

# MATERIAL SAFETY DATA SHEET



## ACUAFIN® 440 EW

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	18.07.2024	50001286	Date of first issue: 08.07.2024

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### 1. IDENTIFICATION

Product name : ACUAFIN® 440 EW

#### Manufacturer or supplier's details

Company : FMC LATINOAMÉRICA S.A.

Address : AV. RODRIGO DE CHÁVEZ Y JUAN TANCA  
CIUDAD COLÓN. TORRE EMPRESARIAL 2  
OFICINA 308. GUAYAQUIL - ECUADOR  
(593 04) 3901953

E-mail address : SDS-Info@fmc.com

Emergency telephone : 1 703 / 741-5970 (CHEMTREC - International)

Medical Emergency Number : Desde Ecuador: 1800 593005 (Quito, La Sierra, Centro y Norte).  
Desde Bogotá: 288 60 12; Línea Nacional: 01 8000 916012  
Desde Venezuela: 0800 1005012  
Desde Perú: SAMU: 106;  
CISPROQUIM®: 080-050-847;  
FMC LATINOAMERICA S.A. SUCURSAL: 421-4811;

#### Recommended use of the chemical and restrictions on use

Recommended use : Can be used as insecticide only.

Restrictions on use : Use as recommended by the label.

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### 2. HAZARDS IDENTIFICATION

#### GHS Classification

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Acute toxicity (Dermal) : Category 4

Specific target organ toxicity - repeated exposure : Category 2

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

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### GHS label elements

Hazard pictograms



Signal Word

: WARNING

Hazard Statements

: H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

**Prevention:**

P260 Do not breathe mist or vapors.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing.

**Response:**

P301 + P317 + P330 IF SWALLOWED: Get medical help.  
Rinse mouth.  
P302 + P352 + P317 IF ON SKIN: Wash with plenty of water.  
Get medical help.  
P304 + P340 + P317 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.  
P319 Get medical help if you feel unwell.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P391 Collect spillage.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards which do not result in classification

Hazard Statements required by Andean Technical Manual for the Registration and Control of Chemical Pesticides for Agricultural Use (Resolution no. 2075):  
Harmful if swallowed, in contact with skin or if inhaled.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

: Mixture

Chemical nature

: insecticide formulation

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
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malathion (ISO) [containing $\leq 0,03$ % isomalathion]	121-75-5	$\geq 30 - < 50$
Poly(oxy-1,2-ethanediyl), .alpha.-phosphono-.omega.-[2,4,6-tris(1-phenylethyl)phenoxy]-	114535-82-9	$\geq 2,5 - < 10$
2-Propenoic acid, homopolymer	9003-01-4	$\geq 0,25 - < 1$

### 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : Wash off with soap and water.  
If symptoms persist, call a physician.  
Wash contaminated clothing before re-use.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Induce vomiting immediately and call a physician.  
Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : Harmful if swallowed, in contact with skin or if inhaled.  
May cause damage to organs through prolonged or repeated exposure.  
Skin contact may result in itching and redness. Eye contact may result in itching, watery eyes, light sensitivity, pain, and/or blurred vision.
- Protection of first-aiders : Avoid inhalation, ingestion and contact with skin and eyes.
- Notes to physician : Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

#### Flammable properties

- Flash point :  $> 95$  °C  
Method: Directive 67/548/EEC, Annex V, A.9.
- Ignition temperature : No data available

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- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower flammability limit : No data available
- Flammability (solid, gas) : Not applicable
- Suitable extinguishing media : Dry chemical, CO<sub>2</sub>, water spray or regular foam.
- Unsuitable extinguishing media : Do not spread spilled material with high-pressure water streams.
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Fire may produce irritating, corrosive and/or toxic gases.  
phosphorus oxides  
Carbon oxides  
Sulfur oxides
- Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.  
Use a water spray to cool fully closed containers.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for fire-fighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

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### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Ensure adequate ventilation.  
If it can be safely done, stop the leak.  
Do not touch or walk through the spilled material.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Prevent product from entering drains.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Never return spills in original containers for re-use.  
Collect as much of the spill as possible with a suitable absorbent material.  
Pick up and transfer to properly labeled containers.  
Keep in suitable, closed containers for disposal.

