# ACTELLIC 50

| Version | Revision Date: | SDS Number: | Date of last issue: 11.05.2026 |
|---|---|---|---|
| 3.0 | 23.07.2026 | 11684447-00003 | Date of first issue: 16.04.2026 |

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

| | | |
|---|---|---|
| Trade name | : | ACTELLIC 50 |
| Product code | : | UVP: DU00000340 Specification: 102D00000777 |
| Unique Formula Identifier (UFI) | : | 77C1-C03D-M006-MT0Y |

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

| | | |
|---|---|---|
| Use of the Substance/Mixture | : | Insecticide |
| Recommended restrictions on use | : | For professional users only. |

### 1.3 Details of the supplier of the safety data sheet

| | | |
|---|---|---|
| Company | : | 2022 Environmental Science FR S.A.S.<br>1 Place Giovanni Da Verrazzano<br>69009 Lyon, France |
| Telephone | : | +33 451 081 508 |
| E-mail address of person responsible for the SDS | : | service.clients.es.france@envu.com |

### 1.4 Emergency telephone number

CIAV: +351 800 250 250

For Emergency or Spill call:
+351 308 801 773 (24/7 multilingual support)
+351 800 250 250

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**REGULATION (EC) No 1272/2008**

| | |
|---|---|
| Flammable liquids, Category 3 | H226: Flammable liquid and vapour. |
| Acute toxicity, Category 4 | H302: Harmful if swallowed. |
| Aspiration hazard, Category 1 | H304: May be fatal if swallowed and enters airways. |
| Skin sensitisation, Category 1 | H317: May cause an allergic skin reaction. |
| Serious eye damage/eye irritation, Category 1 | H318: Causes serious eye damage. |

| | |
|---|---|
| Specific target organ toxicity - single exposure, Category 3 | H335: May cause respiratory irritation. |
| Specific target organ toxicity - single exposure, Category 3, Narcotic effects | H336: May cause drowsiness or dizziness. |
| Specific target organ toxicity - repeated exposure, Category 1, Central nervous system | H372: Causes damage to organs through prolonged or repeated exposure. |
| Carcinogenicity, Category 2 | H351: Suspected of causing cancer. |
| Specific target organ toxicity - single exposure, Category 1, Central nervous system | H370: Causes damage to organs. |

### 2.2 Label elements

**REGULATION (EC) No 1272/2008**

Hazard pictograms :



Signal word : Danger

Hazard statements :

| | |
|---|---|
| H226 | Flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H351 | Suspected of causing cancer. |
| H370 | Causes damage to organs. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Supplemental Hazard Statements : EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements :

| | |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| P103 | Read label before use. |
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |

**Prevention:**

| | |
|---|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P260 | Do not breathe mist. |
| P270 | Do not eat, drink or smoke when using this product. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |

**Response:**

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P310 Immediately call a POISON CENTER or doctor/ physician.
P312 Call a POISON CENTER/ doctor if you feel unwell.
P314 Get medical advice/ attention if you feel unwell.
P331 Do NOT induce vomiting.
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.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to a local hazardous waste disposal facility.

**Hazardous components which must be listed on the label:**

Pirimiphos-methyl
Hydrocarbons, C9, aromatics
2-Methyl-1-propanol

**Additional Labelling**

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

### 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.

Ecological information: 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.

Toxicological information: 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.

Vapours may form explosive mixture with air.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| Pirimiphos-methyl | 29232-93-7<br>249-528-5<br>015-134-00-5<br>01-2120906297-52 | Acute Tox. 4; H302<br>STOT RE 1; H372 (Nervous system)<br>Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410<br>---<br>M-Factor (Acute aquatic toxicity): 1.000<br>M-Factor (Chronic aquatic toxicity): 1.000<br>---<br>Acute toxicity estimate<br><br>Acute oral toxicity: 1.414 mg/kg | >= 30 - < 50 |
| Hydrocarbons, C9, aromatics | 128601-23-0 | Flam. Liq. 3; H226<br>STOT SE 3; H336<br>STOT SE 3; H335<br>Asp. Tox. 1; H304<br>Aquatic Chronic 2; H411<br>EUH066 | >= 30 - < 50 |
| Calcium dodecylbenzenesulphonate | 26264-06-2<br>247-557-8<br>01-2119560592-37 | Acute Tox. 4; H302<br>Skin Irrit. 2; H315<br>Eye Dam. 1; H318<br>Aquatic Chronic 3; H412<br>---<br>Acute toxicity estimate<br><br>Acute oral toxicity: 500 mg/kg | >= 3 - < 10 |
| Isobutyl methyl ketone | 108-10-1<br>203-550-1 | Flam. Liq. 2; H225<br>Acute Tox. 4; H332 | >= 1 - < 10 |

| | | | |
|---|---|---|---|
| | 606-004-00-4 | Eye Irrit. 2; H319<br>Carc. 2; H351<br>STOT SE 3; H336<br>EUH066<br><br>Acute toxicity estimate<br><br>Acute inhalation toxicity (vapour): 11 mg/l | |
| 2-Methyl-1-propanol | 78-83-1<br>201-148-0<br>603-108-00-1<br>01-2119484609-23 | Flam. Liq. 3; H226<br>Skin Irrit. 2; H315<br>Eye Dam. 1; H318<br>STOT SE 3; H335<br>STOT SE 3; H336 | >= 1 - < 3 |

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

If inhaled : If inhaled, remove to fresh air.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention immediately.

If swallowed : If swallowed, DO NOT induce vomiting.
If vomiting occurs have person lean forward.
Call a physician or poison control centre immediately.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.

