

# SAFETY DATA SHEET

## 1. PRODUCT

### 1.1 Product identifiers

Name: Piperonylbutoxide

CAS-No.: 51-03-6

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture


#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal word	Warning
Hazard statement(s)	H410 Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	P273 Avoid release to the environment. P391 Collect spillage. P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonyms: 2-(2-Butoxyethoxy)ethyl (6-propylpiperonyl) ether  
4,5-Methylenedioxy-2-propylbenzyl diethyleneglycol butyl ether

Formula:  $C_{19}H_{30}O_5$

CAS-No.: 51-03-6

EC-No.: 200-076-7

No components need to be disclosed according to the applicable regulations.

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

<b>In case of skin contact</b>
Wash off with soap and plenty of water. Consult a physician.
<b>In case of eye contact</b>
Flush eyes with water as a precaution.
<b>If swallowed</b>
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

## 4.2 Indication of any immediate medical attention and special treatment needed

no data available

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## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

no data available

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## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 480 min Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M) Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 60 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body Protection	impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Form: liquid Colour: light yellow
Odour	no data available
Odour Threshold	no data available
pH	no data available
Melting point/freezing point	Melting point/range: < -20 °C (< -4 °F) - OECD Test Guideline 102
Initial boiling point and boiling range	155 °C (311 °F) at 0.4 hPa (0.3 mmHg)
Flash point	171 °C (340 °F) - closed cup
Evaporation rate	no data available
Flammability (solid, gas)	no data available
Upper/lower flammability or explosive limits	no data available
Vapour pressure	no data available
Vapour density	no data available
Relative density	1.059 g/mL at 25 °C (77 °F)
Water solubility	0.0289 g/l at 20.4 °C (68.7 °F) - OECD Test Guideline 105 - slightly soluble

Partition coefficient: n-octanol/water	log Pow: 4.8 at 20 °C (68 °F)
Auto-ignition temperature	265 °C (509 °F) at 1,010 hPa (758 mmHg)
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	Not explosive
Oxidizing properties	The product has been shown not to be oxidising in a test following Directive

## 9.2 Other safety information

Surface tension: 35.79 mN/m at 25 °C (77 °F)

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

<b>Acute toxicity</b>
LD50 Oral - rat - male and female - 5,630 mg/kg (OECD Test Guideline 401) LC50 Inhalation - rat - male and female - 4 h - > 5.9 mg/l LD50 Dermal - rabbit - male and female - > 2,000 mg/kg (OECD Test Guideline 402) no data available
<b>Skin corrosion/irritation</b>
Skin - rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
<b>Serious eye damage/eye irritation</b>
Eyes - rabbit Result: No eye irritation - 168 h (OECD Test Guideline 405)
<b>Respiratory or skin sensitisation</b>
Buehler Test - guinea pig Result: Does not cause skin sensitisation.
<b>Germ cell mutagenicity</b>
no data available Ames test S. typhimurium Result: negative mouse - male Result: negative

### Carcinogenicity

Carcinogenicity - rat - male and female

No adverse effect has been observed in chronic toxicity tests.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Reproductive toxicity

no data available

Reproductive toxicity - rat - male and female - Oral

No adverse effect has been observed in chronic toxicity tests.

no data available

Developmental Toxicity - rat - Oral

No adverse effect has been observed in chronic toxicity tests.

### Specific target organ toxicity -single exposure

no data available

### Specific target organ toxicity -repeated exposure

no data available

### Aspiration hazard

no data available

### Additional Information

Repeated dose toxicity - rat - male and female - Oral - No observed adverse effect level - 125 mg/kg - Lowest observed adverse effect level - 250 mg/kg

RTECS: XS8050000

Vomiting, Diarrhoea, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish	flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - ca. 6.12 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	flow-through test EC50 - Daphnia magna (Water flea) - ca. 0.05 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	Growth inhibition ErC50 - Pseudokirchneriella subcapitata (Selenastrum capricornutum) - ca. 3.89 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	EC50 - Sludge Treatment - > 1,000 mg/l - 3 h (OECD Test Guideline 209)

### 12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28 d Result: 24 - 48 % - Not readily biodegradable. (OECD Test Guideline 301B)
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### 12.3 Bioaccumulative potential

Bioaccumulation	Lepomis macrochirus - 28 d Bioconcentration factor (BCF): 91 - 380
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### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

no data available

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

<b>Product</b>
Offer surplus and non-recyclable solutions to a licensed disposal company.
<b>Contaminated packaging</b>
Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

### DOT (US)

Not dangerous goods

### IMDG

UN number: 3082 Class: 9 Packing group: III EMS-No: F-A, S-F

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether)

Marine pollutant: Marine pollutant

### IATA

UN number: 3082 Class: 9 Packing group: III

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether)

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

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## 15. REGULATORY INFORMATION

### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Component	CAS-No.	Revision Date
2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether	51-03-6	2007-07-01

### SARA 311/312 Hazards

No SARA Hazards

### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right To Know Components

Component	CAS-No.	Revision Date
2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether	51-03-6	2007-07-01

### New Jersey Right To Know Components

Component	CAS-No.	Revision Date
2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether	51-03-6	2007-07-01

### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

### HMIS Rating

Health hazard: 2

Chronic Health Hazard:

Flammability: 1

Physical Hazard 0

### NFPA Rating

Health hazard: 2

Fire Hazard: 1

Reactivity Hazard: 0

Health hazard: 0

Fire Hazard: 1

Reactivity Hazard: 0

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