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### 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapors/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : 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.  
Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : Do not store near acids.
- Further information on storage stability : No decomposition if stored and applied as directed.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
malathion (ISO) [containing ≤ 0,03 % isomalathion]	121-75-5	TWA (Inhalable fraction and vapor)	1 mg/m <sup>3</sup>	ACGIH

#### Personal protective equipment

- Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
- Hand protection  
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles
- Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concen-

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tration of the dangerous substance at the work place.

Protective measures : Plan first aid action before beginning work with this product.

Hygiene measures : Avoid contact with skin, eyes and clothing.  
Do not inhale aerosol.  
When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Form : suspension

Color : off-white

Odor : No data available

Odor Threshold : No data available

pH : 4,22 (20 °C)

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : > 95 °C

Method: Directive 67/548/EEC, Annex V, A.9.

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Self-ignition : > 400 °C  
Method: EEC A.15

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

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Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	No data available
Solubility(ies) Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, dynamic	:	16,43 - 186,7 mPa.s ( 25 °C) Method: OECD Test Guideline 114
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing
Surface tension	:	39,2 mN/m, 22 °C
Molecular weight	:	Not applicable

### 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed. Decomposes on heating.  No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	Avoid extreme temperatures. Heat, flames and sparks. Exposure to sunlight. Avoid formation of aerosol.
Incompatible materials	:	Avoid strong acids, bases, and oxidizers.
Hazardous decomposition products	:	phosphorus oxides Carbon oxides Sulfur oxides

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No hazardous decomposition products are known.

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Harmful if swallowed, in contact with skin or if inhaled.

#### Product:

Acute oral toxicity : LD50(Rat, male and female): > 5.000 mg/kg  
Method: US EPA Test Guideline OPP 81-1  
Assessment: The substance or mixture has no acute oral toxicity

Assessment: The component/mixture is moderately toxic after single ingestion.

Remarks: Resolution no. 2075

Acute inhalation toxicity : LC50(Rat): > 7,74 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity

Assessment: The component/mixture is moderately toxic after short term inhalation.

Remarks: Resolution no. 2075

Acute dermal toxicity : LD50(Rat): > 5.000 mg/kg  
Method: EPA OPP 81-2  
Assessment: The substance or mixture has no acute dermal toxicity

Assessment: The component/mixture is moderately toxic after single contact with skin.

Remarks: Resolution no. 2075

#### Components:

##### **malathion (ISO) [containing ≤ 0,03 % isomalathion]:**

Acute oral toxicity : LD50 (Rat): 1.857 mg/kg  
Method: OECD Test Guideline 401

LD50 (Rat, female): 1.608 - 2.550 mg/kg  
Method: OECD Test Guideline 401  
Symptoms: Tremors, hypoactivity  
GLP: yes

Acute inhalation toxicity : LC50 (Rat): > 5,2 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist



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Method: EPA OPP 81 - 3  
GLP: yes  
Remarks: no mortality

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: US EPA Test Guideline OPP 81-2  
GLP: yes  
Assessment: The component/mixture is minimally toxic after single contact with skin.

LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes  
Assessment: The component/mixture is minimally toxic after single contact with skin.