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

| | | |
|---|---|---|
| Symptoms | : | The symptoms of cholinesterase inhibition include:<br>Nausea<br>Diarrhoea<br>Vomiting<br>Aspiration may cause pulmonary oedema and pneumonitis. |
| Risks | : | Harmful if swallowed.<br>May be fatal if swallowed and enters airways.<br>May cause an allergic skin reaction.<br>Causes serious eye damage.<br>May cause respiratory irritation.<br>May cause drowsiness or dizziness.<br>Suspected of causing cancer.<br>Causes damage to organs.<br>Causes damage to organs through prolonged or repeated exposure. |

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

| | | |
|---|---|---|
| Treatment | : | Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.<br>Monitor: red blood cell and plasma cholinesterase.<br>The following antidotes are generally accepted: atropin and oximes. |

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

| | | |
|---|---|---|
| Suitable extinguishing media | : | Water spray<br>Alcohol-resistant foam<br>Carbon dioxide (CO2)<br>Dry chemical |
| Unsuitable extinguishing media | : | High volume water jet |

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

| | | |
|---|---|---|
| Specific hazards during fire-fighting | : | Do not use a solid water stream as it may scatter and spread fire.<br>Flash back possible over considerable distance.<br>Vapours may form explosive mixtures with air.<br>Exposure to combustion products may be a hazard to health. |
| Hazardous combustion products | : | Carbon oxides<br>Nitrogen oxides (NOx)<br>Sulphur oxides<br>Oxides of phosphorus<br>Metal oxides<br>Sulphur compounds |

### 5.3 Advice for firefighters

| | | |
|---|---|---|
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus.<br>Use personal protective equipment. |
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so.<br>Evacuate area. |

## SECTION 6: Accidental release measures

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

| | | |
|---|---|---|
| Personal precautions | : | Remove all sources of ignition.<br>Use personal protective equipment.<br>Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8). |

### 6.2 Environmental precautions

| | | |
|---|---|---|
| Environmental precautions | : | Avoid release to the environment.<br>Prevent further leakage or spillage if safe to do so.<br>Prevent spreading over a wide area (e.g. by containment or oil barriers).<br>Retain and dispose of contaminated wash water.<br>Local authorities should be advised if significant spillages cannot be contained. |

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

| | | |
|---|---|---|
| Methods for cleaning up | : | Non-sparking tools should be used.<br>Soak up with inert absorbent material.<br>Suppress (knock down) gases/vapours/mists with a water spray jet.<br>For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.<br>Clean up remaining materials from spill with suitable absorbent.<br>Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.<br>Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. |

### 6.4 Reference to other sections

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

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

| | | |
|---|---|---|
| Technical measures | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation | : | If sufficient ventilation is unavailable, use with local exhaust ventilation.<br>Use explosion-proof electrical, ventilating and lighting equipment. |
| Advice on safe handling | : | Do not get on skin or clothing.<br>Do not breathe mist or vapours.<br>Do not swallow.<br>Do not get in eyes.<br>Wash skin thoroughly after handling.<br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br>Non-sparking tools should be used.<br>Keep container tightly closed.<br>Already sensitised individuals, and those susceptible to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respiratory irritants or sensitisers.<br>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>Take precautionary measures against static discharges.<br>Do not eat, drink or smoke when using this product.<br>Take care to prevent spills, waste and minimize release to the environment. |
| Hygiene measures | : | If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace.<br>Wash contaminated clothing before re-use. |

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

| | | |
|---|---|---|
| Requirements for storage areas and containers | : | Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition. |
| Advice on common storage | : | Do not store with the following product types:<br>Strong oxidizing agents<br>Self-reactive substances and mixtures<br>Organic peroxides<br>Flammable solids<br>Pyrophoric liquids<br>Pyrophoric solids<br>Self-heating substances and mixtures<br>Substances and mixtures, which in contact with water, emit flammable gases<br>Explosives |

Gases
Very acutely toxic substances and mixtures

### 7.3 Specific end use(s)

Specific use(s) : No data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Occupational Exposure Limits**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| Isobutyl methyl ketone | 108-10-1 | TWA | 20 ppm<br>83 mg/m3 | 2000/39/EC |
| | Further information: Indicative | | | |
| | | STEL | 50 ppm<br>208 mg/m3 | 2000/39/EC |
| | Further information: Indicative | | | |
| | | VLE-MP | 20 ppm | PT OEL |
| | Further information: Substances of which the carcinogenic effect has been confirmed in laboratory tests on animals with confirmed relevance for humans. | | | |
| | | VLE_CD | 75 ppm | PT OEL |
| | Further information: Substances of which the carcinogenic effect has been confirmed in laboratory tests on animals with confirmed relevance for humans. | | | |
| | | TWA | 20 ppm<br>83 mg/m3 | PT DL 305/2007 |
| | | STEL | 50 ppm<br>208 mg/m3 | PT DL 305/2007 |
| 2-Methyl-1-propanol | 78-83-1 | VLE-MP | 50 ppm | PT OEL |

**Biological occupational exposure limits**

| Substance name | CAS-No. | Control parameters | Sampling time | Basis |
|---|---|---|---|---|
| Pirimiphos-methyl | 29232-93-7 | Cholinesterase activity: 70 % of an individual's base-line<br>(red cells) | Discretionary (At any time) | PT NP1796 |
| Isobutyl methyl ketone | 108-10-1 | methyl isobutyl ketone: 1 mg/l<br>(Urine) | End of shift | PT NP1796 |

