

Material Safety Data Sheet



Butacide® Piperonyl Butoxide Technical

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to 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, 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.

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Butacide® Piperonyl Butoxide Technical
EPA REGISTRATION NUMBER: 73049-299
MSDS IDENTIFICATION CODE/NO.: ENV-0023
CHEMICAL NAME: Piperonyl butoxide
PRODUCT DESCRIPTION: This product is intended for formulation of insecticides only.

Butacide is a registered trademark of Valent BioSciences Corporation.

MANUFACTURER
Valent BioSciences Corporation
870 Technology Way
Libertyville, Illinois 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

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name (CAS #) [Chemical Name]	Weight Percent	Exposure Limit	Ref.
Piperonyl butoxide (51-03-6) * 5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole	= 100	None established	

* 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.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

A YELLOW-BROWN SEMI-VISCOUS LIQUID

CAUTION:

- HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN
- TOXIC TO FISH

POTENTIAL HEALTH EFFECTS

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

Signs and Symptoms of Systemic Effects: May cause gastrointestinal effects such as nausea, vomiting and diarrhea.

Eye: Minimally irritating. Slight reddening may occur in individuals sensitive to piperonyl butoxide.

Skin: Minimally irritating.

Ingestion: Harmful if swallowed

Inhalation: Harmful if inhaled.

SECTION 4: FIRST AID MEASURES**EMERGENCY NUMBER**

Within the United States (877) 315-9819

Outside the United States (651) 632-6184

EYES: 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: 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 person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a 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 mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: 310°F (154°C)

METHOD: TCC

AUTOIGNITION: NA

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam, or Water

FLAMMABLE LIMITS (% by volume in air): Lower: NA Upper: NA

FIRE AND EXPLOSION HAZARDS: Do not use or store near heat or open flame.

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 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 and carbon monoxide, various hydrocarbons, etc.

SECTION 6: ACCIDENTAL RELEASE MEASURES

EMERGENCY PHONE NUMBER: Within the United States (877) 315-9819

Outside the United States (651) 632-6184

OBSERVE PRECAUTIONS IN SECTION 8: PERSONAL PROTECTION

Ventilate area. Stop the source of the spill if safe to do so. Contain the spill to prevent further contamination of the soil, surface water, or ground water.

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: Soak up liquid with an absorbent material such as sand, sawdust, earth, 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. Drum should be placed in a spillage drum for further movement or transport. Do not allow spill 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 liquid 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 residue. Do not allow water to contaminate water supplies or sewers.

SECTION 7: HANDLING AND STORAGE**HANDLING PRECAUTIONS:**

Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing vapors. Avoid contact with skin, eyes or clothing. Avoid contamination of feed and foodstuff.

STORAGE PRECAUTIONS:

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

WORK/HYGIENIC PRACTICES: Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash clothing before reuse.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Control airborne concentrations below the appropriate exposure guidelines. Use local exhaust ventilation.

RESPIRATION/VENTILATION: Use in a well ventilated area. If not adequate, use a chemical cartridge-type respirator approved by the National Institute of Occupational Health and Safety.

EYE PROTECTION: Safety glasses or goggles.

SKIN PROTECTION: Use of butyl or nitrile rubber gloves.

BODY PROTECTION: Clothing (disposable or washable) to minimize skin contact.

OTHER/GENERAL PROTECTION: Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse. Eye wash facility and safety shower should be available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Yellow-brown
ODOR: Aromatic
PHYSICAL STATE: semi-viscous liquid
SOLUBILITY (H₂O): Slight
pH: NA
PACKAGING DENSITY: 8.79 lb/gal @ 25°C
SPECIFIC GRAVITY: 1.05 mg/L
VAPOR PRESSURE: 1 mmHg @ 168°C
MOLECULAR WEIGHT: 338.49

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

CONDITIONS TO AVOID: Excessive heat and sources of ignition.

INCOMPATIBILITY: Strong oxidizing agents and acids.

