# TALSTAR 10 EC

| Version | Revision Date: | SDS Number: | Date of last issue: - |
|---|---|---|---|
| 1.0 | 11.11.2021 | 50000502 | Date of first issue: 11.11.2021 |

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

### 1.1 Product identifier

**Other means of identification**

**Product code** 50000502

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

**Use of the Substance/Mixture** Can be used as insecticide only.

**Recommended restrictions on use** Use as recommended by the label.

### 1.3 Manufacturer or supplier's details

**Supplier Address**

FMC Agricultural Solutions A/S
Thyborønvej 78
Harboøre, DK-7673
Denmark

Telephone: +45 9690 9690
Telefax: +45 9690 9691
E-mail address: SDS-Info@fmc.com (E-Mail General Information)

### 1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call:
Denmark: 45-69918573 (CHEMTREC)

Medical emergency:
Denmark: +45 82 12 12 12

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

| | |
|---|---|
| Flammable liquids, Category 3 | H226: Flammable liquid and vapour. |
| Acute toxicity, Category 4 | H302: Harmful if swallowed. |
| Skin irritation, Category 2 | H315: Causes skin irritation. |
| Eye irritation, Category 2 | H318: Causes serious eye damage. |

| | |
|---|---|
| Acute toxicity, Category 4 | H332: Harmful if inhaled. |
| Carcinogenicity, Category 2 | H351: Suspected of causing cancer. |
| Specific target organ toxicity - single exposure, Category 3, Respiratory system | H335: May cause respiratory irritation. |
| Specific target organ toxicity - single exposure, Category 3, Central nervous system | H336: May cause drowsiness or dizziness. |
| Specific target organ toxicity - repeated exposure, Category 1 | H372: Causes damage to organs through prolonged or repeated exposure. |
| Aspiration hazard, Category 1 | H304: May be fatal if swallowed and enters airways. |
| Short-term (acute) aquatic hazard, Category 1 | H400: Very toxic to aquatic life. |
| Long-term (chronic) aquatic hazard, Category 1 | H410: Very toxic to aquatic life with long lasting effects. |

### 2.2 Label elements

**Labelling (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.
H315 Causes skin irritation.
H318 Causes serious eye damage.
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.
H410 Very toxic to aquatic life with long lasting effects.

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

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

Precautionary statements : P261 Avoid breathing vapours.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P310 Immediately call a POISON CENTER or doctor/ physician.

**Disposal:**

P501 Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

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

Solvent naphtha (petroleum), light arom.
1,2,4-trimethylbenzene
bifenthrin (ISO)
xylene

**Additional Labelling**

Restricted to professional users.

### 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

Chemical nature : Mixture

**Components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| Solvent naphtha (petroleum), light arom. | 64742-95-6<br>265-199-0<br>649-356-00-4 | Flam. Liq. 3; H226<br>Muta. 1B; H340<br>Carc. 1B; H350<br>STOT SE 3; H336 (Central nervous system) | >= 70 - < 90 |

| | | | |
|---|---|---|---|
| | | STOT SE 3; H335 (Respiratory system)<br>Asp. Tox. 1; H304<br>Aquatic Chronic 2; H411 | |
| 1,2,4-trimethylbenzene | 95-63-6<br>202-436-9<br>601-043-00-3 | Flam. Liq. 3; H226<br>Acute Tox. 4; H332<br>Skin Irrit. 2; H315<br>Eye Irrit. 2; H319<br>STOT SE 3; H335 (Respiratory system)<br>Asp. Tox. 1; H304<br>Aquatic Chronic 2; H411<br>---<br>Acute toxicity esti-mate<br><br>Acute inhalation tox-icity (vapour): 11 mg/l | >= 25 - < 30 |
| bifenthrin (ISO) | 82657-04-3<br><br>607-699-00-7 | Acute Tox. 2; H300<br>Acute Tox. 3; H331<br>Skin Sens. 1B; H317<br>STOT RE 1; H372 (Nervous system)<br>Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410<br>---<br>M-Factor (Acute aquatic toxicity): 10.00010.000<br>M-Factor (Chronic aquatic toxicity): 100.000100.000 | >= 10 - < 20 |
| Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts | 68953-96-8<br>273-234-6 | Acute Tox. 4; H312<br>Skin Irrit. 2; H315<br>Eye Dam. 1; H318<br>Aquatic Chronic 2; H411 | >= 1 - < 2,5 |
| xylene | 1330-20-7<br>215-535-7<br>601-022-00-9 | Flam. Liq. 3; H226<br>Acute Tox. 4; H332<br>Acute Tox. 4; H312<br>Skin Irrit. 2; H315<br>Eye Irrit. 2; H319<br>STOT SE 3; H335 (Respiratory system)<br>STOT RE 2; H373 (hearing organs)<br>Asp. Tox. 1; H304 | >= 1 - < 2,5 |

| | | | |
|---|---|---|---|
| | | Aquatic Chronic 3; H412<br>---<br>Acute toxicity estimate<br><br>Acute dermal toxicity: 1.100 mg/kg | |
| Oxirane, methyl-, polymer with oxirane, monobutyl ether | 9038-95-3 | | >= 1 - < 10 |
| naphthalene | 91-20-3<br>202-049-5<br>601-052-00-2 | Flam. Sol. 2; H228<br>Acute Tox. 4; H302<br>Carc. 2; H351<br>Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410<br>---<br>M-Factor (Acute aquatic toxicity): 1<br>M-Factor (Chronic aquatic toxicity): 1 | >= 0,1 - < 0,25 |

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.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.