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

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|---|---|---|---|---|
| Pirimiphos-methyl | Workers | Inhalation | Long-term systemic effects | 0,027 mg/m3 |
| | Workers | Skin contact | Long-term systemic | 0,046 mg/kg |

| | | | | |
|---|---|---|---|---|
| | | | effects | bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 0,005 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 0,017 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 0,002 mg/kg bw/day |
| Hydrocarbons, C9, aromatics | Workers | Inhalation | Long-term systemic effects | 151 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 12,5 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 32 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 7,5 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 7,5 mg/kg bw/day |
| Polyethylene glycol castor oil | Workers | Inhalation | Long-term systemic effects | 16,4 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 4,67 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 2,9 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 1,67 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 1,67 mg/kg bw/day |
| Calcium dodecylbenzenesulphonate | Workers | Inhalation | Long-term systemic effects | 52 mg/m3 |
| | Workers | Inhalation | Acute systemic effects | 52 mg/m3 |
| | Workers | Inhalation | Long-term local effects | 52 mg/m3 |
| | Workers | Inhalation | Acute local effects | 52 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 57,2 mg/kg bw/day |
| | Workers | Skin contact | Acute systemic effects | 80 mg/kg bw/day |
| | Workers | Skin contact | Long-term local effects | 1,57 mg/kg bw/day |
| | Workers | Skin contact | Acute local effects | 1,57 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 26 mg/m3 |
| | Consumers | Inhalation | Acute systemic effects | 26 mg/m3 |
| | Consumers | Inhalation | Acute local effects | 26 mg/m3 |
| | Consumers | Inhalation | Long-term local effects | 26 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 28,6 mg/kg bw/day |
| | Consumers | Skin contact | Acute systemic ef- | 40 mg/kg |

| | | | | |
|---|---|---|---|---|
| | | | fects | bw/day |
| | Consumers | Skin contact | Acute local effects | 0,787 mg/kg bw/day |
| | Consumers | Skin contact | Long-term local effects | 0,787 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 13 mg/kg bw/day |
| | Consumers | Ingestion | Acute systemic effects | 13 mg/kg bw/day |
| Isobutyl methyl ketone | Workers | Inhalation | Long-term systemic effects | 83 mg/m3 |
| | Workers | Inhalation | Acute systemic effects | 208 mg/m3 |
| | Workers | Inhalation | Long-term local effects | 83 mg/m3 |
| | Workers | Inhalation | Acute local effects | 208 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 11,8 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 14,7 mg/m3 |
| | Consumers | Inhalation | Acute systemic effects | 155,2 mg/m3 |
| | Consumers | Inhalation | Long-term local effects | 14,7 mg/m3 |
| | Consumers | Inhalation | Acute local effects | 155,2 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 4,2 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 4,2 mg/kg bw/day |
| 2-Methyl-1-propanol | Workers | Inhalation | Long-term local effects | 310 mg/m3 |
| | Consumers | Inhalation | Long-term local effects | 55 mg/m3 |
| Soybean oil, epoxidized | Workers | Inhalation | Long-term systemic effects | 11,9 mg/m3 |
| | Workers | Inhalation | Acute systemic effects | 70 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 1,7 mg/kg bw/day |
| | Workers | Skin contact | Acute systemic effects | 10 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 2,8 mg/m3 |
| | Consumers | Inhalation | Acute systemic effects | 17,5 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 0,8 mg/kg bw/day |
| | Consumers | Skin contact | Acute systemic effects | 5 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 0,8 mg/kg bw/day |
| | Consumers | Ingestion | Acute systemic ef- | 5 mg/kg |

| | | | | |
|---|---|---|---|---|
| | | | fects | bw/day |

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

| Substance name | Environmental Compartment | Value |
|---|---|---|
| Pirimiphos-methyl | Fresh water | 0 mg/l |
| | Freshwater - intermittent | 0 mg/l |
| | Marine water | 0 mg/l |
| | Marine water - intermittent | 0 mg/l |
| | Sewage treatment plant | 4,5 mg/l |
| | Fresh water sediment | 0,001 mg/kg dry weight (d.w.) |
| | Marine sediment | 0 mg/kg dry weight (d.w.) |
| | Soil | 0,419 mg/kg dry weight (d.w.) |
| | Oral (Secondary Poisoning) | 1,33 mg/kg food |
| Polyethylene glycol castor oil | Fresh water | 0,000 mg/l |
| | Freshwater - intermittent | 0,0661 mg/l |
| | Marine water | 0,000 mg/l |
| | Marine water - intermittent | 0,00661 mg/l |
| | Fresh water sediment | 0,0129 mg/kg dry weight (d.w.) |
| | Marine sediment | 0,00129 mg/kg dry weight (d.w.) |
| | Soil | 0,00258 mg/kg dry weight (d.w.) |
| Calcium dodecylbenzenesulpho-nate | Fresh water | 0,28 mg/l |
| | Freshwater - intermittent | 0,654 mg/l |
| | Marine water | 0,458 mg/l |
| | Sewage treatment plant | 50 mg/l |
| | Fresh water sediment | 27,5 mg/kg dry weight (d.w.) |
| | Marine sediment | 2,75 mg/kg dry weight (d.w.) |
| | Air | 10 mg/m3 |
| | Soil | 25 mg/kg dry weight (d.w.) |
| | Oral | 20 mg/kg food |
| Isobutyl methyl ketone | Fresh water | 0,6 mg/l |
| | Freshwater - intermittent | 1,5 mg/l |
| | Marine water | 0,06 mg/l |
| | Sewage treatment plant | 27,5 mg/l |
| | Fresh water sediment | 8,27 mg/kg dry weight (d.w.) |
| | Marine sediment | 0,83 mg/kg dry weight (d.w.) |
| | Soil | 1,3 mg/kg dry weight (d.w.) |
| Soybean oil, epoxidized | Soil | 6,25 mg/kg dry weight (d.w.) |

### 8.2 Exposure controls

**Appropriate engineering controls**

Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation.
Use explosion-proof electrical, ventilating and lighting equipment.