### **Poly(oxy-1,2-ethanediyl), .alpha.-phosphono-.omega.-[2,4,6-tris(1-phenylethyl)phenoxy]-:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 401

### **2-Propenoic acid, homopolymer:**

Acute oral toxicity : LD50 (Rat, male and female): 617 - 1.405 mg/kg

Acute inhalation toxicity : LC0 (Rat, male and female): > 5,1 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Based on data from similar materials

### **Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

### **Product:**

Species : Rabbit  
Method : US EPA Test Guideline OPP 81-5  
Result : No skin irritation

### **Components:**

#### **malathion (ISO) [containing ≤ 0,03 % isomalathion]:**

Species : Rabbit  
Method : US EPA Test Guideline OPP 81-5  
Result : No skin irritation  
GLP : yes

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### **Poly(oxy-1,2-ethanediyl), .alpha.-phosphono-.omega.-[2,4,6-tris(1-phenylethyl)phenoxy]-:**

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: No skin irritation

### **2-Propenoic acid, homopolymer:**

Species	: Rabbit
Exposure time	: 4 h
Method	: OECD Test Guideline 404
Result	: No skin irritation

### **Serious eye damage/eye irritation**

Not classified due to lack of data.

#### **Product:**

Species	: Rabbit
Assessment	: Irritating to eyes.
Method	: US EPA Test Guideline OPP 81-4
Result	: Eye irritation

#### **Components:**

##### **malathion (ISO) [containing $\leq 0,03$ % isomalathion]:**

Species	: Rabbit
Method	: EPA OPP 81-4
Result	: No eye irritation
GLP	: yes

### **Poly(oxy-1,2-ethanediyl), .alpha.-phosphono-.omega.-[2,4,6-tris(1-phenylethyl)phenoxy]-:**

Species	: Rabbit
Method	: OECD Test Guideline 405
Result	: Eye irritation

### **2-Propenoic acid, homopolymer:**

Species	: Rabbit
Result	: Irreversible effects on the eye
Remarks	: Based on data from similar materials

### **Respiratory or skin sensitization**

#### **Skin sensitization**

Based on available data, the classification criteria are not met.

#### **Respiratory sensitization**

Not classified due to lack of data.

#### **Product:**

Test Type	: Buehler Test
Routes of exposure	: Skin contact

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Species	:	Guinea pig
Method	:	US EPA Test Guideline OPP 81-6
Result	:	Not a skin sensitizer.

### Components:

#### **malathion (ISO) [containing ≤ 0,03 % isomalathion]:**

Routes of exposure	:	Dermal
Species	:	Guinea pig
Method	:	US EPA Test Guideline OPP 81-6
Result	:	Does not cause skin sensitization.

Test Type	:	Local lymph node assay (LLNA)
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitization.

Test Type	:	Magnussen-Kligman test
Method	:	OECD Test Guideline 406
Result	:	May cause sensitization by skin contact.
Remarks	:	Based on data from similar materials

#### **2-Propenoic acid, homopolymer:**

Test Type	:	Split adjuvant test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	Not a skin sensitizer.

### **Germ cell mutagenicity**

Not classified due to lack of data.

### Components:

#### **malathion (ISO) [containing ≤ 0,03 % isomalathion]:**

Genotoxicity in vitro	:	Test Type: Ames test
		Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Result: positive  
Remarks: Based on data from similar materials

Test Type: unscheduled DNA synthesis assay  
Result: negative  
Remarks: Based on data from similar materials

Genotoxicity in vivo	:	Test Type: chromosome aberration assay
		Species: Rat
		Result: negative
		Remarks: Based on data from similar materials

Test Type: unscheduled DNA synthesis assay  
Species: Rat  
Result: negative

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Remarks: Based on data from similar materials

### 2-Propenoic acid, homopolymer:

Genotoxicity in vitro : Test Type: gene mutation test  
Test system: Chinese hamster ovary cells  
Method: OECD Test Guideline 476  
Result: negative  
Remarks: Based on data from similar materials

Test Type: gene mutation test  
Test system: mouse lymphoma cells  
Result: positive  
Remarks: Based on data from similar materials

Test Type: reverse mutation assay  
Result: negative  
Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro  
Test system: Chinese hamster ovary cells  
Method: OECD Test Guideline 473  
Result: positive  
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Bone marrow chromosome aberration.  
Species: Rat (male and female)  
Application Route: Oral  
Method: OECD Test Guideline 475  
Result: negative  
Remarks: Based on data from similar materials

Test Type: Rodent Dominant Lethal Assay  
Species: Mouse (male and female)  
Application Route: Oral  
Result: negative  
Remarks: Based on data from similar materials

### Carcinogenicity

Not classified due to lack of data.