If inhaled : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.
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 induce vomiting.
Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

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

Risks : Harmful if swallowed.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause genetic defects.
Suspected of causing cancer.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure.

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

Treatment : Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO2)
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 allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

### 5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

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.
For safety reasons in case of fire, cans should be stored separately in closed containments.

Use a water spray to cool fully closed containers.

## SECTION 6: Accidental release measures

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

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

### 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.

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

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

### 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

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/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.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation 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 : Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

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

Requirements for storage areas and containers : No smoking. 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. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

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

### 7.3 Specific end use(s)

Specific use(s) : Registered pesticide to be used in accordance with a label approved by country-specific regulatory authorities.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Occupational Exposure Limits**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| 1,2,4-trimethylbenzene | 95-63-6 | TWA | 20 ppm<br>100 mg/m3 | 2000/39/EC |
| Further information | Indicative | | | |
| | | GV | 20 ppm<br>100 mg/m3 | DK OEL |
| Further information | Guiding list of organic solvents., The substance has an EC-limit value | | | |
| xylene | 1330-20-7 | TWA | 50 ppm<br>221 mg/m3 | 2000/39/EC |
| Further information | Identifies the possibility of significant uptake through the skin, Indicative | | | |
| | | STEL | 100 ppm<br>442 mg/m3 | 2000/39/EC |
| | | GV | 25 ppm<br>109 mg/m3 | DK OEL |
| Further information | Means that the substance can be absorbed through the skin., Guiding list of organic solvents., The substance has an EC-limit value | | | |
| naphthalene | 91-20-3 | TWA | 10 ppm<br>50 mg/m3 | 91/322/EEC |
| Further information | Indicative | | | |
| | | GV | 10 ppm | DK OEL |

| | | | | |
|---|---|---|---|---|
| | | | 50 mg/m3 | |
| Further information | Means that the substance is included in the list of substances considered carcinogenic., The substance has an EC-limit value | | | |

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

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|---|---|---|---|---|
| Solvent naphtha (petroleum), light arom. | Workers | Inhalation | Long-term systemic effects | 150 mg/m3 |
| | Workers | Dermal | Long-term systemic effects | 25 mg/kg bw/day |
| 1,2,4-trimethylbenzene | Workers | Inhalation | Long-term systemic effects | 100 mg/m3 |
| | Workers | Inhalation | Long-term local effects | 100 mg/m3 |
| | Workers | Dermal | Long-term systemic effects | 16171 mg/kg bw/day |
| Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts | Workers | Inhalation | Long-term systemic effects | 6 mg/m3 |
| | Workers | Dermal | Long-term systemic effects | 8,5 mg/kg bw/day |
| xylene | Workers | Inhalation | Long-term systemic effects | 221 mg/m3 |
| | Workers | Inhalation | Acute systemic effects | 442 mg/m3 |
| | Workers | Inhalation | Long-term local effects | 221 mg/m3 |
| | Workers | Inhalation | Acute local effects | 442 mg/m3 |
| | Workers | Dermal | Long-term systemic effects | 212 mg/kg |
| naphthalene | Workers | Inhalation | Long-term systemic effects | 25 mg/m3 |
| | Workers | Inhalation | Long-term local effects | 25 mg/m3 |
| | Workers | Dermal | Long-term systemic effects | 3,57 mg/kg bw/day |

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

| Substance name | Environmental Compartment | Value |
|---|---|---|
| 1,2,4-trimethylbenzene | Fresh water | 0,12 mg/l |
| | Marine water | 0,12 mg/l |
| | Fresh water sediment | 13,56 mg/kg dry weight (d.w.) |
| | Marine sediment | 13,56 mg/kg dry weight (d.w.) |
| | Soil | 2,34 mg/kg dry weight (d.w.) |
| | Sewage treatment plant | 2,41 mg/l |
| | Intermittent use (freshwater) | 0,12 mg/l |
| bifenthrin (ISO) | Fresh water | 0,095 ng/l |

| | | |
|---|---|---|
| Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts | Fresh water | 0,023 mg/l |
| | Marine water | 0,002 mg/l |
| | Sewage treatment plant | 5,5 mg/l |
| | Fresh water sediment | 1,35 mg/kg |
| | Marine sediment | 0,135 mg/kg |
| | Soil | 0,124 mg/kg |
| | Intermittent use (freshwater) | 0,290 mg/l |
| xylene | Fresh water | 0,327 mg/l |
| | Intermittent use (freshwater) | 0,327 mg/l |
| | Marine water | 0,327 mg/l |
| | Sewage treatment plant | 6,58 mg/l |
| | Fresh water sediment | 12,46 mg/kg |
| | Marine sediment | 12,46 mg/kg |
| naphthalene | Fresh water | 0,0024 mg/l |
| | Intermittent use/release | 0,020 mg/l |
| | Marine water | 0,0024 mg/l |
| | Sewage treatment plant | 2,9 mg/l |
| | Fresh water sediment | 0,0672 mg/kg dry weight (d.w.) |
| | Marine sediment | 0,0672 mg/kg dry weight (d.w.) |
| | Soil | 0,0533 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
Wear face-shield and protective suit for abnormal processing problems.