**Individual protection measures, such as personal protective equipment (PPE)**

| | | |
|---|---|---|
| Eye/face protection | : | Wear the following personal protective equipment:<br>Chemical resistant goggles must be worn.<br>If splashes are likely to occur, wear:<br>Face-shield<br>Equipment should conform to NP EN 166 |
| Hand protection | | |
| Material | : | Nitrile rubber |
| Break through time | : | > 480 min |
| Glove thickness | : | 0,5 mm |
| Remarks | : | Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. |
| Skin and body protection | : | Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.<br>Wear the following personal protective equipment:<br>If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.<br>Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc). |
| Respiratory protection | : | If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.<br>Filter should conform to NP EN 14387 |
| Filter type | : | Combined particulates and organic vapour type (A-P) |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| Physical state | : | liquid |
| Form | : | liquid |
| Colour | : | clear, light yellow, brown |
| Odour | : | aromatic |
| Odour Threshold | : | No data available |

| | | |
|---|---|---|
| Melting point/freezing point | : | No data available |
| Initial boiling point and boiling range | : | No data available |
| Flammability (solid, gas) | : | Not applicable |
| Flammability (liquids) | : | Ignitable (see flash point) |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Flash point | : | 46 °C<br>Method: Pensky-Martens closed cup |
| Auto-ignition temperature | : | 410 °C |
| Decomposition temperature | : | No data available |
| pH | : | substance/mixture is non-soluble (in water) |
| Viscosity | | |
| Viscosity, dynamic | : | 4,61 mPa.s (40 °C) |
| | | 8,08 mPa.s (20 °C) |
| Viscosity, kinematic | : | No data available |
| Solubility(ies) | | |
| Water solubility | : | insoluble |
| Partition coefficient: n-octanol/water | : | Not applicable |
| Vapour pressure | : | No data available |
| Relative density | : | No data available |
| Density | : | 1,02 g/cm³ (25 °C) |
| Relative vapour density | : | No data available |
| Particle characteristics | | |
| Particle size | : | Not applicable |

**9.2 Other information**

| | | |
|---|---|---|
| Explosives | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Evaporation rate | : | No data available |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Not classified as a reactivity hazard.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Flammable liquid and vapour.
Vapours may form explosive mixture with air.
Can react with strong oxidizing agents.

### 10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents

### 10.6 Hazardous decomposition products

No hazardous decomposition products are known.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

**Acute toxicity**

Harmful if swallowed.

**Product:**

Acute oral toxicity : Acute toxicity estimate: 1.807 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 1.414 mg/kg<br>Method: OECD Test Guideline 401<br>Remarks: The test was conducted according to guideline |
| Acute inhalation toxicity | : | LC50 (Rat): > 5,04 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 403<br>Remarks: The test was conducted equivalent or similar to guideline |
| Acute dermal toxicity | : | LD50 (Rat): > 2.000 mg/kg<br>Method: OECD Test Guideline 402<br>Assessment: The substance or mixture has no acute dermal toxicity<br>Remarks: The test was conducted according to guideline |

**Hydrocarbons, C9, aromatics:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, female): 3.492 mg/kg<br>Remarks: No test guideline followed |
| Acute inhalation toxicity | : | LC50 (Rat): > 6,193 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapour<br>Method: OECD Test Guideline 403<br>Remarks: The test was conducted equivalent or similar to guideline |
| Acute dermal toxicity | : | LD50 (Rabbit): > 3.160 mg/kg<br>Method: OECD Test Guideline 402<br>Assessment: The substance or mixture has no acute dermal toxicity<br>Remarks: The test was conducted equivalent or similar to guideline |

**Calcium dodecylbenzenesulphonate:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): > 500 - 2.000 mg/kg<br>Method: OECD Test Guideline 401<br>Remarks: Based on data from similar materials |
| Acute dermal toxicity | : | LD50 (Rabbit): > 2.000 mg/kg<br>Method: OECD Test Guideline 402<br>Remarks: Based on data from similar materials |

**Isobutyl methyl ketone:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 2.080 mg/kg |
| Acute inhalation toxicity | : | Acute toxicity estimate: 11 mg/l |

| | | |
|---|---|---|
| | | Exposure time: 4 h<br>Test atmosphere: vapour<br>Method: Expert judgement |
| Acute dermal toxicity | : | LD50 (Rat): > 2.000 mg/kg<br>Method: OECD Test Guideline 402<br>Assessment: The substance or mixture has no acute dermal toxicity |

**2-Methyl-1-propanol:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, female): 3.350 mg/kg<br>Method: OECD Test Guideline 401 |
| Acute inhalation toxicity | : | LC50 (Rat): > 18,18 mg/l<br>Exposure time: 6 h<br>Test atmosphere: vapour |
| Acute dermal toxicity | : | LD50 (Rabbit, female): 2.460 mg/kg<br>Method: OECD Test Guideline 402 |

**Skin corrosion/irritation**

Not classified based on available information.

**Product:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No skin irritation |

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | No skin irritation |
| Remarks | : | The test was conducted according to guideline |

**Hydrocarbons, C9, aromatics:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | Mild skin irritation |
| Remarks | : | The test was conducted according to guideline |

| | | |
|---|---|---|
| Assessment | : | Repeated exposure may cause skin dryness or cracking. |

**Calcium dodecylbenzenesulphonate:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | Skin irritation |
| Remarks | : | Based on data from similar materials |

**Isobutyl methyl ketone:**

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

| | | |
|---|---|---|
| Assessment | : | Repeated exposure may cause skin dryness or cracking. |

**2-Methyl-1-propanol:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | Skin irritation |

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 405 |
| Result | : | No eye irritation |
| Remarks | : | The test was conducted according to guideline |

**Hydrocarbons, C9, aromatics:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 405 |
| Result | : | No eye irritation |
| Remarks | : | The test was conducted equivalent or similar to guideline |

**Calcium dodecylbenzenesulphonate:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 405 |
| Result | : | Irreversible effects on the eye |
| Remarks | : | Based on data from similar materials |

**Isobutyl methyl ketone:**

| | | |
|---|---|---|
| Species | : | Human |
| Result | : | Irritation to eyes, reversing within 21 days |

**2-Methyl-1-propanol:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 405 |
| Result | : | Irreversible effects on the eye |

**Respiratory or skin sensitisation**

**Skin sensitisation**

May cause an allergic skin reaction.

