



# Material Safety Data Sheet

## Butacide® PS

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.

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Butacide® PS  
**MSDS IDENTIFICATION NO.:** ENV-0120  
**CHEMICAL NAME:** Piperonyl butoxide  
**EPA REGISTRATION NUMBER:** 73049-382  
**PRODUCT DESCRIPTION:** This product is to be used only for the formulation of insecticides.

Butacide is a registered trademark of Valent BioSciences Corporation

#### 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](http://www.valentbiosciences.com)

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight/ Percent	ACGIH Exposure Limits	OSHA Exposure Limits	Manufacturer's Exposure Limits
Piperonyl butoxide * (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole) (51-03-6)	90	None	None	See regulated exposure limits
Others ** (No CAS#)	10	None	None	See regulated exposure limits

\* Active Ingredient

\*\* 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.

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

##### A CLEAR GOLDEN AMBER LIQUID

- CAUTION**
- Harmful if swallowed or absorbed through skin.
  - Avoid contact with eyes, skin and clothing.
  - Toxic to fish.
  - Keep out of reach of children.

#### POTENTIAL HEALTH EFFECTS

**Acute Toxicity (Primary Routes of Exposure):** Inhalation, eye and skin contact

**Signs and Symptoms of Systemic Effects:** No Data Available

**Acute Eye Contact:** This product is expected to cause minimal or no eye irritation. The expected adverse health effects resulting from an exposure may include redness and possibly some minor swelling.

**Acute Skin Contact:** This product is slightly toxic when absorbed through the skin. This product can cause brief and/or minor irritation. The expected adverse health effects resulting from an exposure may include redness and possibly some minor swelling. Based on an evaluation of the ingredients and/or similar products, this product is not expected to cause allergic skin reactions.

**Acute Ingestion:** This product is slightly toxic when ingested.

**Acute Inhalation:** This product is minimally toxic when inhaled.

**Chronic Toxicity (including cancer):** This product is not listed as a carcinogen by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), the Occupational Safety and Health Administration (OSHA) or ACGIH.

**Potentially Aggravated Medical Conditions:** None known

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

### 4. FIRST AID MEASURES

**EMERGENCY NUMBER: within the United States (877) 315-9819;  
outside the United States (651) 632-6184**

#### 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:**

Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. 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:**

None

**5. FIRE FIGHTING MEASURES**

**FLASH POINT:** >200° F (>93° C)  
**FLASH POINT METHOD:** TCC  
**FLAME EXTENSION:** Not applicable  
**AUTOIGNITION:** No data available  
**EXTINGUISHING MEDIA:** Water fog, carbon dioxide, foam, dry chemical

**FLAMMABLE LIMITS IN AIR - LOWER (%):** Not applicable  
**FLAMMABLE LIMITS IN AIR - UPPER (%):** Not applicable

**NFPA RATING:**

Health: 1  
Flammability: 1  
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:** Products of combustion from fires involving this material may be toxic. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Minimize the amount of water used for fire fighting. Do not enter any enclosed area without full protective equipment, including self-contained breathing equipment. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and fire fighting equipment before reuse. Read the entire document.

**6. ACCIDENTAL RELEASE MEASURES**

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

**OBSERVE PRECAUTIONS IN SECTION 8: PERSONAL PROTECTION**

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.
- 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. Ensure that the disposal is in compliance with all Federal, Provincial, and local regulations (See Section 13 for applicable RCRA Number). Refer to Section 15 for applicable Reportable Quantity (RQ) and other regulatory requirements.

**SPILL OR LEAK**

**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 drum should be oriented to prevent further leakage. Do not allow spilled material to enter any body of water.

Large Spills: Eliminate all ignition sources. 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 adsorbents and place into an approved chemical waste container for disposal. Area can be washed with water to remove the last trace 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:** Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Avoid contamination of feed and foodstuff.

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

**WORK/HYGIENIC PRACTICES:** 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.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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

**EYES:** 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 PROTECTION:** Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including long pants, long-sleeved shirt and shoes plus socks and chemical-resistant gloves. Remove contaminated clothing.

**ENGINEERING CONTROLS:** Exhaust ventilation.

**OTHER/GENERAL PROTECTION:** Wash thoroughly with soap and water after handling.

**EXPOSURE LIMITS - See Section 2.**

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>PHYSICAL STATE:</b>	Liquid
<b>COLOR:</b>	Clear golden-amber
<b>ODOR:</b>	Mild aromatic
<b>MELTING POINT:</b>	Not applicable
<b>BOILING POINT:</b>	No data available
<b>DENSITY:</b>	8.80 lbs/gal
<b>SPECIFIC GRAVITY:</b>	1.056
<b>VAPOR PRESSURE:</b>	No data available
<b>VISCOSITY:</b>	No data available
<b>SOLUBILITY:</b>	Insoluble in water.

## 10. STABILITY AND REACTIVITY

<b>CHEMICAL STABILITY:</b>	Stable at normal ambient temperatures.
<b>INCOMPATIBILITY:</b>	Strong oxidizing agents
<b>OXIDATION/REDUCTION PROPERTIES:</b>	No data available
<b>EXPLODABILITY:</b>	Not expected to be explosive.
<b>HAZARDOUS POLYMERIZATION :</b>	Will not occur.
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	May form toxic materials such as: Carbon dioxide, carbon monoxide, various hydrocarbons, etc.