Hand protection

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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : light brown

Odour : hydrocarbon-like, mild

| | | |
|---|---|---|
| | : | Decomposition: yes |
| Flammability | : | Flammable solid |
| Flash point | : | 40 °C |
| pH | : | 5,28 |
| Solubility(ies) | | |
| Water solubility | : | dispersible |
| Relative density | : | 0,913 - 0,916 |

**9.2 Other information**

No data available

## 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.

Vapours may form explosive mixture with air.

**10.4 Conditions to avoid**

Conditions to avoid : Heat, flames and sparks.

**10.5 Incompatible materials**

Materials to avoid : Not applicable

**10.6 Hazardous decomposition products**

No data available

## SECTION 11: Toxicological information

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

**Acute toxicity**

Harmful if swallowed.

**Product:**

Acute oral toxicity : LD50 (Rat): 520 mg/kg

| | | |
|---|---|---|
| Acute inhalation toxicity | : | LC50 (Rat): > 5,2 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist |
| Acute dermal toxicity | : | LD50 (Rat): > 2.000 mg/kg |

**Components:**

**Solvent naphtha (petroleum), light arom.:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, female): 3.492 mg/kg<br>Method: OECD Test Guideline 401<br><br>LD50 (Rat, male): 6.984 mg/kg<br>Method: OECD Test Guideline 401 |
| Acute inhalation toxicity | : | LC50 (Rat, male and female): > 6,193 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapour<br>Assessment: The substance or mixture has no acute inhalation toxicity<br>Remarks: no mortality |
| Acute dermal toxicity | : | LD50 (Rabbit, male and female): > 3.160 mg/kg<br>Assessment: The substance or mixture has no acute dermal toxicity |

**1,2,4-trimethylbenzene:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, male): 6.000 mg/kg<br>Method: Fixed Dose Method |
| Acute inhalation toxicity | : | Acute toxicity estimate: 11 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapour<br>Method: Expert judgement<br>Remarks: Based on EU Harmonised classification - Annex VI of Regulation (EC) No 1272/2008 (CLP Regulation) |
| Acute dermal toxicity | : | LD50 (Rat, male and female): 3.440 mg/kg<br>Remarks: Based on data from similar materials |

**bifenthrin (ISO):**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, male and female): 56,7 mg/kg |
| Acute inhalation toxicity | : | LC50 (Rat, female): 0,8 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 403<br><br>LC50 (Rat, male): 1,10 mg/l<br>Exposure time: 4 h |

Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2.000 mg/kg

**Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

Acute oral toxicity : LD0 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 401
Remarks: no mortality

Acute dermal toxicity : LD50 (Rat, male and female): > 1.000 - 1.600 mg/kg
Method: OECD Test Guideline 402

**xylene:**

Acute oral toxicity : LD50 (Rat, male): 3.523 mg/kg
Method: Regulation (EC) No. 440/2008, Annex, B.1 bis

LD50 (Rat, female): > 4.000 mg/kg
Method: Regulation (EC) No. 440/2008, Annex, B.1 bis

Acute inhalation toxicity : LC50 (Rat, male and female): 27,6 mg/l, 6350 ppm
Exposure time: 4 h
Test atmosphere: vapour
Method: Regulation (EC) No. 440/2008, Annex, B.2

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

Acute dermal toxicity : Acute toxicity estimate: 1.100 mg/kg
Method: Converted acute toxicity point estimate

LD50 (Rabbit, male): > 4.200 mg/kg

**Oxirane, methyl-, polymer with oxirane, monobutyl ether:**

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 5,01 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

**naphthalene:**

Acute oral toxicity : LD50 (Mouse, female): 710 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC0 (Rat, male and female): > 0,4 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 16.000 mg/kg
Method: OECD Test Guideline 402

**Skin corrosion/irritation**

Causes skin irritation.

**Product:**

Assessment : Irritating to skin.
Remarks : May cause skin irritation and/or dermatitis.

**Components:**

**Solvent naphtha (petroleum), light arom.:**

Species : Rabbit
Method : OECD Test Guideline 404
Result : Mild skin irritation

**1,2,4-trimethylbenzene:**

Species : Rabbit
Result : Skin irritation
Remarks : Based on data from similar materials

**bifenthrin (ISO):**

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

**Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

Species : Rabbit
Result : Skin irritation

**xylene:**

Species : Rabbit
Result : Skin irritation
Remarks : Based on data from similar materials

**Oxirane, methyl-, polymer with oxirane, monobutyl ether:**

Result : No skin irritation

**naphthalene:**

Species : Rabbit
Result : No skin irritation

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Product:**

Result : Irritation to eyes, reversing within 21 days

Remarks : May cause irreversible eye damage.

**Components:**

**Solvent naphtha (petroleum), light arom.:**

Species : Rabbit
Result : No eye irritation

**1,2,4-trimethylbenzene:**

Result : Moderate eye irritation
Remarks : Based on EU Harmonised classification - Annex VI of Regulation (EC) No 1272/2008 (CLP Regulation)

**bifenthrin (ISO):**

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

**Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

Species : Rabbit
Result : Irreversible effects on the eye

**xylene:**

Species : Rabbit
Result : Moderate eye irritation

**Oxirane, methyl-, polymer with oxirane, monobutyl ether:**

Result : No eye irritation

**naphthalene:**

Species : Rabbit
Result : No eye irritation

**Respiratory or skin sensitisation**

**Skin sensitisation**

May cause an allergic skin reaction.