### Components:

#### malathion (ISO) [containing ≤ 0,03 % isomalathion]:

Species : Rat  
Application Route : Ingestion  
Exposure time : 24 month(s)  
NOAEL : 6.000 ppm  
Result : positive

Remarks : Probably carcinogenic to humans (IARC 2A)

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### Reproductive toxicity

Not classified due to lack of data.

### Components:

#### malathion (ISO) [containing $\leq 0,03$ % isomalathion]:

Effects on fertility : Test Type: Two-generation study  
Species: Rat, male and female  
General Toxicity F1: NOAEL: 132 - 152 mg/kg bw/day  
Symptoms: Reduced offspring weight gain.

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
General Toxicity Maternal: NOAEL: 400 mg/kg bw/day  
Teratogenicity: NOAEL: 800 mg/kg bw/day  
Result: No teratogenic effects.

Test Type: Embryo-fetal development  
Species: Rabbit  
General Toxicity Maternal: NOAEL: 25 mg/kg bw/day  
Teratogenicity: NOAEL: 25 mg/kg bw/day  
Result: No teratogenic effects.

#### 2-Propenoic acid, homopolymer:

Effects on fertility : Test Type: Two-generation study  
Species: Rat, male and female  
Application Route: Oral  
Dose: 0, 53, 240, 460 mg/kg bw/day  
General Toxicity Parent: NOAEL: 240 mg/kg body weight  
General Toxicity F1: NOAEL: 53 mg/kg body weight  
General Toxicity F2: NOAEL: 53 mg/kg body weight  
Method: OECD Test Guideline 416  
Result: negative  
Remarks: Based on data from similar materials

Test Type: Two-generation study  
Species: Rat, male and female  
Application Route: Oral  
Dose: 0, 53, 240, 460 mg/kg bw/day  
General Toxicity Parent: LOAEL: 460 mg/kg body weight  
General Toxicity F1: LOAEL: 240 mg/kg body weight  
General Toxicity F2: LOAEL: 240 mg/kg body weight  
Method: OECD Test Guideline 416  
Result: negative  
Remarks: Based on data from similar materials

Effects on fetal development : Species: Rat  
Application Route: inhalation (vapor)  
Dose: 0.117, 0.353, 1.06 milligram per liter  
Duration of Single Treatment: 14 d  
General Toxicity Maternal: NOAEC: 0,12 mg/L  
Teratogenicity: NOAEC F1: > 1,08 mg/L  
Embryo-fetal toxicity.: NOAEC F1: > 1,08 mg/L

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Method: OECD Test Guideline 414  
Remarks: Based on data from similar materials

Species: Rat  
Application Route: inhalation (vapor)  
Dose: 0.117, 0.353, 1.06 milligram per liter  
Duration of Single Treatment: 14 d  
General Toxicity Maternal: LOAEC: 0,36 mg/L  
Method: OECD Test Guideline 414  
Remarks: Based on data from similar materials

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

### STOT-single exposure

Not classified due to lack of data.

#### Components:

##### 2-Propenoic acid, homopolymer:

Assessment : May cause respiratory irritation.

### STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

#### Components:

##### malathion (ISO) [containing $\leq 0,03$ % isomalathion]:

Assessment : May cause damage to organs through prolonged or repeated exposure.

