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Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 02 Dec 2024

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

Piperonyl butoxide

1.1. Catalog No.:

674844

1.2. Relevant identified uses of the substance or mixture

Identified uses: Laboratory chemical
R&D

1.3. Uses advised against:

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1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410

2.2. Label elements

2.2.1. Pictogram

2.2.2.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
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.
Supplemental Hazard Statements none
Reduced Labeling (<= 125 ml)
Signal Word Warning
Hazard statement(s) none
Precautionary statement(s) none
Supplemental Hazard Statements none
2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Component: 5-{[2-(2-Butoxyethoxy)ethoxy]methyl}-6-propyl-1,3-benzodioxole CAS-No. : 51-03-6 EC-No. : 200-076-7
Classification: Aquatic Acute 1; Aquatic Chronic 1; H400, H410
M-Factor - Aquatic Acute: 10
Concentration: <= 100 %

3.1.1. Formula

C19H30O5

3.1.2. Molecular Weight (g/mol)

338.44

3.1.3. CAS-No.

51-03-6

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4. FIRST AID MEASURES

4.1 Description of first-aid measures
If inhaled
After inhalation: fresh air.
In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.
If swallowed
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.
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
4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.
5.2 Special hazards arising from the substance or mixture
Carbon oxides
Combustible.
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapours possible in the event of fire.
5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.
5.4 Further information
Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.
6.2 Environmental precautions
Do not let product enter drains.
6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®).
Dispose of properly. Clean up affected area.
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
Storage conditions
Tightly closed.
Storage stability
Recommended storage temperature
2 - 8 °C
Storage class
Storage class (TRGS 510): 10: Combustible liquids
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
Ingredients with workplace control parameters
8.2 Exposure controls
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). Safety glasses
Respiratory protection
Recommended Filter type: Filter A-(P2)
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.
These measures have to be properly documented.
Control of environmental exposure
Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
a) Physical state liquid
b) Color light yellow
c) Odor No data available
d) Melting point/freezing point
Melting point/range: < -20 °C - OECD Test Guideline 102
e) Initial boiling point and boiling range
180 °C at 1 hPa
f) Flammability (solid, gas)
No data available
g) Upper/lower flammability or explosive limits
No data available
h) Flash point 171 °C - closed cup
i) Autoignition temperature
265 °C
at 1.010 hPa
j) Decomposition temperature
No data available
k) pH No data available
l) Viscosity Viscosity, kinematic: No data available

Viscosity, dynamic: 28,7 mPa.s at 20 °C
m) Water solubility 0,0289 g/l at 20,4 °C - OECD Test Guideline 105- slightly soluble
n) Partition coefficient:
n-octanol/water
log Pow: 4,8 at 20 °C
o) Vapor pressure No data available
p) Density 1,059 g/cm3
Relative density 1,058 at 20 °C
q) Relative vapor density
r) Particle characteristics
No data available
s) Explosive properties Not explosive
t) Oxidizing properties The product has been shown not to be oxidizing in a test following Directive 67/548/EEC (Method A17, oxidizing properties).
9.2 Other safety information
Surface tension 35,79 mN/m at 25 °C

10. STABILITY AND REACTIVITY

10.1 Reactivity
Forms explosive mixtures with air on intense heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.
10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .
10.3 Possibility of hazardous reactions
Violent reactions possible with: Strong oxidizing agents
10.4 Conditions to avoid
Strong heating.
10.5 Incompatible materials
Strong oxidizing agents
10.6 Hazardous decomposition products
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
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)
Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)
Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation - 168 h
(OECD Test Guideline 405)
Respiratory or skin sensitization
Buehler Test - Guinea pig
Result: Does not cause skin sensitization.
Germ cell mutagenicity
Test Type: Ames test
Test system: S. typhimurium

Metabolic activation: with and without metabolic activation
Result: negative
Test Type: In vivo micronucleus test
Species: Mouse
Application Route: Oral
Result: negative
Carcinogenicity
No data available
Reproductive toxicity
No data available
Specific target organ toxicity - single exposure
No data available
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available
11.2 Additional Information
Endocrine disrupting properties
Product:
Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) - 125 mg/kg - LOAEL (Lowest observed adverse effect level) - 250 mg/kg
RTECS: XS8050000
Vomiting, Diarrhea, 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 (algae) - 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)
Toxicity to fish(Chronic toxicity): NOEC - Pimephales promelas (fathead minnow) - 0,18 mg/l - 35 d
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) NOEC - Daphnia magna (Water flea) - 0,03 mg/l - 21 d
12.2 Persistence and degradability
Biodegradability aerobic - Exposure time 28 d
Result: 24 - 48 % - Not readily biodegradable. (OECD Test Guideline 301B)
12.3 Bioaccumulative potential
Bioaccumulation Lepomis macrochirus - 28 d (5-{[2-(2-Butoxyethoxy)ethoxy]methyl}-6-propyl-1,3-benzodioxole)
Bioconcentration factor (BCF): 91 - 380
12.4 Mobility in soil
No data available
12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6 Endocrine disrupting properties Product:
Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
12.7 Other adverse effects
No data available

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13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
No data available

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 3082 IMDG: 3082 IATA: 3082
14.2 UN proper shipping name
ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (5-{[2-(2-Butoxyethoxy)ethoxy]methyl}-6-propyl-1,3-benzodioxole)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (5-{[2-(2-Butoxyethoxy)ethoxy]methyl}-6-propyl-1,3-benzodioxole)
IATA: Environmentally hazardous substance, liquid, n.o.s. (5-{[2-(2-Butoxyethoxy)ethoxy]methyl}-6-propyl-1,3-benzodioxole)
14.3 Transport hazard class(es)
ADR/RID: 9 IMDG: 9 IATA: 9
14.4 Packaging group
ADR/RID: III IMDG: III IATA: III
14.5 Environmental hazards
ADR/RID: yes IMDG Marine pollutant: yes IATA: yes
14.6 Special precautions for user
Tunnel restriction code : (-)
Further information
Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
National legislation
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
: ENVIRONMENTAL HAZARDS
Other regulations
Take note of Dir 94/33/EC on the protection of young people at work.
15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!