**Respiratory sensitisation**

Not classified based on available information.

**Product:**

Result : Not a skin sensitizer.

**Components:**

**Solvent naphtha (petroleum), light arom.:**

Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Not a skin sensitizer.

**1,2,4-trimethylbenzene:**

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.
Remarks : Based on data from similar materials

**bifenthrin (ISO):**

Test Type : Magnussen-Kligman test
Method : OECD Test Guideline 406
Result : May cause sensitisation by skin contact.

Test Type : Buehler Test
Species : Guinea pig
Result : Not a skin sensitizer.

**Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.

**xylene:**

Test Type : Local lymph node assay (LLNA)
Exposure routes : Skin contact
Species : Mouse
Method : OECD Test Guideline 429
Result : Does not cause skin sensitisation.

**Oxirane, methyl-, polymer with oxirane, monobutyl ether:**

Remarks : No data available

**naphthalene:**

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406

Result : Does not cause skin sensitisation.

**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

**Solvent naphtha (petroleum), light arom.:**

Genotoxicity in vitro : Test Type: in vitro DNA damage and/or repair study
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: reverse mutation assay
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: Bone marrow chromosome aberration
Species: Rat (male and female)
Application Route: Inhalation
Result: negative

**1,2,4-trimethylbenzene:**

Genotoxicity in vitro : Test Type: reverse mutation assay
Method: OECD Test Guideline 471
Result: negative

Test Type: gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

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

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

Germ cell mutagenicity- Assessment : Weight of evidence does not support classification as a germ cell mutagen.

**bifenthrin (ISO):**

Genotoxicity in vitro : Test Type: gene mutation test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: reverse mutation assay
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: Mouse lymphoma assay
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: Sex-linked Recessive Lethal Test
Species: Drosophila melanogaster (vinegar fly)
Result: negative

Test Type: unscheduled DNA synthesis assay
Species: Rat
Method: OECD Test Guideline 486
Result: negative

**Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

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

Test Type: reverse mutation assay
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Oral
Result: negative
Remarks: Based on data from similar materials

Germ cell mutagenicity- Assessment : Weight of evidence does not support classification as a germ cell mutagen.

**xylene:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Method: Regulation (EC) No. 440/2008, Annex, B.10
Result: negative

Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Result: negative

Genotoxicity in vivo : Test Type: Rodent Dominant Lethal Assay
Species: Mouse (male)
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 478
Result: negative

**Oxirane, methyl-, polymer with oxirane, monobutyl ether:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Remarks: No data available |
| Genotoxicity in vivo | : | Remarks: No data available |

**naphthalene:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: reverse mutation assay<br>Result: negative |
| Genotoxicity in vivo | : | Test Type: Micronucleus test<br>Species: Mouse<br>Application Route: Intraperitoneal injection<br>Result: negative |

**Carcinogenicity**

Suspected of causing cancer.

**Product:**

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

**Components:**

**1,2,4-trimethylbenzene:**

| | | |
|---|---|---|
| Carcinogenicity - Assessment | : | Weight of evidence does not support classification as a carcinogen |

**bifenthrin (ISO):**

| | | |
|---|---|---|
| Species | : | Rat, female |
| Application Route | : | Oral |
| Exposure time | : | 2 Years |
| NOAEL | : | 3 mg/kg bw/day |
| Result | : | negative |
| | | |
| Species | : | Mouse, male |
| Application Route | : | Oral |
| Exposure time | : | 18 month(s) |
| NOAEL | : | 7,6 mg/kg bw/day |
| Result | : | positive |
| Symptoms | : | malignant tumors |
| | | |
| Carcinogenicity - Assessment | : | Weight of evidence does not support classification as a carcinogen |

**xylene:**

| | | |
|---|---|---|
| Species | : | Rat |
| Application Route | : | Oral |
| Exposure time | : | 103 weeks |

Result : negative

**naphthalene:**

Species : Rat
Application Route : Inhalation
Exposure time : 2 Years
Result : positive

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

**Reproductive toxicity**

Not classified based on available information.

**Components:**

**Solvent naphtha (petroleum), light arom.:**

Effects on fertility : Test Type: Three-generation study
Species: Rat
Application Route: inhalation (vapour)
Fertility: NOAEC Mating/Fertility: 7,5 mg/l
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Species: Mouse
Application Route: inhalation (vapour)
General Toxicity Maternal: LOAEC: 500 part per million
Symptoms: Maternal effects

**1,2,4-trimethylbenzene:**

Effects on fertility : Test Type: Multi-generation study
Species: Rat, male and female
Application Route: inhalation (vapour)
Dose: 0, 100, 500 and 1500 parts per million
General Toxicity - Parent: NOAEC: 500
Method: OECD Test Guideline 416
Result: negative

Effects on foetal development : Test Type: Developmental Toxicity Screening Test
Species: Rat
Application Route: inhalation (vapour)
Dose: 0, 100, 300, 600, 900 parts per million
Duration of Single Treatment: 15 d
General Toxicity Maternal: LOAEC: 600 part per million
Teratogenicity: NOAEC Mating/Fertility: 900 part per million
Embryo-foetal toxicity: LOAEC F1: 600 part per million
Method: OECD Test Guideline 414
Result: negative