## 11. TOXICOLOGICAL INFORMATION

**ACUTE** (Product Specific Information):

Oral Toxicity LD <sub>50</sub> (rats)	> 500 mg/kg	EPA Tox Category	III
Dermal Toxicity LD <sub>50</sub> (rabbits)	> 2020 mg/kg	EPA Tox Category	III
Inhalation Toxicity LC <sub>50</sub> (rats)	> 4.2 mg/L	EPA Tox Category	IV
Eye Irritation (rabbits)	Mildly irritating	EPA Tox Category	IV
Skin Irritation (rabbits)	Slightly irritating	EPA Tox Category	IV
Skin Sensitization (guinea pigs)	Non-sensitizer (technical)	EPA Tox Category	Not applicable

**CHRONIC/CARCINOGENICITY:** A statistically significant increase in the number of benign liver tumors appeared in mice fed piperonyl butoxide technical at doses which far exceed any anticipated daily human intake. Independent and industry toxicological experts who have reviewed the data agree that the findings of the study do not indicate a health risk to human beings.

**REPRODUCTION:** No data available

**DEVELOPMENTAL TOXICITY:** Piperonyl butoxide is not considered to be teratogenic.

## 12. ECOLOGICAL INFORMATION

**ECOTOXICOLOGICAL INFORMATION:**

**ACUTE AND LONG-TERM TOXICITY TO FISH AND INVERTEBRATES:**

This product is toxic to fish.

**ECOLOGICAL TOXICITY:****OTHER ENVIRONMENTAL INFORMATION:**

Do not apply directly to lakes, streams, ponds, tidal marshes or estuaries. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. Do not contaminate water by cleaning of equipment or disposal of wastes.

**13. DISPOSAL CONSIDERATIONS**

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

**CONTAINER DISPOSAL:**

Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**DISPOSAL METHODS:**

Wastes resulting from use of this product may be disposed of on site or at a waste disposal facility. Never place unused product down any indoor or outdoor drain.

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

**14. TRANSPORT INFORMATION**

<b>DOT:</b>	Not regulated
<b>DOT REPORTABLE QUANTITY (RQ):</b>	None
<b>UN/NA NUMBER:</b>	Not applicable
<b>HAZARD CLASS:</b>	Not applicable

**15. REGULATORY INFORMATION**

**REGULATIONS UNDER FIFRA:** 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.

**EPA REGISTRATION NUMBER:** 73049-382

**OTHER U.S. FEDERAL REGULATIONS:**

Chemical Name	RCRA - U Series Wastes	Clean Water Act - Hazardous Substances	Clean Water Act Section 307
Piperonyl butoxide * (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole) (51-03-6)	None	Not listed	Not listed

**CWA Section 311:** No data

Chemical Name	SARA 313 Chemicals	SARA Section 302	CERCLA Reportable Quantity (RQ):
Piperonyl butoxide * (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole) (51-03-6)	1.0% de minimis concentration	Not listed	None

**SARA (311, 312):**

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

Chemical Name	IARC - Group 1 (carcinogenic to humans)	IARC - Group 2A (Probably carcinogenic)	IARC - Group 2B (Possibly carcinogenic)	NTP Carcinogen List
Piperonyl butoxide * (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole) (51-03-6)	No	No	No	Not listed

**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 2 for Exposure Limit information. For Louisiana Right to Know refer to SARA information listed under U.S. Regulations above.

Chemical Name	California Proposition 65	California - Directors List of Hazardous Substances	NJ Environmental Hazardous Substances List
Piperonyl butoxide * (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole) (51-03-6)	Not listed	Not listed	Listed

Chemical Name	MI - Critical Materials List	MA Right To Know	NJ Right To Know
Piperonyl butoxide * (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole) (51-03-6)	Not listed	Not listed	Listed

Chemical Name	PA Right To Know	RI Right To Know	MN Hazardous Substance
Piperonyl butoxide * (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole) (51-03-6)	Not listed	Not listed	Not listed

**California Proposition 65:** Not listed

**CHEMICAL INVENTORY INFORMATION:**

TSCA Inventory List - Registered pesticide, exempt from TSCA.

Chemical Name	Canada NDSL Inventory List	Canada DSL Inventory List -	EINECS Inventory List -
Piperonyl butoxide * (5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole) (51-03-6)	Not listed	Listed	200-076-7

**CANADIAN REGULATIONS:**

**WHMIS Hazard Class:** Not determined

For information regarding potential adverse health effects from exposure to this product, refer to Sections 3 and 11.

**16. OTHER INFORMATION**

**REASON FOR ISSUE:** Input MSDS into the new system and minor edits throughout.  
**EPA REGISTRATION NUMBER:** 73049-382  
**MSDS NO.:** ENV-0120  
**REVISION NUMBER:** 1  
**REVISION DATE:** 09/19/2006  
**SUPERCEDES DATE:** January 24, 2003

---

**16. OTHER INFORMATION**

---

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.

JUDGEMENTS AS TO THE SUITABILITY OF INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES ARE NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, VALENT EXTENDS NO WARRANTIES, MAKES NO REPRESENTATIONS, AND ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.

2006 Valent BioSciences Corporation