**Respiratory sensitisation**

Not classified based on available information.

**Product:**

| | | |
|---|---|---|
| Test Type | : | Buehler Test |
| Species | : | Guinea pig |
| Assessment | : | Probability or evidence of skin sensitisation in humans |

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |
| Remarks | : | The test was conducted according to guideline |

**Hydrocarbons, C9, aromatics:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |
| Remarks | : | The test was conducted according to guideline |

**Calcium dodecylbenzenesulphonate:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |
| Remarks | : | Based on data from similar materials |

**Isobutyl methyl ketone:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |

**2-Methyl-1-propanol:**

| | | |
|---|---|---|
| Test Type | : | Buehler Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |
| Remarks | : | Based on data from similar materials |

**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES)<br>Method: OECD Test Guideline 471<br>Result: negative<br>Remarks: The test was conducted according to guideline<br><br>Test Type: In vitro mammalian cell gene mutation test<br>Method: OECD Test Guideline 476<br>Result: negative<br>Remarks: The test was conducted according to guideline<br><br>Test Type: Chromosome aberration test in vitro<br>Method: OECD Test Guideline 473<br>Result: negative<br>Remarks: The test was conducted according to guideline |
| Genotoxicity in vivo | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)<br>Species: Mouse<br>Application Route: Ingestion<br>Method: OECD Test Guideline 474<br>Result: negative<br>Remarks: The test was conducted according to guideline |

**Hydrocarbons, C9, aromatics:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES)<br>Method: OECD Test Guideline 471<br>Result: negative<br>Remarks: The test was conducted equivalent or similar to guideline<br><br>Test Type: In vitro mammalian cell gene mutation test<br>Method: OECD Test Guideline 476<br>Result: negative<br>Remarks: The test was conducted equivalent or similar to guideline<br><br>Test Type: Chromosome aberration test in vitro<br>Method: OECD Test Guideline 473<br>Result: negative<br>Remarks: The test was conducted equivalent or similar to guideline |
| Genotoxicity in vivo | : | Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)<br>Species: Rat<br>Application Route: inhalation (vapour)<br>Method: OECD Test Guideline 475 |

Result: negative
Remarks: The test was conducted equivalent or similar to guideline

**Calcium dodecylbenzenesulphonate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

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

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

**Isobutyl methyl ketone:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: equivocal

Test Type: Chromosome aberration test in vitro
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

**2-Methyl-1-propanol:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: negative

Test Type: in vitro micronucleus test

| | | |
|---|---|---|
| | | Result: negative |
| Genotoxicity in vivo | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)<br>Species: Mouse<br>Application Route: Ingestion<br>Method: OECD Test Guideline 474<br>Result: negative |

**Carcinogenicity**

Suspected of causing cancer.

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Species | : | Rat |
| Application Route | : | Ingestion |
| Exposure time | : | 104 weeks |
| Method | : | OECD Test Guideline 453 |
| Result | : | negative |
| Remarks | : | The test was conducted equivalent or similar to guideline |

**Hydrocarbons, C9, aromatics:**

| | | |
|---|---|---|
| Species | : | Mouse |
| Application Route | : | Skin contact |
| Exposure time | : | 102 weeks |
| Method | : | OECD Test Guideline 451 |
| Result | : | negative |
| Remarks | : | The test was conducted equivalent or similar to guideline<br>Based on data from similar materials |

**Isobutyl methyl ketone:**

| | | |
|---|---|---|
| Species | : | Rat |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 2 Years |
| Method | : | OECD Test Guideline 451 |
| Result | : | positive |

| | | |
|---|---|---|
| Species | : | Mouse |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 2 Years |
| Method | : | OECD Test Guideline 451 |
| Result | : | positive |

| | | |
|---|---|---|
| Carcinogenicity - Assessment | : | Limited evidence of carcinogenicity in animal studies |

**Reproductive toxicity**

Not classified based on available information.

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Ingestion<br>Method: EPA OPP 83-4<br>Result: negative<br>Remarks: The test was conducted according to guideline |
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 414<br>Result: negative<br>Remarks: The test was conducted equivalent or similar to guideline |

**Hydrocarbons, C9, aromatics:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Three-generation reproduction toxicity study<br>Species: Rat<br>Application Route: inhalation (vapour)<br>Result: negative |
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Mouse<br>Application Route: inhalation (vapour)<br>Result: negative |

**Calcium dodecylbenzenesulphonate:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 422<br>Result: negative<br>Remarks: Based on data from similar materials |
| Effects on foetal development | : | Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 422<br>Result: negative<br>Remarks: Based on data from similar materials |

**Isobutyl methyl ketone:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: inhalation (vapour)<br>Result: negative |

| | | |
|---|---|---|
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: inhalation (vapour)<br>Result: negative |

**2-Methyl-1-propanol:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: inhalation (vapour)<br>Method: OPPTS 870.3800<br>Result: negative |
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: inhalation (vapour)<br>Method: OECD Test Guideline 414<br>Result: negative |

**STOT - single exposure**

May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs (Central nervous system).