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

**bifenthrin (ISO):**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation study<br>Species: Rat<br>Application Route: Oral<br>General Toxicity - Parent: NOAEL: 3 mg/kg bw/day<br>General Toxicity F1: NOAEL: 5 mg/kg bw/day<br>Result: negative |
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Rabbit<br>Application Route: Oral<br>General Toxicity Maternal: NOAEL: 2,7 mg/kg bw/day<br>Teratogenicity: NOAEL: 2,7 mg/kg bw/day<br>Symptoms: Maternal effects<br>Result: No teratogenic effects<br><br>Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: Oral<br>General Toxicity Maternal: NOAEL: 1 mg/kg bw/day<br>Teratogenicity: NOAEL: 2 mg/kg bw/day<br>Result: No teratogenic effects |
| Reproductive toxicity - Assessment | : | Weight of evidence does not support classification for reproductive toxicity |

**Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Three-generation study<br>Species: Rat, male and female<br>Application Route: Oral<br>Dose: 14, 70, 350 mg/kg bw d<br>General Toxicity - Parent: NOAEL: 350 mg/kg body weight<br>General Toxicity F1: NOAEL: 350 mg/kg bw/day<br>General Toxicity F2: NOAEL: 350 mg/kg bw/day<br>Result: negative<br>Remarks: Based on data from similar materials |
| Effects on foetal development | : | Test Type: reproductive and developmental toxicity study<br>Species: Rat<br>Application Route: Oral<br>Dose: 0.2, 2.0, 300 and 600 mg/kg<br>Duration of Single Treatment: 20 d<br>General Toxicity Maternal: LOAEL: 600 mg/kg body weight<br>Teratogenicity: LOAEL: 600 mg/kg bw/day<br>Result: negative<br>Remarks: Based on data from similar materials |
| Reproductive toxicity - Assessment | : | Weight of evidence does not support classification for reproductive toxicity |

**xylene:**

Effects on fertility : Test Type: Two-generation study
Species: Rat
Application Route: inhalation (vapour)
General Toxicity F1: NOAEC: 2,171 mg/l
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Pre-natal
Species: Rat
Application Route: inhalation (vapour)
Symptoms: Maternal effects
Result: negative
Remarks: Based on data from similar materials

**Oxirane, methyl-, polymer with oxirane, monobutyl ether:**

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

**naphthalene:**

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Inhalation
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Oral
Method: OECD Test Guideline 414
Result: Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses

**STOT - single exposure**

May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs.

**Product:**

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

**Components:**

**Solvent naphtha (petroleum), light arom.:**

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

**1,2,4-trimethylbenzene:**

Assessment : May cause respiratory irritation.

**bifenthrin (ISO):**

Remarks : No significant adverse effects were reported

**Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

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

**xylene:**

Assessment : May cause respiratory irritation.

**STOT - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

**Product:**

Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

**Components:**

**Solvent naphtha (petroleum), light arom.:**

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

**1,2,4-trimethylbenzene:**

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

**bifenthrin (ISO):**

Target Organs : Nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

**xylene:**

Exposure routes : Inhalation
Target Organs : hearing organs
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

**Repeated dose toxicity**

**Components:**

**Solvent naphtha (petroleum), light arom.:**

Species : Rat, male and female

| | | |
|---|---|---|
| | : | 0,8 - 0,9 mg/l |
| Application Route | : | Inhalation |
| Test atmosphere | : | vapour |
| Remarks | : | Based on data from similar materials |

| | | |
|---|---|---|
| Species | : | Rat, male |
| NOAEL | : | 600 mg/kg |
| Application Route | : | Oral |
| Remarks | : | Based on data from similar materials |

**1,2,4-trimethylbenzene:**

| | | |
|---|---|---|
| Species | : | Rat, male and female |
| NOAEL | : | 600 mg/kg |
| Application Route | : | Oral - gavage |
| Exposure time | : | 91 d |
| Dose | : | 0, 50, 200 & 600 mg/kg bw/day |
| Method | : | OECD Test Guideline 408 |
| Remarks | : | Based on data from similar materials |

| | | |
|---|---|---|
| Species | : | Rat, male and female |
| | : | 1,8 mg/l |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 1 yr |
| Dose | : | 0, 450, 900, 1800 mg/m3 |
| Method | : | OECD Test Guideline 452 |

| | | |
|---|---|---|
| Species | : | Rat, male and female |
| | : | 1,23 mg/l |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 3 m |
| Dose | : | 0, 123, 492 & 1230 mg/m3 |
| Method | : | OECD Test Guideline 413 |

**bifenthrin (ISO):**

| | | |
|---|---|---|
| Species | : | Rat, male and female |
| NOEL | : | 100 ppm |
| Application Route | : | Oral - feed |
| Exposure time | : | 90 d |
| Remarks | : | No toxicologically significant effects were found. |

| | | |
|---|---|---|
| Species | : | Dog, male and female |
| NOEL | : | 2,5 mg/kg bw/day |
| Application Route | : | Oral - feed |
| Exposure time | : | 13 w |
| Symptoms | : | Tremors |

**Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

| | | |
|---|---|---|
| Species | : | Rat, male and female |
| NOAEL | : | 40 mg/kg bw/day |
| LOAEL | : | 115 mg/kg bw/day |
| Application Route | : | Oral - feed |

| | | |
|---|---|---|
| Exposure time | : | 6 months |
| Dose | : | 40, 115, 340, 1030 mg/kg bw d |
| Remarks | : | Based on data from similar materials |

**xylene:**

| | | |
|---|---|---|
| Species | : | Rat |
| | : | 3,515 mg/l |
| Application Route | : | Inhalation |
| Exposure time | : | 13 weeks |

**Oxirane, methyl-, polymer with oxirane, monobutyl ether:**

| | | |
|---|---|---|
| Remarks | : | No data available |

**Aspiration toxicity**

May be fatal if swallowed and enters airways.

