SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Dichlofenthion Formulation

Manufacturer or supplier’s details
Company name of supplier: MSD
Address: Avenida 16 de Septiembre No. 301
Xaltocan - Xochimilco Mexico 16090
Telephone: 52 55 57284444
Telefax: 908-735-1496
Emergency telephone: 1-908-423-6000
E-mail address: EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use
Recommended use: Veterinary product

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Flammable liquids: Category 3
Acute toxicity (Oral): Category 4
Acute toxicity (Dermal): Category 5
Skin corrosion: Sub-category 1B
Serious eye damage: Category 1
Skin sensitization: Category 1
Germ cell mutagenicity: Category 2
Carcinogenicity (Oral): Category 1A
Reproductive toxicity: Category 2
Specific target organ toxicity - single exposure: Category 1 (Nervous system)
Specific target organ toxicity - single exposure: Category 3
Specific target organ toxicity - repeated exposure: Category 1 (Nervous system)
Specific target organ toxicity - repeated exposure: Category 2 (Central nervous system, Kidney, Liver, Skin, Respiratory Tract, Auditory system)
Aspiration hazard: Category 1

GHS label elements
Hazard pictograms:

Signal Word: Danger

Hazard Statements:
- H226 Flammable liquid and vapor.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H313 May be harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H350 May cause cancer if swallowed.
- H361d Suspected of damaging the unborn child.
- H370 Causes damage to organs (Nervous system).
- H372 Causes damage to organs (Nervous system) through prolonged or repeated exposure.
- H373 May cause damage to organs (Central nervous system, Kidney, Liver, Skin, Respiratory Tract, Auditory system) through prolonged or repeated exposure.

Precautionary Statements:

Prevention:
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260 Do not breathe mist or vapors.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
- P301 + P330 + P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/ physician.
- P303 + P361 + P353 + P310 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Immediately call a POISON CENTER or doctor/ physician.
- P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
- P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:
P405 Store locked up.

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

Other hazards
Vapors may form explosive mixture with air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tar, wood</td>
<td>91722-33-7</td>
<td>&gt;= 10 &lt; 20</td>
</tr>
<tr>
<td></td>
<td>Rosin</td>
<td>8050-09-7</td>
<td>&gt;= 10 &lt; 20</td>
</tr>
<tr>
<td></td>
<td>Tar, coal</td>
<td>8007-45-2</td>
<td>&gt;= 10 &lt; 20</td>
</tr>
<tr>
<td></td>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>&gt;= 5 &lt; 10</td>
</tr>
<tr>
<td></td>
<td>Xylene</td>
<td>1330-20-7</td>
<td>&gt;= 5 &lt; 10</td>
</tr>
<tr>
<td></td>
<td>Dichlofenthion (ISO)</td>
<td>97-17-6</td>
<td>&gt;= 1 &lt; 5</td>
</tr>
<tr>
<td></td>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>&gt;= 2 &lt; 3</td>
</tr>
<tr>
<td></td>
<td>Phenol</td>
<td>108-95-2</td>
<td>&gt;= 1 &lt; 3</td>
</tr>
<tr>
<td></td>
<td>m-Cresol</td>
<td>108-39-4</td>
<td>&gt;= 1 &lt; 3</td>
</tr>
<tr>
<td></td>
<td>p-Cresol</td>
<td>106-44-5</td>
<td>&gt;= 1 &lt; 3</td>
</tr>
</tbody>
</table>

SECTION 4. 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.

If inhaled: If inhaled, remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention immediately.

In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention immediately.
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.
If swallowed: Get medical attention immediately. If swallowed, DO NOT induce vomiting. If vomiting occurs have person lean forward. Call a physician or poison control center immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:
- Harmful if swallowed.
- May be fatal if swallowed and enters airways.
- May be harmful in contact with skin.
- May cause an allergic skin reaction.
- Causes serious eye damage.
- May cause respiratory irritation.
- Suspected of causing genetic defects.
- May cause cancer if swallowed.
- Suspected of damaging the unborn child.
- Causes damage to organs.
- Causes damage to organs through prolonged or repeated exposure.
- Causes severe burns.
- Causes digestive tract burns.

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).

Notes to physician: Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray
- Alcohol-resistant foam
- Carbon dioxide (CO2)
- Dry chemical

Unsuitable extinguishing media: High volume water jet

Specific hazards during fire fighting:
- Do not use a solid water stream as it may scatter and spread fire.
- Flash back possible over considerable distance.
- Vapors may form explosive mixtures with air.
- Exposure to combustion products may be a hazard to health.

Hazardous combustion products: Carbon oxides
- Metal oxides
- Nitrogen oxides (NOx)

Specific extinguishing methods:
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Use water spray to cool unopened containers.
- Remove undamaged containers from fire area if it is safe to do so.
- Evacuate area.

Special protective equipment for fire-fighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, or other protective measures: Remove all sources of ignition.
Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g., by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapors/mists with a water spray jet. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. 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. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

Technical measures  :  See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation  :  If sufficient ventilation is unavailable, use with local exhaust ventilation. If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.
Advice on safe handling  :  Do not get on skin or clothing. Do not breathe vapors or spray mist. Do not swallow. Do not get in eyes. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment. Non-sparking tools should be used. Keep container tightly closed. Already sensitized individuals should consult their physician regarding working with respiratory irritants or sensitizers. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. 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. 
Wash contaminated clothing before re-use.  
The effective operation of a facility should include review of 
ingineering controls, proper personal protective equipment, 
appropriate degowning and decontamination procedures,  
industrial hygiene monitoring, medical surveillance and the 
use of administrative controls.  

Conditions for safe storage :  
Keep in properly labeled 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.  

