

Piperonyl butoxide -MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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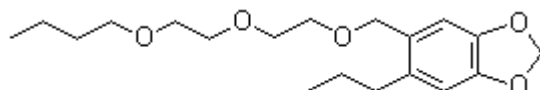
1. Chemical Product Identification

Product Name: Piperonyl butoxide

Molecular Formula: C₁₉H₃₀O₅

Molecular Weight: 338.44

Structural Formula:



Chemical Name: 3,4-methylenedioxy-6-propylbenzyl-n-butyl diethylene glycol ether

Form: Liquid

Color: Slight yellow

Odor: slight odor

CAS No.: 51-03-6

2. Composition / Information on Ingredients

Composition	CAS No.	Content %
Piperonyl butoxide	51-03-6	95.0
Other ingredients		5.0

3. Hazards Identification

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant); Severe over-exposure can result in death.

The substance may be toxic to blood, kidneys, lungs, liver, skin, central nervous system.

Repeated or prolonged exposure to the substance can produce target organs damage.

Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human

4. First Aid Measures

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

5. Fire-Fighting Measures

Flammability: May be combustible at high temperature.

Flash Points: close cup 171°C

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:

Fire Fighting Media and Instructions: use dry chemical powder for small fire, use water spray, fog or foam for large fire, do not use water jet.

6. Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill: Poisonous liquid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

7. Handling And Storage

Precautions: Keep locked up. Keep away from heat and sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. Exposure Controls/Personal Protection

Personal Protection: Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist before handling this product.

9. Physical and Chemical Properties

Appearance: Slight yellow liquid

Special density: 1.04-1.07

Boiling point t: 180°C/133.3Pa

Refractive index: 1.485-1.510

Solubility: Insoluble in water, soluble in many organic solvents including mineral oil and dichlorodifluoro -methane.

10. Stability and Reactivity

Stability: The product is stable.

Incompatibility with various substances: Slightly reactive to reactive with oxidizing agents.

Polymerization: Will not occur..

11. Toxicological Information

Acute toxicity:

Oral LD₅₀ for rat: 7500 mg/kg

Dermal LD₅₀ for rat: ≥1800 mg/kg

Chronic toxicity:

In two year feeding trials rats receiving 100mg/kg diet suffered no ill-effect. It is non-carcinogenic and the safe human tolerance for chronic ingestion is estimated at 42mg/kg diet.

12. Ecological And Ecotoxicological Information

Effect on Birds: low toxic to birds.

Oral LD₅₀ for Bobwhite Quail Oral: >2250mg/kg

Effect on Fish: highly toxic to fish and aquatic organisms.

LC₅₀ (96h) for Bluegill Sunfish: 5.37ppm

LC₅₀ (48h) for Daphnia Magna: 0.51ppm

Effects on other organisms: Honeybee Acute >25µg/bee

13. Disposal Considerations

Do not reuse product containers.

Dispose of product containers, waste containers, and residues according to Federal, State and local health and environmental regulations.

14. Transport Information

Hazard Class: 6.1 Packing group: II UN. No.: 2810

15. Regulatory Information

Not applicable.

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.