**Product:**

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.

**Components:**

**Solvent naphtha (petroleum), light arom.:**

May be fatal if swallowed and enters airways.

**1,2,4-trimethylbenzene:**

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.

**bifenthrin (ISO):**

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

**xylene:**

May be fatal if swallowed and enters airways.

### 11.2 Information on other hazards

**Experience with human exposure**

**Components:**

**xylene:**

| | | |
|---|---|---|
| General Information | : | Target Organs: inner ear<br>Symptoms: hearing loss |
| | | Target Organs: Central nervous system<br>Symptoms: Drowsiness, Dizziness |

**Neurological effects**

**Components:**

**bifenthrin (ISO):**

Remarks : No neurotoxicity observed in animal studies

**Further information**

**Product:**

Remarks : Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Concentrations substantially above the TLV value may cause narcotic effects.
Solvents may degrease the skin.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Product:**

**Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

**Components:**

**Solvent naphtha (petroleum), light arom.:**

Toxicity to fish : NOEC (Oncorhynchus mykiss (rainbow trout)): 4,5 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

LL50 (Pimephales promelas (fathead minnow)): 8,2 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 : EL50 (Daphnia magna (Water flea)): 4,5 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (microalgae)): 3,1 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (Tetrahymena pyriformis): 15,41 mg/l
Exposure time: 40 h
Test Type: Growth inhibition
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Toxicity to fish (Chronic toxicity) : NOELR: 2,6 mg/l
Exposure time: 14 d
Species: Pimephales promelas (fathead minnow)
Method: OECD Test Guideline 204
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: 2,6 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

**1,2,4-trimethylbenzene:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 7,72 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 3,6 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (green algae): 2,356 mg/l
Exposure time: 96 h
Method: QSAR

Toxicity to microorganisms : (activated sludge): 500 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition

Toxicity to fish (Chronic toxicity) : Chronic Toxicity Value: 0,396 mg/l
Exposure time: 30 d
Species: Fish
Method: QSAR

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Chronic Toxicity Value: 0,367 mg/l
Exposure time: 16 d
Species: Daphnia magna (Water flea)
Method: QSAR

Toxicity to soil dwelling organisms : LC50:
141.598 parts per million
Exposure time: 14 d
Species: Eisenia fetida (earthworms)

| | | |
|---|---|---|
| Toxicity to terrestrial organisms | : | LD50: > 2.250 mg/kg<br>Species: Colinus virginianus (Bobwhite quail) |

**bifenthrin (ISO):**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Salmo gairdneri): 0,15 µg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 0,11 µg/l<br>Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | EC50 (algae): 0,822 mg/l<br>Exposure time: 72 h |
| M-Factor (Acute aquatic toxicity) | : | 10.000 |
| | | 10.000 |
| Toxicity to fish (Chronic toxicity) | : | NOEC: 0,00012 mg/l<br>Exposure time: 21 d<br>Species: Oncorhynchus mykiss (rainbow trout) |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 0,0013 µg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea) |
| | | NOEC: 0,00095 µg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea) |
| M-Factor (Chronic aquatic toxicity) | : | 100.000 |
| | | 100.000 |
| Toxicity to soil dwelling organisms | : | > 16 mg/kg<br>Exposure time: 14 d<br>Species: Eisenia fetida (earthworms) |
| Toxicity to terrestrial organisms | : | LD50: 1.800 mg/kg<br>Species: Colinus virginianus (Bobwhite quail) |
| | | LD50: 0,044 - 0,11 µg/bee<br>End point: Acute contact toxicity<br>Species: Apis mellifera (bees) |
| | | LD50: 0,1 µg/bee<br>End point: Acute oral toxicity<br>Species: Apis mellifera (bees) |
| | | LD50: > 2.150 mg/kg<br>Species: Anas platyrhynchos (Mallard duck) |

**Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Danio rerio (zebra fish)): 31,6 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)): 62 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to algae/aquatic plants | : | EC50 (Pseudokirchneriella subcapitata (green algae)): 29 mg/l<br>Exposure time: 96 h<br>Remarks: Based on data from similar materials<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): 0,5 mg/l<br>Exposure time: 96 h<br>Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : | EC50 (activated sludge): 550 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209 |
| Toxicity to fish (Chronic toxicity) | : | NOEC: 0,23 mg/l<br>Exposure time: 72 d<br>Species: Oncorhynchus mykiss (rainbow trout)<br>Test Type: flow-through test<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 1,18 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Test Type: flow-through test<br>Remarks: Based on data from similar materials |
| Toxicity to soil dwelling organisms | : | NOEC: 250 mg/kg<br>Exposure time: 14 d<br>Species: Eisenia fetida (earthworms)<br>Method: OECD Test Guideline 207<br>Remarks: Based on data from similar materials<br><br>LC50: > 1.000 mg/kg<br>Exposure time: 14 d<br>Species: Eisenia fetida (earthworms)<br>Method: OECD Test Guideline 207<br>Remarks: Based on data from similar materials |
| Plant toxicity | : | EC50: 167 mg/kg<br>Exposure time: 21 d<br>Species: Sorghum bicolor (sorghum)<br><br>80 mg/kg |

Exposure time: 14 d
Species: Avena sativa (oats)

Toxicity to terrestrial organisms : EC10: 82 mg/kg
Exposure time: 21 d
Species: Hypoaspis aculeifer
Remarks: Information given is based on data obtained from similar substances.