##### 2-Propenoic acid, homopolymer:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### Repeated dose toxicity

#### Components:

##### malathion (ISO) [containing $\leq 0,03$ % isomalathion]:

Species : Rat  
LOAEL : 34,4 mg/kg  
Application Route : Oral - feed  
Exposure time : 90 d  
Target Organs : Nervous system  
Symptoms : cholinesterase inhibition

##### 2-Propenoic acid, homopolymer:

Species : Rat, male  
NOAEL : 40 mg/kg  
LOAEL : 100 mg/kg

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Application Route : Oral  
Exposure time : 12 months  
Dose : 6, 40, 100, 200 mg/kg bw/day  
Method : OECD Test Guideline 452  
Remarks : Based on data from similar materials

Species : Rat, female  
NOAEL : 375 mg/kg  
Application Route : Oral  
Exposure time : 12 months  
Dose : 10, 66, 150, 375 mg/kg bw/day  
Method : OECD Test Guideline 452  
Remarks : Based on data from similar materials

### Aspiration toxicity

Not classified due to lack of data.

### Components:

#### malathion (ISO) [containing $\leq 0,03$ % isomalathion]:

The substance does not have properties associated with aspiration hazard potential.

### Further information

#### Product:

Remarks : No data available

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

#### malathion (ISO) [containing $\leq 0,03$ % isomalathion]:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,18 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,72 µg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : IC50 ( Selenastrum capricornutum (green algae)): 4,06 mg/l  
Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 1.000

Toxicity to fish (Chronic toxicity) : NOEC: 0,021 mg/l  
Exposure time: 37 d  
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic) : NOEC: 0,00006 mg/l  
Exposure time: 21 d

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ic toxicity)	Species: Daphnia magna (Water flea)
M-Factor (Chronic aquatic toxicity)	: 1.000
Toxicity to soil dwelling organisms	: 613 mg/kg Exposure time: 14 d Species: Eisenia fetida (earthworms)  Remarks: No significant adverse effect on Nitrogen mineralization. No significant adverse effect on Carbon mineralization.
Toxicity to terrestrial organisms	: LD50: 359 mg/kg Exposure time: 5 d Species: Colinus virginianus (Bobwhite quail)  LC50: 3.497 mg/kg Exposure time: 5 d Species: Colinus virginianus (Bobwhite quail) Remarks: Dietary  LD50: > 2.250 mg/kg Species: Anas platyrhynchos (Mallard duck)  LD50: 0.38 µg/bee End point: Acute oral toxicity Species: Apis mellifera (bees)

### Ecotoxicology Assessment

Toxicity Data on Soil	: Harmful to the soil environment.
Other organisms relevant to the environment	: Harmful to terrestrial vertebrates., Harmful to terrestrial invertebrates.

### Poly(oxy-1,2-ethanediyl), .alpha.-phosphono-.omega.-[2,4,6-tris(1-phenylethyl)phenoxy]-:

Toxicity to fish	: LC50 (Leuciscus idus (Golden orfe)): 100 - 500 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: NOEC ( Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201  EC50 ( Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201



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### 2-Propenoic acid, homopolymer:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 27 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Remarks: Based on data from similar materials
- LC50 (Oryzias latipes (Orange-red killifish)): 62 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Remarks: Based on data from similar materials
- LC50 (Cyprinodon variegatus (sheepshead minnow)): 236 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 47 mg/l  
Exposure time: 48 h  
Test Type: semi-static test
- Toxicity to algae/aquatic plants : EC50 ( Pseudokirchneriella subcapitata (green algae)): 0,75 mg/l  
Exposure time: 72 h  
Test Type: Growth inhibition
- NOEC ( Pseudokirchneriella subcapitata (green algae)): 0,03 mg/l  
Exposure time: 72 h  
Test Type: Growth inhibition
- EC50 ( Skeletonema costatum (marine diatom)): 105 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: ISO 10253
- NOEC ( Skeletonema costatum (marine diatom)): 36 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: ISO 10253
- EC50 ( Desmodesmus subspicatus (green algae)): 0,13 - 0,205 mg/l  
Exposure time: 72 h  
Method: EU Method C3
- M-Factor (Acute aquatic toxicity) : 1
- Toxicity to microorganisms : NOEC (Pseudomonas putida): 41 mg/l  
Exposure time: 16 h  
Test Type: Cell multiplication inhibition test

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### Persistence and degradability

#### Components:

##### **malathion (ISO) [containing $\leq 0,03$ % isomalathion]:**

Biodegradability : Result: Not readily biodegradable.

