA

NFPA RATING:

Health:	1
Flammability:	2
Reactivity:	0
Special:	None

(Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using professional judgement. Values were not available in the guidelines or published evaluations prepared by the National Fire Protection Association, NFPA.

FIRE FIGHTING INSTRUCTIONS: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear. Keep upwind. Isolate hazard area. Avoid inhalation of smoke and fumes. Use water or foam to reduce fumes. Do not touch spilled material. If possible, move containers from area. Extinguish only if flow of water can be stopped. Use flooding amounts of water as a fog. Cool containers with flooding amounts of water from as far a distance as possible. Avoid breathing vapors.

HAZARDOUS COMBUSTION PRODUCTS: May form toxic materials: Carbon dioxide, carbon monoxide, various hydrocarbons, etc.

6. ACCIDENTAL RELEASE MEASURES

VALENT BIOSCIENCES EMERGENCY PHONE NUMBER:

WITHIN THE UNITED STATES: (877) 315-9819
 OUTSIDE OF THE UNITED STATES: (651) 632-6184

UN/NA NUMBER: UN 3082 **EMERGENCY RESPONSE GUIDEBOOK NO.:** 171

If it is safe to do so:

- Evacuate non-essential personnel from the area to prevent human exposure.
- Remove all sources of ignition.
- Ventilate area, especially low areas where vapors may accumulate.
- Stop the source of the spill. Contain the spill to prevent further contamination of the soil, surface water, or ground water.
- May produce slippery conditions.

GENERAL AND DISPOSAL: Use proper protective equipment to minimize personal exposure (see Section 8). Take all necessary action to prevent and to remedy the adverse effect of the spill. For additional spill response information refer to the **North American Emergency Response Guidebook**. Ensure that the disposal is in compliance with all Federal, State, and local regulations. Refer to Section 14 for applicable Reportable Quantity (RQ) and other regulatory requirements.

FOR SPILLS OR LEAKS:

CONTAINMENT:

Small spills: Absorb with an inert absorbent material such as sand, granular clay, sawdust, Fuller's earth, etc. and dispose of in trash. Place in an approved chemical waste container for disposal. Where possible, container should be oriented to prevent further leakage. Do not allow spilled material to enter any body of water.

Large Spills: Eliminate all ignition sources. Ventilate area. Stop leak if you can do so without coming into contact with spilled material. Dike far ahead of the spill for later disposal. All equipment used to clean up spill should be grounded. Prevent entry into waterways, sewers, basements, or confined areas. Inform appropriate authorities immediately if contamination occurs.

CLEANUP:

Rinse spill area with small amount of soapy water. Contain and absorb the rinsate with inert absorbents and place into the same disposal container. Area can be washed with water to remove the last trace of residue. Do not allow water to contaminate water supplies or sewers.

7. HANDLING AND STORAGE

END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

HANDLING PRECAUTIONS: Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove contaminated clothing and wash clothing before reuse. Avoid contamination of feed and foodstuffs.

STORAGE: Store upright at room temperature. Avoid exposure to extreme temperature. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

EYES & FACE: Do not get this material in your eyes. Eye contact can be avoided by wearing protective eyewear.

RESPIRATORY PROTECTION: Use this material only in well ventilated areas. Unless ventilation is adequate to keep airborne concentrations below recommended exposure standards, approved respiratory protection should be worn.

SKIN & HAND PROTECTION: Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.

EXPOSURE LIMITS

Chemical Name	ACGIH Exposure Limits	OSHA Exposure Limits	Manufacturer's Exposure Limits
Permethrin	None	None	None
Pyrethrin	5 mg/m ³ TWA	5 mg/m ³ TWA	None
Piperonyl butoxide (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole)	None	None	None
Synthetic Isoparaffinic Hydrocarbon	None	None	1200 mg/m ³ TWA
Other ingredients	None	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM:	Liquid
COLOR:	Medium to dark amber
ODOR:	Mild
FLASH POINT:	> 170° F (> 77° C)
FLASH POINT METHOD:	TCC
SPECIFIC GRAVITY:	0.972 gm/mL @ 25° C
pH:	6 - 8
VISCOSITY:	32 cps @ 25° C
SOLUBILITY:	Emulsifiable in water. Miscible in polar solvents.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable.
INCOMPATIBILITY:	Strong acids and oxidizing agents.
OXIDATION/REDUCTION PROPERTIES:	Product does not have the potential to act as a strong oxidizing or reducing agent.

10. STABILITY AND REACTIVITY

EXPLODABILITY:	Not expected to be explosive.
HAZARDOUS POLYMERIZATION :	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	May form toxic materials such as: Carbon dioxide, carbon monoxide, various hydrocarbons, etc.
CONDITIONS TO AVOID:	Excessive heat and sources of ignition.

11. TOXICOLOGICAL INFORMATION**ACUTE TOXICITY:**

The following information is for the formulated product.

Oral Toxicity LD ₅₀ (rats)	834 mg/kg	EPA Tox Category	III
Dermal Toxicity LD ₅₀ (rabbits)	> 5,050 mg/kg	EPA Tox Category	IV
Inhalation Toxicity LC ₅₀ (rats)	> 2.04 mg/L	EPA Tox Category	IV
Eye Irritation (rabbits)	Non-irritating	EPA Tox Category	IV
Skin Irritation (rabbits)	Slightly irritating	EPA Tox Category	IV
Skin Sensitization (guinea pigs)	Non-sensitizer	EPA Tox Category	Not applicable

CARCINOGEN CLASSIFICATION

Chemical Name	IARC - Group 1 (carcinogenic to humans)	IARC - Group 2A (Probably carcinogenic)	IARC - Group 2B (Possibly carcinogenic)	NTP Carcinogen List
Pyrethrin (8003-34-7)	No	No	No	Not listed
Piperonyl butoxide (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole) (51-03-6)	No	No	No	Not listed
Synthetic Isoparaffinic Hydrocarbon (64742-47-8)	No	No	No	Not listed
Permethrin (52645-53-1)	No	No	No	Not listed
Other ingredients (Various CAS#s)	No	No	No	Not listed

TOXICITY OF ACTIVE INGREDIENTS:**CHRONIC/CARCINOGENICITY:**

Pyrethrum: In a study, marginally higher incidences of benign thyroid, parathyroid, ovary, and liver tumors were observed in rats and in lungs of mice following lifetime high dose exposures to pyrethrum.