**xylene:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2,6 mg/l
Exposure time: 96 h
Test Type: Static renewal test
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 2,2 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (Pseudokirchneriella subcapitata (green algae)): 0,44 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC (activated sludge): 16 mg/l
Exposure time: 28 h
Method: OECD Test Guideline 301F

Toxicity to fish (Chronic toxicity) : NOEC: > 1,3 mg/l
Exposure time: 56 d
Species: Oncorhynchus mykiss (rainbow trout)
Test Type: flow-through test
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,96 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia (water flea)
Remarks: Based on data from similar materials

Toxicity to soil dwelling organisms : NOEC: 16 mg/kg
Exposure time: 14 d
Species: Eisenia fetida (earthworms)
Remarks: Based on data from similar materials

**Oxirane, methyl-, polymer with oxirane, monobutyl ether:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 1.200 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1.000 mg/l
Exposure time: 48 h

**naphthalene:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1,6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,16 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Skeletonema costatum (marine diatom)): 0,4 - 0,5 mg/l
Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : IC50 (Bacteria): 29 mg/l
Exposure time: 24 h

Toxicity to fish (Chronic toxicity) : NOEC: 0,37 mg/l
Exposure time: 40 d
Species: Oncorhynchus kisutch (coho salmon)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,59 mg/l
Exposure time: 125 d
Species: Daphnia pulex (Water flea)

M-Factor (Chronic aquatic toxicity) : 1

### 12.2 Persistence and degradability

**Components:**

**Solvent naphtha (petroleum), light arom.:**

Biodegradability : Concentration: 49,2 mg/l
Result: Inherently biodegradable.
Biodegradation: 77,05 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

**1,2,4-trimethylbenzene:**

Biodegradability : Inoculum: activated sludge, non-adapted
Result: Inherently biodegradable.
Biodegradation: 69,67 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Remarks: Based on data from similar materials

**bifenthrin (ISO):**

Biodegradability : Result: Not readily biodegradable.

**Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

Biodegradability : Inoculum: activated sludge, non-adapted
Result: Not readily biodegradable.
Biodegradation: 2,9 %
Exposure time: 28 d
Method: OECD Test Guideline 301E

Result: Inherently biodegradable.
Biodegradation: > 35 - 45 %
Exposure time: 10 d

**xylene:**

Biodegradability : Test Type: aerobic
Inoculum: activated sludge, non-adapted
Concentration: 16 mg/l
Result: Readily biodegradable.
Biodegradation: 98 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Test Type: aerobic
Inoculum: activated sludge, non-adapted
Concentration: 16 mg/l
Result: Readily biodegradable.
Biodegradation: 94 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Test Type: aerobic
Inoculum: activated sludge, non-adapted
Concentration: 16,2 mg/l
Result: Readily biodegradable.
Biodegradation: 90 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

**Oxirane, methyl-, polymer with oxirane, monobutyl ether:**

Biodegradability : Result: Readily biodegradable.

**naphthalene:**

Biodegradability : Result: Inherently biodegradable.

Biodegradation: 67 %
Exposure time: 12 d

**12.3 Bioaccumulative potential**

**Components:**

**1,2,4-trimethylbenzene:**

Bioaccumulation : Species: Pimephales promelas (fathead minnow)
Bioconcentration factor (BCF): 243
Method: QSAR

Partition coefficient: n-octanol/water : log Pow: 3,63

**bifenthrin (ISO):**

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 1.709
Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is possible.
See section 9 for octanol-water partition coefficient.

**Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

Bioaccumulation : Bioconcentration factor (BCF): 3,16
Method: QSAR

Partition coefficient: n-octanol/water : log Pow: 4,595 (20 °C)

**xylene:**

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Exposure time: 7 d
Concentration: 1,3 mg/l
Bioconcentration factor (BCF): > 4,9
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 3,2 (20 °C)
pH: 7
Remarks: Based on data from similar materials

log Pow: 3,12 (20 °C)
pH: 7
Remarks: Based on data from similar materials

log Pow: 3,15 (20 °C)
pH: 7
Remarks: Based on data from similar materials

log Pow: 3,15 (20 °C)
pH: 7

Remarks: Based on data from similar materials

**naphthalene:**

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 168

Partition coefficient: n-octanol/water : log Pow: 3,7

### 12.4 Mobility in soil

**Components:**

**bifenthrin (ISO):**

Distribution among environmental compartments : Remarks: immobile

Stability in soil : Dissipation time: 86 d

### 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

No data available

### 12.7 Other adverse effects

**Product:**

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

## 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.

Waste, residues, etc. must be collected, stored and disposed of in tightly closed container labeled: "Contains a substance that is covered by the Danish health and safety regulation in

terms of cancer risk."

