



# SAFETY DATA SHEET



## FYFANON™ 440 EW

Version 2.0      Revision Date: 16.02.2022      SDS Number: 50001290      Date of last issue: -  
Date of first issue: 19.02.2019

gory 1

Long-term (chronic) aquatic hazard, Category 1

H410: Very toxic to aquatic life with long lasting effects.

### 2.2 Label elements

#### Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**  
P261 Avoid breathing mist or vapors.  
P273 Avoid release to the environment.  
P280 Wear protective gloves.  
**Response:**  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P391 Collect spillage.

Hazardous ingredients which must be listed on the label:  
malathion (ISO) [containing  $\leq 0,03$  % isomalathion]

### 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.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
malathion (ISO) [containing $\leq 0,03$ % isomalathion]	121-75-5 204-497-7 015-041-00-X	Acute Tox. 4; H302 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	$\geq 30$ - $< 50$

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		M-Factor (Acute aquatic toxicity): 1,000 M-Factor (Chronic aquatic toxicity): 1,000	
Polyacrylic acid	9003-01-4	Acute Tox. 4; H302 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system) Aquatic Acute 1; H400 Aquatic Chronic 2; H411  M-Factor (Acute aquatic toxicity): 1	$\geq 0.25 - < 1$

For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of 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 : If on skin, rinse well with water.
- 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 : 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.

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

- Risks : May cause an allergic skin reaction.

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

- Treatment : Treat symptomatically.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Dry chemical, CO<sub>2</sub>, water spray or regular foam.

Unsuitable extinguishing media : High volume water jet

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

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Thermal decomposition can lead to release of irritating gases and vapors.  
Carbon oxides  
Sulfur oxides  
Oxides of phosphorus

### 5.3 Advice for firefighters

Special protective equipment for fire-fighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

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.

Further information : 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.

Standard procedure for chemical fires.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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## SECTION 6: Accidental release measures

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

Personal precautions : Evacuate personnel to safe areas.  
Use personal protective equipment.  
If it can be safely done, stop the leak.  
Do not touch or walk through the spilled material.  
Never return spills in original containers for re-use.  
For disposal considerations see section 13.

### 6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

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.  
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Wash hands before breaks and at the end of workday.  
  
General industrial hygiene practice. Avoid contact with skin, eyes and clothing. Do not inhale aerosol.

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

Requirements for storage areas and containers : 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.

Advice on common storage : Do not store near acids.

Recommended storage temperature :  $\leq 25$  °C

Further information on storage stability : No decomposition if stored and applied as directed.

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### 7.3 Specific end use(s)

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
malathion (ISO) [containing ≤ 0,03 % isomalathion]	121-75-5	OEL-RL (inhalable fraction and vapour)	2 mg/m <sup>3</sup>	ZA OEL
Further information	danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents, denotes carcinogenicity, which is based on GHS categorisation, including category 1A, 1B			

#### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Routes of exposure	Potential health effects	Value
Polyacrylic acid	Consumers	Inhalation	Long-term systemic effects	0.348 mg/m <sup>3</sup>
	Consumers	Dermal	Long-term systemic effects	0.2 mg/kg
	Consumers	Oral	Long-term systemic effects	0.2 mg/kg
	Workers	Inhalation	Long-term systemic effects	1.97 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	0.560 mg/kg

#### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
malathion (ISO) [containing ≤ 0,03 % isomalathion]	Fresh water	1.2
Polyacrylic acid	Fresh water	0.003 mg/l
	Intermittent use (freshwater)	0.0013 mg/l
	Sea water	0.0003 mg/l
	Intermittent use (marine water)	0.00013 mg/l
	Sewage treatment plant	0.9 mg/l
	Fresh water sediment	0.0207 mg/kg dry weight (d.w.)
	Sea sediment	0.00207 mg/kg dry weight (d.w.)
	Soil	0.003117 mg/kg dry weight (d.w.)

### 8.2 Exposure controls

#### Personal protective equipment

Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles

Hand protection  
Material : Wear chemical resistant gloves, such as barrier laminate,

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butyl rubber or nitrile rubber.