**Product:**

| | | |
|---|---|---|
| Target Organs | : | Central nervous system |
| Assessment | : | Shown to produce significant health effects in animals at concentrations of 10 mg/l/4h or less. |

**Components:**

**Hydrocarbons, C9, aromatics:**

| | | |
|---|---|---|
| Assessment | : | May cause respiratory irritation. |
| Remarks | : | Based on data from similar materials |
| Assessment | : | May cause drowsiness or dizziness. |

**Isobutyl methyl ketone:**

| | | |
|---|---|---|
| Assessment | : | May cause drowsiness or dizziness. |

**2-Methyl-1-propanol:**

| | | |
|---|---|---|
| Assessment | : | May cause respiratory irritation., May cause drowsiness or dizziness. |

**STOT - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Exposure routes | : | Ingestion |
| Target Organs | : | Nervous system |
| Assessment | : | Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less. |

**Calcium dodecylbenzenesulphonate:**

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

**Repeated dose toxicity**

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Species | : | Rat, female |
| NOAEL | : | 0,4 mg/kg |
| LOAEL | : | 4 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 90 Days |
| Method | : | OECD Test Guideline 408 |
| Remarks | : | The test was conducted equivalent or similar to guideline |

**Hydrocarbons, C9, aromatics:**

| | | |
|---|---|---|
| Species | : | Rat |
| LOAEL | : | > 100 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 90 Days |
| Method | : | OECD Test Guideline 408 |
| Remarks | : | The test was conducted equivalent or similar to guideline<br>Based on data from similar materials |

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | >= 1,8 mg/l |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 12 Months |
| Method | : | OECD Test Guideline 452 |
| Remarks | : | The test was conducted equivalent or similar to guideline |

| | | |
|---|---|---|
| Species | : | Rat |
| LOAEL | : | > 600 mg/kg |
| Application Route | : | Skin contact |
| Exposure time | : | 28 Days |
| Method | : | OECD Test Guideline 410 |
| Remarks | : | The test was conducted equivalent or similar to guideline<br>Based on data from similar materials |

**Calcium dodecylbenzenesulphonate:**

| | | |
|---|---|---|
| Species | : | Rat |
| LOAEL | : | > 200 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 6 - 7 Weeks |
| Method | : | OECD Test Guideline 422 |
| Remarks | : | Based on data from similar materials |

| | | |
|---|---|---|
| Species | : | Rabbit |
| NOAEL | : | > 100 mg/kg |
| Application Route | : | Skin contact |
| Exposure time | : | 28 Days |
| Method | : | OECD Test Guideline 410 |
| Remarks | : | Based on data from similar materials |

**Isobutyl methyl ketone:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 250 mg/kg |
| LOAEL | : | 1.000 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 13 Weeks |

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 4,106 mg/l |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 14 Weeks |

**2-Methyl-1-propanol:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | > 1.450 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 90 Days |
| Method | : | OECD Test Guideline 408 |

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | >= 7,5 mg/l |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 17 Weeks |

**Aspiration hazard**

May be fatal if swallowed and enters airways.

**Components:**

**Hydrocarbons, C9, aromatics:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

**Isobutyl methyl ketone:**

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

**2-Methyl-1-propanol:**

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

### 11.2 Information on other hazards

**Endocrine disrupting properties**

Not classified based on available information.

**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. |

## SECTION 12: Ecological information

### 12.1 Toxicity

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 0,404 mg/l<br>Exposure time: 96 h<br>Remarks: No test guideline followed |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 314 ng/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202<br>Remarks: The test was conducted according to guideline |
| Toxicity to algae/aquatic plants | : | NOEC (Raphidocelis subcapitata (freshwater green alga)): 0,3 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: The test was conducted according to guideline<br><br>ErC50 (Raphidocelis subcapitata (freshwater green alga)): 3,38 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: The test was conducted according to guideline |
| M-Factor (Acute aquatic toxicity) | : | 1.000 |
| Toxicity to microorganisms | : | EC10 (Pseudomonas putida): > 4,5 mg/l<br>Exposure time: 6 h |

| | | |
|---|---|---|
| | | EC50 (Pseudomonas putida): > 4,5 mg/l<br>Exposure time: 6 h |
| Toxicity to fish (Chronic toxicity) | : | NOEC: 0,02 mg/l<br>Exposure time: 28 d<br>Species: Oncorhynchus mykiss (rainbow trout)<br>Method: OECD Test Guideline 204<br>Remarks: The test was conducted equivalent or similar to guideline |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 0,05 µg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Method: OECD Test Guideline 211<br>Remarks: The test was conducted equivalent or similar to guideline |
| M-Factor (Chronic aquatic toxicity) | : | 1.000 |

**Hydrocarbons, C9, aromatics:**

| | | |
|---|---|---|
| Toxicity to fish | : | LL50 (Oncorhynchus mykiss (rainbow trout)): 9,2 mg/l<br>Exposure time: 96 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 203<br>Remarks: The test was conducted according to guideline |
| Toxicity to daphnia and other aquatic invertebrates | : | EL50 (Daphnia magna (Water flea)): 3,2 mg/l<br>Exposure time: 48 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 202<br>Remarks: The test was conducted according to guideline |
| Toxicity to algae/aquatic plants | : | EL50 (Raphidocelis subcapitata (freshwater green alga)): 2,9 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201<br>Remarks: The test was conducted according to guideline<br><br>NOELR (Raphidocelis subcapitata (freshwater green alga)): 1 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201<br>Remarks: The test was conducted according to guideline |
| Toxicity to microorganisms | : | NOEC (activated sludge): >= 99 mg/l<br>Exposure time: 10 min<br>Method: OECD Test Guideline 209<br>Remarks: The test was conducted according to guideline |
| Toxicity to daphnia and other | : | NOELR: > 1 mg/l |

| | | |
|---|---|---|
| aquatic invertebrates (Chronic toxicity) | | Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 211<br>Remarks: The test was conducted according to guideline<br>Based on data from similar materials |

**Calcium dodecylbenzenesulphonate:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Leuciscus idus (Golden orfe)): > 1 - 10 mg/l<br>Exposure time: 96 h<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l<br>Exposure time: 48 h<br>Remarks: Based on data from similar materials |
| Toxicity to algae/aquatic plants | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): > 10 - 100 mg/l<br>Exposure time: 72 h<br>Remarks: Based on data from similar materials<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): > 0,1 - 1 mg/l<br>Exposure time: 72 h<br>Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : | EC50 (activated sludge): > 100 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209<br>Remarks: Based on data from similar materials |
| Toxicity to fish (Chronic toxicity) | : | NOEC: > 0,1 - 1 mg/l<br>Exposure time: 28 d<br>Species: Pimephales promelas (fathead minnow)<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: > 1 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Remarks: Based on data from similar materials |