| | | |
|---|---|---|
| Contaminated packaging | : | Empty remaining contents.<br>Dispose of as unused product.<br>Do not re-use empty containers.<br>Do not burn, or use a cutting torch on, the empty drum. |

## 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>(Aromatic hydrocarbons, Bifenthrin) |
| **ADR** | : | FLAMMABLE LIQUID, N.O.S.<br>(Aromatic hydrocarbons, Bifenthrin) |
| **RID** | : | FLAMMABLE LIQUID, N.O.S.<br>(Aromatic hydrocarbons, Bifenthrin) |
| **IMDG** | : | FLAMMABLE LIQUID, N.O.S.<br>(Aromatic hydrocarbons, Bifenthrin) |
| **IATA** | : | Flammable liquid, n.o.s.<br>(Aromatic hydrocarbons, Bifenthrin) |

### 14.3 Transport hazard class(es)

| | | |
|---|---|---|
| **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

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

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, preparations and articles (Annex XVII) | : | Conditions of restriction for the following entries should be considered: Number on list 3<br><br>Solvent naphtha (petroleum), light arom. (Number on list 29, 28) |
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : | Not applicable |
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer | : | Not applicable |
| Regulation (EU) 2019/1021 on persistent organic pollutants (recast) | : | naphthalene |
| Regulation (EC) 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 |

| | | |
|---|---|---|
| Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. | H3 | STOT SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE |
| | P5c | FLAMMABLE LIQUIDS |
| | E1 | ENVIRONMENTAL HAZARDS |
| | 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) |

**Other regulations:**

When evaluating a workplace, measures must be taken to ensure that employees are not exposed to conditions that may pose a risk during pregnancy or breastfeeding (cf. The Danish

Working Environment Authority's Executive Order on The Performance of Work)

Young people under the age of 18 are not allowed to use or be exposed to the product professionally. Young people above the age of 15 are, however, except from this rule if the product is a necessary part of their education.

| | | |
|---|---|---|
| The substance/mixture is subject to the provisions of BEK nr. 1795 of 18/12/2015 (as amended) “Executive order on Measures to Protect Workers from the Risks related to Exposure to Carcinogenic Substances and Materials at Work”. The work with this substance/mixture may pose a cancer risk. | : | Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified<br>Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified<br>naphthalene<br>bifenthrin (ISO) |

**The components 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. |
| AICS | : | Not in compliance with the inventory |
| DSL | : | This product contains the following components that are not on the Canadian DSL nor NDSL.<br><br>2-METHYLBIPHENYL-3-YLMETHYL (Z)-(1RS,3RS)-3-(2-CHLORO-3,3,3-TRIFLUOROPROP-1-ENYL)-2,2-DIMETHYLCYCLOPROPANECARBOXYLATE |
| ENCS | : | Not in compliance with the inventory |
| ISHL | : | Not in compliance with the inventory |
| KECI | : | Not in compliance with the inventory |
| PICCS | : | Not in compliance with the inventory |
| IECSC | : | On the inventory, or in compliance with the inventory |
| NZIoC | : | Not in compliance with the inventory |

### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture.

## SECTION 16: Other information

**Full text of H-Statements**

| | | |
|---|---|---|
| H226 | : | Flammable liquid and vapour. |
| H228 | : | Flammable solid. |
| H300 | : | Fatal if swallowed. |
| H302 | : | Harmful if swallowed. |

| | | |
|---|---|---|
| H304 | : | May be fatal if swallowed and enters airways. |
| H312 | : | Harmful in contact with skin. |
| H315 | : | Causes skin irritation. |
| H317 | : | May cause an allergic skin reaction. |
| H318 | : | Causes serious eye damage. |
| H319 | : | Causes serious eye irritation. |
| H331 | : | Toxic if inhaled. |
| H332 | : | Harmful if inhaled. |
| H335 | : | May cause respiratory irritation. |
| H336 | : | May cause drowsiness or dizziness. |
| H340 | : | May cause genetic defects. |
| H350 | : | May cause cancer. |
| H351 | : | Suspected of causing cancer. |
| H372 | : | Causes damage to organs through prolonged or repeated exposure. |
| H373 | : | May cause damage to organs through prolonged or repeated exposure if inhaled. |
| 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 |
| Flam. Sol. | : | Flammable solids |
| Muta. | : | Germ cell mutagenicity |
| Skin Irrit. | : | Skin irritation |
| Skin Sens. | : | Skin sensitisation |
| 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 |
| 91/322/EEC | : | Europe. Commission Directive 91/322/EEC on establishing indicative limit values |
| DK OEL | : | Denmark. Occupational Exposure Limits |
| 2000/39/EC / TWA | : | Limit Value - eight hours |
| 2000/39/EC / STEL | : | Short term exposure limit |
| 91/322/EEC / TWA | : | Limit Value - eight hours |
| DK OEL / GV | : | Long term exposure limit |

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European 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 Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

**Further information**

| **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 |
| Skin Irrit. 2 | H315 | Calculation method |
| Eye Irrit. 2 | H318 | Based on product data or assessment |
| Acute Tox. 4 | H332 | Based on product data or assessment |
| Carc. 2 | H351 | 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 |
| Asp. Tox. 1 | H304 | Based on product data or assessment |
| Aquatic Acute 1 | H400 | Based on product data or assessment |
| Aquatic Chronic 1 | H410 | Based on product data or assessment |

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