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

OXIDATION/REDUCTION PROPERTIES: Product does not have the potential to act as a strong oxidizing or reducing agent.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE (Product Specific Information):

Oral Toxicity LD₅₀ (rat):	4,300 mg/kg	III EPA Tox Category
Dermal Toxicity LD₅₀ (rabbit):	> 2,000 mg/kg	III EPA Tox Category
Inhalation Toxicity LC₅₀(rat):	> 5 mg/L	IV EPA Tox Category
Eye Irritation (rabbit):	Minimally irritating	IV EPA Tox Category
Skin Irritation (rabbit):	Minimally irritating	IV EPA Tox Category
Skin Sensitization (guinea pig):	Non-sensitizer	

TOXICITY OF ACTIVE INGREDIENTS: PIPERONYL BUTOXIDE:

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.

CARCINOGENICITY: NTP: No IARC: No OSHA: No

SECTION 12: ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION****ACUTE AND LONG-TERM TOXICITY TO FISH AND INVERTEBRATES:**

This product is highly toxic to fish.

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 Pollutant Discharge Elimination system (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to 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.

SECTION 13: DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. If partly filled: Call your local solid waste agency or 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor or outdoor drain.

CONTAINER DISPOSAL:

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

RCRA INFORMATION

RCRA HAZARDOUS WASTE INGREDIENTS: None

SECTION 14: TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Not DOT Regulated

RQ: NA

DOT HAZARD CLASS: NA

UN/NA NUMBER: NA

REMARKS: NA

EXEMPTION REQUIREMENT: NA

SECTION 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.

EMERGENCY TELEPHONE #: Within the United States (877) 315-9819
Outside the United States (651) 632-6184

MSDS NO. ENV-0023

Revision Number: 1

Revision Date: 11/09/2004

EPA Registration Number: 73049-299

OTHER U.S. FEDERAL REGULATIONS:

TSCA Inventory: Registered Pesticide, exempt from TSCA.

SARA TITLE III:

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

CAS NUMBER	INGREDIENT NAME	PERCENT BY WEIGHT
51-03-6	Piperonyl butoxide	= 100

SARA Title III:

Acute Health Hazard - Yes
Chronic Health Hazard - No
Fire Hazard - No
Sudden Release of Pressure - No
Reactivity Hazard - No

This information must be included on all MSDSs that are copied and distributed for this material.

REGULATED INGREDIENTS

INGREDIENT: Piperonyl butoxide
CAS NUMBER: 51-03-6
PERCENT BY WEIGHT: = 100
Regulations: State right-to-know: NJ
Canadian Domestic Substance List (DSL)
European Inventory of Existing Commercial Substances (EINECS)

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

HMIS HAZARD RATING - HEALTH: 1 Slight
- FIRE: 0 Moderate
- REACTIVITY: 0 Negligible
- PROTECTION: A

NFPA HAZARD RATING - HEALTH: 1 Slight
- FIRE: 0 Moderate
- REACTIVITY: 0 Negligible
- SPECIAL: -

RATINGS:

(Least-0, Slight-1, Moderate-2, High-3, Extreme-4).

These values are obtained using professional judgment. Because the customer is most aware of the application of the product, he must ensure that the proper personal protective equipment (PPE) is provided consistent with the information contained in the product MSDS.

* RQ: Reportable Quantity

** RCRA waste codes must be determined on a case-by-case basis (i.e., spill, processing waste, etc.).

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

SECTION 16: OTHER INFORMATION

REASON FOR ISSUE: Correct of product name, new format
REVISION NUMBER: 1
REVISION DATE: 11/09/2004
SUPERSEDES DATE: 10/22/2001
EPA REGISTRY NUMBER: 73049-299
MSDS NUMBER: ENV-0023

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

This information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with label instructions.

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 CORPORATION TO CONFIRM IF YOU HAVE THE MOST CURRENT MSDS.

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