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
Protective suit

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

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

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### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Appearance : suspension  
liquid

Color : off-white  
No data available

Odor : aromatic  
No data available

Odor Threshold : not determined  
No data available

pH : 4.53 (25 °C)  
5.32 (25 °C)  
(1% solution in water)

Melting point/range : No data available

Boiling point/boiling range : not determined

Flash point : > 100 °C  
Method: Pensky-Martens closed cup - PMCC  
No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower : No data available

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flammability limit

Vapor pressure : No data available

Relative density : 1.072 (20 °C)

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 : not determined  
No data available

Viscosity  
Viscosity, dynamic : 1,092 mPa.s (20 °C)  
973 mPa.s (40 °C)

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : Non-oxidizing

### 9.2 Other information

Self-ignition : not determined  
No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No decomposition if stored and applied as directed.

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if stored and applied as directed.

### 10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.  
No data available



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Avoid extreme temperatures  
Avoid formation of aerosol.

### 10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents  
Strong bases  
Strong acids

Not applicable

Avoid strong acids, bases, and oxidizers.

### 10.6 Hazardous decomposition products

Stable under recommended storage conditions.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Not classified based on available information.

#### Product:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 425  
Assessment: The component/mixture is minimally toxic after single ingestion.

Acute inhalation toxicity : LC50 (Rat): > 5.75 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 4,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The component/mixture is minimally toxic after single contact with skin.

#### Components:

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

Acute oral toxicity : LD50 (Rat): 1,857 mg/kg  
Method: OECD Test Guideline 401  
Assessment: The component/mixture is moderately toxic after single ingestion.  
Remarks: Based on data from similar materials

LD50 (Rat): > 5,000 mg/kg  
Method: FIFRA 81.01

Acute inhalation toxicity : LC50 (Rat): > 5.02 mg/l  
Exposure time: 4 h

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Test atmosphere: dust/mist  
Method: EPA OPP 81 - 3  
Assessment: The component/mixture is minimally toxic after short term inhalation.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg  
Method: FIFRA 81.02  
Assessment: The substance or mixture has no acute dermal toxicity

### **Polyacrylic acid:**

Acute oral toxicity : LD50 (Rat, male and female): 617 - 1,405 mg/kg

Acute toxicity estimate: 617 mg/kg  
Method: Calculation method

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**

Not classified based on available information.

### **Product:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : slight irritation

### **Components:**

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

Method : FIFRA 81.05  
Result : slight irritation

#### **Polyacrylic acid:**

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

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

Not classified based on available information.

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### **Product:**

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

### **Components:**

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

Method : FIFRA 81.04  
Result : slight irritation

#### **Polyacrylic acid:**

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

### **Respiratory or skin sensitization**

#### **Skin sensitization**

May cause an allergic skin reaction.

#### **Respiratory sensitization**

Not classified based on available information.

### **Product:**

Test Type : Local lymph node assay (LLNA)  
Species : Mouse  
Method : OECD Test Guideline 429  
Result : The product is a skin sensitizer, sub-category 1B.

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

Remarks : Causes sensitization.

### **Components:**

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

Test Type : Buehler Test  
Method : FIFRA 81.06  
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 : Magnusson-Kligman test  
Method : OECD Test Guideline 406  
Result : May cause sensitization by skin contact.  
Remarks : Based on data from similar materials

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### **Polyacrylic acid:**

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

### **Germ cell mutagenicity**

Not classified based on available information.

### **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  
Remarks: Based on data from similar materials

### **Polyacrylic acid:**

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

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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 based on available information.

#### **Components:**

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

Species : Rat  
Application Route : Ingestion  
Exposure time : 24 month(s)  
NOAEL : 6,000 ppm  
Result : positive

Carcinogenicity - Assessment : Overall weight of evidence indicates that the substance is not carcinogenic

### **Reproductive toxicity**

Not classified based on available information.

#### **Components:**

##### **malathion (ISO) [containing ≤ 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.

Reproductive toxicity - Assessment : Animal testing showed no reproductive toxicity.