Permethrin: A statistically significant increase in the incidence of lung and liver tumors was observed in female mice receiving diets containing 375 and 750 mg/kg/day of permethrin technical over 85 weeks.

Piperonyl Butoxide: Marginally higher incidences of benign liver tumors appeared in mice following lifetime high dose exposures to piperonyl butoxide.

MUTAGENICITY:

Pyrethrum was not found to be genotoxic and did not damage DNA in any study conducted (Ames mutagenicity assay, chromosome aberration in Chinese hamster ovary (CHO) cells, CHO/HGPRT assay with S9 activation, and in the unscheduled DNA synthesis (UDS) assay in cultured human liver cells).

Permethrin did not produce any mutagenic effects when tested in the Ames test.

Piperonyl butoxide was not genotoxic in several tests including the Ames mutagenicity assay, chromosome aberration in Chinese hamster ovary (CHO) cells, CHO/HGPRT assay with S9 activation, and in the unscheduled DNA synthesis (UDS) assay in cultured human liver cells.

DEVELOPMENTAL TOXICITY: There were no birth defects or adverse effects on reproductive parameters in tests with rats or rabbits for either pyrethrum, permethrin or piperonyl butoxide. They are not considered to be teratogenic.

For a summary of the potential for adverse health effects from exposure to this product, refer to Section 2. For information regarding regulations pertaining to this product, refer to Section 15.

12. ECOLOGICAL INFORMATION

AQUATIC ORGANISM TOXICITY: This product is very toxic to fish and other aquatic organisms.

OTHER ENVIRONMENTAL INFORMATION:

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA. Do not contaminate water when disposing of equipment wash waters.

13. DISPOSAL CONSIDERATIONS

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.

PRODUCT DISPOSAL:

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL:

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Offer for recycling, if available.

DISPOSAL METHODS:

Check government regulations and local authorities for approved disposal of this material. Dispose in accordance with applicable laws and regulations.

14. TRANSPORT INFORMATION

UN/NA NUMBER:	UN 3082
DOT (ground) SHIPPING NAME:	Environmentally hazardous substance, liquid, n.o.s.
TECHNICAL NAME (hazardous material):	Pyrethrins
HAZARD CLASS:	9
PACKING GROUP:	III
DOT REPORTABLE QUANTITY (RQ):	1.76 gallons (pyrethrin RQ = 1 lb.)
REMARKS:	None
EXEMPTION REQUIREMENT:	None
EMERGENCY RESPONSE GUIDEBOOK NO.:	171
MARINE POLLUTANT:	Not applicable

15. REGULATORY INFORMATION

PESTICIDE REGULATIONS: All pesticides are governed under FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act). Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

U.S. FEDERAL REGULATIONS:

Ingredients in this product are reviewed against an inclusive list of federal regulations. Therefore, the user should consult appropriate authorities. The federal regulations reviewed include: Clean Water Act, SARA, CERCLA, RCRA, DOT and OSHA. If no components or information is listed in the space below this paragraph, then none of the regulations reviewed are applicable.

Pyrethrin

CERCLA Reportable Quantity (RQ): 0.454 kg
1 lb

Piperonyl butoxide (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole)

SARA 313 Chemicals 1.0% de minimis concentration

Permethrin

SARA 313 Chemicals 1.0% de minimis concentration

SARA (311, 312):

Immediate Health: Yes
Chronic Health: No
Fire: No
Sudden Pressure: No
Reactivity: No

STATE REGULATIONS:

Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities. The state regulations reviewed include: California Proposition 65, California Directors List of Hazardous Substances, Massachusetts Right to Know, Michigan Critical Materials List, New Jersey Right to Know, Pennsylvania Right to Know, Rhode Island Right to Know and the Minnesota Hazardous Substance list. For Washington State Right to Know, see Section 8 for Exposure Limit information. For Louisiana Right to Know refer to SARA information listed under U.S. Regulations above. If no components or information is listed in the space below this paragraph, then none of the regulations reviewed are applicable.

Pyrethrin

California - Directors List of Hazardous Substances Present
MA Right To Know Listed
NJ Right To Know Listed
PA Right To Know Listed
RI Right To Know Listed
MN Hazardous Substance Listed

Piperonyl butoxide (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole)

NJ Right To Know Listed

Permethrin

MA Right To Know Listed
NJ Right To Know Listed

For information regarding potential adverse health effects from exposure to this product, refer to Sections 2 and 11.

16. OTHER INFORMATION

REASON FOR ISSUE: New format. Revisions throughout MSDS.
EPA REGISTRATION NUMBER: 73049-342
MSDS NO.: ENV-0027

16. OTHER INFORMATION

REVISION NUMBER: 2
REVISION DATE: 05/18/2009
SUPERCEDES DATE: May 21, 2004
RESPONSIBLE PERSON(S): Valent U.S.A. Corporation, Corporate EH&S, (925) 256-2803

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products is regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling. All necessary and appropriate precautionary, use, and storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

The information in this MSDS is based on data available to us as of the revision date given herein, and believed to be correct. Contact Valent Biosciences to confirm if you have the most current MSDS.

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