**Isobutyl methyl ketone:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Danio rerio (zebra fish)): > 179 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 200 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to daphnia and other aquatic invertebrates (Chron- | : | NOEC: 30 mg/l<br>Exposure time: 21 d |

| | | |
|---|---|---|
| ic toxicity) | | Species: Daphnia magna (Water flea) |

**2-Methyl-1-propanol:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Pimephales promelas (fathead minnow)): 1.430 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia pulex (Water flea)): 1.100 mg/l<br>Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): 1.799 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): 117 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| Toxicity to microorganisms | : | EC50 : > 1.000 mg/l<br>Exposure time: 16 h |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 20 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea) |

**12.2 Persistence and degradability**

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Not readily biodegradable.<br>Biodegradation: 0 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301F<br>Remarks: The test was conducted according to guideline |
| Biodegradation Simulation Tests | : | Environmental Compartment: Fresh water<br>Value type: DT50<br>Value: 5,5 d |

**Hydrocarbons, C9, aromatics:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 78 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301F<br>Remarks: The test was conducted according to guideline |

**Calcium dodecylbenzenesulphonate:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable. |

Remarks: Based on data from similar materials

**Isobutyl methyl ketone:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 83 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

**2-Methyl-1-propanol:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 74 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

### 12.3 Bioaccumulative potential

**Components:**

**Pirimiphos-methyl:**

Bioaccumulation : Species: Oryzias latipes (Orange-red killifish)
Bioconcentration factor (BCF): 1.276,9
Method: OECD Test Guideline 305
Remarks: The test was conducted according to guideline

Partition coefficient: n-octanol/water : log Pow: 4,2 (20 °C)
pH: 5 - 7
Method: OECD Test Guideline 107
Remarks: The test was conducted according to guideline

**Hydrocarbons, C9, aromatics:**

Partition coefficient: n-octanol/water : log Pow: > 4
Remarks: Expert judgement

**Calcium dodecylbenzenesulphonate:**

Bioaccumulation : Bioconcentration factor (BCF): < 500
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 4,77
Remarks: Calculation

**Isobutyl methyl ketone:**

Partition coefficient: n-octanol/water : log Pow: 1,9

**2-Methyl-1-propanol:**

Partition coefficient: n-octanol/water : log Pow: 1
Method: OECD Test Guideline 117

### 12.4 Mobility in soil

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Distribution among environmental compartments | : | log Koc: 3,37<br>Method: OECD Test Guideline 106<br>Remarks: The test was conducted according to guideline |

### 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 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. |

**Components:**

**Pirimiphos-methyl:**

| | | |
|---|---|---|
| Method | : | OECD Test Guideline 230 |
| Species | : | Pimephales promelas (fathead minnow) |
| Application Route | : | water |
| Exposure time | : | 21 d |
| Modality | : | estrogenic, androgenic, steroidogenic |
| Study Result | : | negative |
| Remarks | : | The test was conducted according to guideline |
| Method | : | OECD Test Guideline 231 |
| Species | : | Xenopus laevis (common platanna) |
| Application Route | : | water |
| Exposure time | : | 21 d |
| Modality | : | thyroid |
| Study Result | : | negative |
| Remarks | : | The test was conducted according to guideline |

### 12.7 Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

| | | |
|---|---|---|
| Product | : | Dispose of in accordance with local regulations.<br>According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.<br>Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.<br>Do not dispose of waste into sewer. |
| Contaminated packaging | : | Empty containers should be taken to an approved waste handling site for recycling or disposal.<br>Empty containers retain residue and can be dangerous.<br>Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.<br>If not otherwise specified: Dispose of as unused product. |
| Waste Code | : | The following Waste Codes are only suggestions:<br><br>used product<br>02 01 08*, agrochemical waste containing hazardous substances<br><br>unused product<br>02 01 08*, agrochemical waste containing hazardous substances<br><br>uncleaned packagings<br>15 01 10*, packaging containing residues of or contaminated by hazardous substances |

## SECTION 14: Transport information

### 14.1 UN number or ID number

| | | |
|---|---|---|
| **ADN** | : | UN 1993 |
| **ADR** | : | UN 1993 |
| **RID** | : | UN 1993 |
| **IMDG** | : | UN 1993 |
| **IATA** | : | UN 1993 |

### 14.2 UN proper shipping name

| | | |
|---|---|---|
| **ADN** | : | FLAMMABLE LIQUID, N.O.S.<br>(Isobutyl methyl ketone, 2-Methyl-1-propanol) |
| **ADR** | : | FLAMMABLE LIQUID, N.O.S.<br>(Isobutyl methyl ketone, 2-Methyl-1-propanol) |
| **RID** | : | FLAMMABLE LIQUID, N.O.S.<br>(Isobutyl methyl ketone, 2-Methyl-1-propanol) |
| **IMDG** | : | FLAMMABLE LIQUID, N.O.S.<br>(Isobutyl methyl ketone, 2-Methyl-1-propanol, Pirimiphos-methyl) |

| | | |
|---|---|---|
| **IATA** | : | Flammable liquid, n.o.s.<br>(Isobutyl methyl ketone, 2-Methyl-1-propanol) |

### 14.3 Transport hazard class(es)

| | | Class | Subsidiary risks |
|---|---|---|---|
| **ADN** | : | 3 | |
| **ADR** | : | 3 | |
| **RID** | : | 3 | |
| **IMDG** | : | 3 | |
| **IATA** | : | 3 | |

### 14.4 Packing group

**ADN**

| | | |
|---|---|---|
| Packing group | : | III |
| Classification Code | : | F1 |
| Hazard Identification Number | : | 30 |
| Labels | : | 3 |