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### Polyacrylic acid:

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  
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 based on available information.

### Components:

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

Remarks : No significant adverse effects were reported

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### **Polyacrylic acid:**

Assessment : May cause respiratory irritation.

### **STOT-repeated exposure**

Not classified based on available information.

### **Components:**

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

Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

### **Polyacrylic acid:**

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

### **Repeated dose toxicity**

#### **Components:**

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

Species : Rat  
NOAEL : 100 ppm  
Application Route : Oral - feed  
Exposure time : 90 d  
Target Organs : Nervous system

### **Polyacrylic acid:**

Species : Rat, male  
NOAEL : 40 mg/kg  
LOAEL : 100 mg/kg  
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 based on available information.

#### **Components:**

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

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

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### Neurological effects

#### Components:

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

Remarks : No neurotoxicity observed in animal studies.

### Further information

#### Product:

Remarks : No data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : LC50 (*Salmo gairdneri*): 0.74 mg/l  
Exposure time: 96 h  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 1.8 µg/l  
Exposure time: 48 h  
Remarks: Based on data from similar materials

Toxicity to soil dwelling organisms : LC50: 285 mg/kg  
Exposure time: 14 d  
Species: *Eisenia fetida* (earthworms)

Toxicity to terrestrial organisms : LD50: 528 mg/kg  
Species: *Colinus virginianus* (Bobwhite quail)

#### Components:

##### **malathion (ISO) [containing ≤ 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)



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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.006 mg/l  
Exposure time: 21 d  
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)

Toxicity to terrestrial organisms : LC50: 3,497 mg/kg  
Exposure time: 5 d  
Species: Colinus virginianus (Bobwhite quail)

LD50: 1,485 mg/kg  
Species: Anas platyrhynchos (Mallard duck)

LD50: 0.38 µg/bee  
Species: Apis mellifera (bees)

### **Polyacrylic acid:**

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

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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

### 12.2 Persistence and degradability

#### Components:

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

Biodegradability : Result: Not readily biodegradable.

##### **Polyacrylic acid:**

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

### 12.3 Bioaccumulative potential

#### Components:

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

Bioaccumulation : Species: Fish  
Bioconcentration factor (BCF): 95  
Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 2.75

##### **Polyacrylic acid:**

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

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Remarks: Based on data from similar materials

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

**Product:**

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

**Product:**

Endocrine disrupting potential : 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.

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.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : 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 : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## SECTION 14: Transport information

### 14.1 UN number

IMDG : UN 3082

IATA : UN 3082

### 14.2 UN proper shipping name

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**IMDG** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Malathion)

**IATA** : Environmentally hazardous substance, liquid, n.o.s. (Malathion)

### 14.3 Transport hazard class(es)

**IMDG** : 9

**IATA** : 9

### 14.4 Packing group

**IMDG**  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F

**IATA (Cargo)**  
Packing instruction (cargo aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous

**IATA (Passenger)**  
Packing instruction (passenger aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous

### 14.5 Environmental hazards

**IMDG**  
Marine pollutant : yes

### 14.6 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.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

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## SECTION 15: Regulatory information

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

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.

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AIIC	:	Not in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	Not in compliance with the inventory

### 15.2 Chemical Safety Assessment

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#### SECTION 16: Other information

##### Full text of H-Statements

H302	:	Harmful if swallowed.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H335	:	May cause respiratory irritation.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.

##### Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Skin Sens.	:	Skin sensitization
STOT SE	:	Specific target organ toxicity - single exposure
ZA OEL	:	South Africa. The Regulations for Hazardous Chemical Agents, Occupational Exposure Limits
ZA OEL / OEL-RL	:	Occupational Exposure Limit Restricted limit - 8- hour exposure or equivalent (12 hour shifts)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; GHS - Globally Harmonized System; GLP - Good La-

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boratory 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Other information :

### Classification of the mixture:

Skin Sens. 1B	H317
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

### Classification procedure:

Based on product data or assessment
Based on product data or assessment
Calculation method

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