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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:

Malathion

1.1. Catalog No.:

672938

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

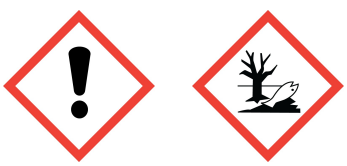
HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 4), H302
Skin sensitization (Category 1), H317
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 Pictogram Signal word Warning
Hazard statement(s)

H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves.
P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of water.
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
Formula : C10H19O6PS2
Molecular weight : 330,36 g/mol
CAS-No. : 121-75-5
EC-No. : 204-497-7
Index-No. : 015-041-00-X
Component Classification Concentration
Malathion
Acute Tox. 4; Skin Sens. 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H317, H400, H410
M-Factor - Aquatic Acute: 100 - Aquatic Chronic: 100
<= 100 %

3.1.1. Formula

C10H19O6PS2

3.1.2. Molecular Weight (g/mol)

330.36

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3.1.3. CAS-No.

121-75-5

4. FIRST AID MEASURES

4.1 Description of first-aid measures
General advice
Show this material safety data sheet to the doctor in attendance.
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. Consult a physician.
In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.
If swallowed
After swallowing: immediately make victim drink water (two glasses at most). 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
4.3 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, Sulfur oxides, Oxides of phosphorus
Combustible.
Development of hazardous combustion gases or vapours possible in the event of fire.
5.3 Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
5.4 Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. 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. Avoid substance contact. Ensure adequate ventilation. 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

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
Tightly closed.
Recommended storage temperature 2 - 8 °C
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
Appropriate engineering controls
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
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
Skin protection
required
Body Protection
protective clothing
Respiratory protection
required when vapours/aerosols are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
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) Appearance Form: liquid
Color: colorless
b) Odor No data available
c) Odor Threshold No data available d) pH No data available
e) Melting
point/freezing point
Melting point: 2,9 °C

f) Initial boiling point
and boiling range
156 - 157 °C at 0,9 hPa
g) Flash point No data available
h) Evaporation rate No data available
i) Flammability (solid,
gas)
No data available
j) Upper/lower
flammability or
explosive limits
No data available
k) Vapor pressure No data available
l) Vapor density No data available
m) Relative density 1,23 g/cm3 at 25 °C
n) Water solubility soluble
o) Partition coefficient:
n-octanol/water
log Pow: 2,9 at 25 °C - (Lit.), Bioaccumulation is not expected.
p) Autoignition
temperature
No data available
q) Decomposition
temperature
No data available
r) Viscosity No data available
s) Explosive properties No data available
t) Oxidizing properties No data available
9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available
10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
no information available
10.5 Incompatible materials
Strong oxidizing agents, Corrodes metal
10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulfur oxides, Oxides of phosphorus
Other decomposition products - No data availableIn the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - 644 mg/kg
Remarks: (RTECS)
LD50 Dermal - Rabbit - 8.790 mg/kg
Remarks: (IUCLID)
Skin corrosion/irritation
No data available
Serious eye damage/eye irritation
Eyes - Rabbit

Result: No eye irritation
Respiratory or skin sensitization
No data available
Germ cell mutagenicity
Human
leukocyte
Cytogenetic analysis
Human
lymphocyte
Cytogenetic analysis
Human
lymphocyte
DNA inhibition
Human
fibroblast
Other mutation test systems
Human
leukocyte
Sister chromatid exchange
Human fibroblast
Sister chromatid exchange
Hamster
ovary
Cytogenetic analysis
Hamster
Lungs
Cytogenetic analysis
Hamster
Lungs
Sister chromatid exchange
Hamster
ovary
Sister chromatid exchange
Human
lymphocyte
Unscheduled DNA Synthesis Human
lymphocyte
Micronucleus test
Mouse
Cytogenetic analysis
Mouse
Cytogenetic analysis
Mouse
Cytogenetic analysis
Hamster
Cytogenetic analysis
Carcinogenicity
IARC: 2A - Group 2A: Probably carcinogenic to humans (Malathion)
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
Additional Information
RTECS: WM8400000
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 LC50 - Fish - 0,252 mg/l - 96 h
Toxicity to daphnia
and other aquatic
invertebrates
EC50 - Daphnia magna (Water flea) - 0,002 mg/l - 48 h
Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 4,06 mg/l - 72 h

12.2 Persistence and degradability
No data available
12.3 Bioaccumulative potential
Bioaccumulation Oryzias latipes - 168 h
- 12,8 µg/l(Malathion)
Bioconcentration factor (BCF): 12 Remarks: Can accumulate in aquatic organisms.
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 Other adverse effects
No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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. (Malathion)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Malathion)
IATA: Environmentally hazardous substance, liquid, n.o.s. (Malathion)
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
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.

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.
REACH - Restrictions on the manufacture,
placing on the market and use of certain

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dangerous substances, preparations and articles
: (Annex XVII)
Other regulations
Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.
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!