**ADR**

| | | |
|---|---|---|
| Packing group | : | III |
| Classification Code | : | F1 |
| Hazard Identification Number | : | 30 |
| Labels | : | 3 |
| Tunnel restriction code | : | (D/E) |

**RID**

| | | |
|---|---|---|
| Packing group | : | III |
| Classification Code | : | F1 |
| Hazard Identification Number | : | 30 |
| Labels | : | 3 |

**IMDG**

| | | |
|---|---|---|
| Packing group | : | III |
| Labels | : | 3 |
| EmS Code | : | F-E, S-E |

**IATA (Cargo)**

| | | |
|---|---|---|
| Packing instruction (cargo aircraft) | : | 366 |
| Packing instruction (LQ) | : | Y344 |
| Packing group | : | III |
| Labels | : | Flammable Liquids |

**IATA (Passenger)**

| | | |
|---|---|---|
| Packing instruction (passenger aircraft) | : | 355 |
| Packing instruction (LQ) | : | Y344 |
| Packing group | : | III |
| Labels | : | Flammable Liquids |

### 14.5 Environmental hazards

**ADN**
Environmentally hazardous : yes

**ADR**
Environmentally hazardous : yes

**RID**
Environmentally hazardous : yes

**IMDG**
Marine pollutant : yes

### 14.6 Special precautions for user

Remarks : THE COMBUSTIBLE LIQUID EXCEPTION MAY BE USED FOR PACKAGES <119 GAL.

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 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:
Number on list 3

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Number on list 40
This substance/mixture shall not be used in aerosol dispensers intended for supply to the general public for entertainment and decorative purposes.

Number on list 75
If you intend to use this product as tattoo ink, please contact your vendor.

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Substance(s) or mixture(s) are listed here according to their appearance in the regulation, irrespective of their use/purpose or the conditions of the restriction. Please refer to the condi-

tions in corresponding Regulation to determine whether an entry is applicable to the placing on the market or not.

| | | |
|---|---|---|
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : | Not applicable |
| Regulation (EU) No 2024/590 on substances that deplete the ozone layer | : | Not applicable |
| Regulation (EU) 2019/1021 on persistent organic pollutants (recast) | : | Not applicable |
| Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals | : | Not applicable |
| REACH - List of substances subject to authorisation (Annex XIV) | : | Not applicable |
| Active substance | : | 500 g/l<br>Pirimiphos-methyl |

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

| | | Quantity 1 | Quantity 2 |
|---|---|---|---|
| H3 | STOT SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE | 50 t | 200 t |
| E1 | ENVIRONMENTAL HAZARDS | 100 t | 200 t |
| P5c | FLAMMABLE LIQUIDS | 5.000 t | 50.000 t |

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

| | | | |
|---|---|---|---|
| 34 | Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d) | 2.500 t | 25.000 t |

**Other regulations:**

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.
Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

| | | |
|---|---|---|
| Other information | : | Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines. |

**Full text of H-Statements**

| | | |
|---|---|---|
| EUH066 | : | Repeated exposure may cause skin dryness or cracking. |
| H225 | : | Highly flammable liquid and vapour. |
| H226 | : | Flammable liquid and vapour. |
| H302 | : | Harmful if swallowed. |
| H304 | : | May be fatal if swallowed and enters airways. |
| H315 | : | Causes skin irritation. |
| H318 | : | Causes serious eye damage. |
| H319 | : | Causes serious eye irritation. |
| H332 | : | Harmful if inhaled. |
| H335 | : | May cause respiratory irritation. |
| H336 | : | May cause drowsiness or dizziness. |
| H351 | : | Suspected of causing cancer. |
| H372 | : | Causes damage to organs through prolonged or repeated exposure. |
| 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. |
| H412 | : | Harmful 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 |
| Asp. Tox. | : | Aspiration hazard |
| Carc. | : | Carcinogenicity |
| Eye Dam. | : | Serious eye damage |
| Eye Irrit. | : | Eye irritation |
| Flam. Liq. | : | Flammable liquids |
| Skin Irrit. | : | Skin irritation |
| STOT RE | : | Specific target organ toxicity - repeated exposure |
| STOT SE | : | Specific target organ toxicity - single exposure |
| 2000/39/EC | : | Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values |
| PT DL 305/2007 | : | Portugal. Indicative Occupational Exposure Limits |
| PT NP1796 | : | Portuguese Norm 1796 - Biological Exposure Indices |
| PT OEL | : | Portugal. Security and Health at the Workplace - Occupational exposure limits of chemical agents |
| 2000/39/EC / TWA | : | Limit Value - eight hours |
| 2000/39/EC / STEL | : | Short term exposure limit |
| PT DL 305/2007 / TWA | : | 8 Hour limit value |
| PT DL 305/2007 / STEL | : | Short term limit value |

| | | |
|---|---|---|
| PT OEL / VLE-MP | : | Time Weighted Average |
| PT OEL / VLE_CD | : | Short Term Exposure Limit |

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 Harmonised 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; 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 - Organisation 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

**Further information**

| | | |
|---|---|---|
| Sources of key data used to compile the Safety Data Sheet | : | Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/ |

| **Classification of the mixture:** | | **Classification procedure:** |
|---|---|---|
| Flam. Liq. 3 | H226 | Based on product data or assessment |
| Acute Tox. 4 | H302 | Based on product data or assessment |
| Asp. Tox. 1 | H304 | Based on product data or assessment |
| Skin Sens. 1 | H317 | Based on product data or assessment |
| 1 | H318 | Based on product data or assessment |
| STOT SE 3 | H335 | Based on product data or assessment |
| STOT SE 3 | H336 | Based on product data or assessment |

| | | |
|---|---|---|
| STOT RE 1 | H372 | Based on product data or assessment |
| Carc. 2 | H351 | Based on product data or assessment |
| STOT SE 1 | H370 | Based on product data or assessment |

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.
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