##### **Poly(oxy-1,2-ethanediyl), .alpha.-phosphono-.omega.-[2,4,6-tris(1-phenylethyl)phenoxy]-:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 30 - 40 %  
Method: OECD Test Guideline 302B

##### **2-Propenoic acid, homopolymer:**

Biodegradability : aerobic  
Inoculum: activated sludge, non-adapted  
Result: Readily biodegradable.  
Exposure time: 28 d  
Method: OECD Test Guideline 301F

### Bioaccumulative potential

#### Product:

Bioaccumulation : Remarks: No data available

#### Components:

##### **malathion (ISO) [containing $\leq 0,03$ % isomalathion]:**

Bioaccumulation : Species: Fish  
Bioconcentration factor (BCF): 95  
Remarks: Bioaccumulation is unlikely.  
See section 9 for octanol-water partition coefficient.

Partition coefficient: n-octanol/water : log Pow: 2,75

##### **2-Propenoic acid, homopolymer:**

Partition coefficient: n-octanol/water : log Pow: 0,27 (20 °C)  
pH: 3,59 - 3,63  
Remarks: Based on data from similar materials  
  
log Pow: 0,23 (20 °C)  
pH: 3,59 - 3,63  
Remarks: Based on data from similar materials

### Mobility in soil

#### Components:

##### **malathion (ISO) [containing $\leq 0,03$ % isomalathion]:**

Distribution among environ- : Remarks: medium mobility in soil

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mental compartments

### Other adverse effects

#### Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

## 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging : It is prohibited to reuse, bury, burn, or sell containers. Rinsable containers: Triple rinse containers of less than 20 liters and pressure rinse containers of 20 liters or more. Triple rinsing: Add water up to ¼ of the container's capacity, close and shake for 30 seconds. Pour the rinse water into the mixing tank, considering this volume of water within the recommended volume for mixing preparation. Perform this procedure three times. Pressure rinsing: Activate the pressure rinsing device for 30 seconds, considering the volume of water used as part of the recommended volume for mixing preparation. In both procedures, punctured the container on its base without damaging the label. In all cases, take the empty containers to collection points indicated by the local empty containers program.

## 14. TRANSPORT INFORMATION

### International Regulations

#### **UNRTDG**

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Malathion)

Class : 9  
Packing group : III  
Labels : 9  
Environmentally hazardous : yes

#### **IATA-DGR**

UN/ID No. : UN 3082

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Proper shipping name : Environmentally hazardous substance, liquid, n.o.s. (Malathion)

Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964  
Environmentally hazardous : yes

### IMDG-Code

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Malathion)

Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

Organic Law on Integral Prevention of Social and Economic Phenomenon of Drugs and of Regulation and Use Control of Listed Substances subject to Monitoring : ethyl acetate  
benzene

### The ingredients of this product are reported in the following inventories:

TCSI : On the inventory, or in compliance with the inventory  
TSCA : Product contains substance(s) not listed on TSCA inventory.  
AIIC : Not in compliance with the inventory  
DSL : All components of this product are on the Canadian DSL  
ENCS : Not in compliance with the inventory

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ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory
NZIoC	: Not in compliance with the inventory
TECI	: Not in compliance with the inventory

### 16. OTHER INFORMATION

Revision Date	: 18.07.2024
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#### Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
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ACGIH / TWA	: 8-hour, time-weighted average
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AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recom-

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recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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