Materials to avoid  :  
Do not store with the following product types:  
Strong oxidizing agents  
Organic peroxides  
Flammable solids  
Pyrophoric liquids  
Pyrophoric solids  
Self-heating substances and mixtures  
Substances and mixtures which in contact with water emit  
flammable gases  
Explosives  
Gases  

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION  

Ingredients with workplace control parameters  

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>VLE-PPT</td>
<td>20 ppm</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>VLE-PPT</td>
<td>100 ppm</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VLE-CT</td>
<td>150 ppm</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>100 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Dichlofenthion (ISO)</td>
<td>97-17-6</td>
<td>TWA</td>
<td>20 µg/m3 (OEB 3)</td>
<td>Internal</td>
</tr>
</tbody>
</table>

Further information: Skin  
Wipe limit 200 µg/100 cm² Internal  

Sodium hydroxide             | 1310-73-2 | VLE-P                          | 2 mg/m³                                      | NOM-010-STPS-2014 |
|                            |           | C                             | 2 mg/m³                                      | ACGIH        |
| Phenol                     | 108-95-2  | VLE-PPT                       | 5 ppm                                       | NOM-010-STPS-2014 |
| m-Cresol                   | 108-39-4  | VLE-PPT                       | 20 mg/m³                                     | NOM-010-
### Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenol</td>
<td>108-95-2</td>
<td>Phenol</td>
<td>Urine</td>
<td>End of shift</td>
<td>250 mg/g Creatinine</td>
<td>MX BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>Methylhippuric acid</td>
<td>Urine</td>
<td>End of shift</td>
<td>1.5 g/g creatinine</td>
<td>MX BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>Sum of Mandelic acid plus phenylglyoxylic acid</td>
<td>Urine</td>
<td>End of shift at end of work-week</td>
<td>0.7 g/g creatinine</td>
<td>MX BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

### Engineering measures

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., dripless quick connections).
All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment. Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices). Minimize open handling.

### Personal protective equipment

**Respiratory protection**
- If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
- **Filter type**: Combined particulates and organic vapor type

**Hand protection**
- **Material**: Chemical-resistant gloves
- **Remarks**: Consider double gloving. Take note that the product is flammable, which may impact the selection of hand protection.

**Eye protection**
- Wear safety glasses with side shields or goggles.
- If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
- Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

**Skin and body protection**
- Work uniform or laboratory coat.
- Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.
- Use appropriate degowning techniques to remove potentially contaminated clothing.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**: viscous liquid
- **Color**: dark, brown
- **Odor**: strong
- **Odor Threshold**: No data available
- **pH**: Not applicable
- **Melting point/freezing point**: No data available
- **Initial boiling point and boiling range**: No data available
- **Flash point**: 30 °C
- **Evaporation rate**: No data available
**SAFETY DATA SHEET**

**Dichlofenthion Formulation**

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date:</th>
<th>SDS Number:</th>
<th>Date of last issue:</th>
<th>Date of first issue:</th>
</tr>
</thead>
</table>

- **Flammability (solid, gas)**: Not applicable
- **Flammability (liquids)**: Not applicable
- **Upper explosion limit / Upper flammability limit**: No data available
- **Lower explosion limit / Lower flammability limit**: No data available
- **Vapor pressure**: No data available
- **Relative vapor density**: No data available
- **Relative density**: No data available
- **Density**: 1,009 - 1,051 g/cm³ (20 °C)
- **Solubility(ies)**
  - **Water solubility**: No data available
- **Partition coefficient: n-octanol/water**: Not applicable
- **Autoignition temperature**: No data available
- **Decomposition temperature**: No data available
- **Viscosity**
  - **Viscosity, kinematic**: No data available
- **Explosive properties**: Not explosive
- **Oxidizing properties**: The substance or mixture is not classified as oxidizing.
- **Particle size**: Not applicable

### SECTION 10. STABILITY AND REACTIVITY

- **Reactivity**: Not classified as a reactivity hazard.
- **Chemical stability**: Stable under normal conditions.
- **Possibility of hazardous reactions**
  - Flammable liquid and vapor.
  - Vapors may form explosive mixture with air.
  - Can react with strong oxidizing agents.
- **Conditions to avoid**: Heat, flames and sparks.
- **Incompatible materials**: Oxidizing agents
- **Hazardous decomposition products**: No hazardous decomposition products are known.
SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute toxicity
Harmful if swallowed.
May be harmful in contact with skin.

Product:
| Acute oral toxicity | Acute toxicity estimate: 1,450 mg/kg |
| Acute inhalation toxicity | Acute toxicity estimate: > 40 mg/l |
| Acute dermal toxicity | Acute toxicity estimate: 3,724 mg/kg |

Exposure time: 4 h
Test atmosphere: vapor
Method: Calculation method

Components:
Tar, wood:
| Acute oral toxicity | LD50 (Rat): > 2,000 mg/kg |
| Acute dermal toxicity | LD50 (Rat): > 2,000 mg/kg |

Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Rosin:
| Acute oral toxicity | LD50 (Rat): 2,800 mg/kg |
| Acute dermal toxicity | LD50 (Rat): > 2,000 mg/kg |

Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Tar, coal:
| Acute oral toxicity | LD50 (Rat): 1,700 mg/kg |
| Acute dermal toxicity | LD50 (Rabbit): > 5,000 mg/kg |

Ethylbenzene:
| Acute oral toxicity | LD50 (Rat): 3,500 mg/kg |
| Acute inhalation toxicity | LC50 (Rat): 17.8 mg/l |

Exposure time: 4 h
Test atmosphere: vapor
### Dichlofenthion Formulation

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date</th>
<th>SDS Number</th>
<th>Date of last issue</th>
<th>Date of first issue</th>
</tr>
</thead>
</table>

#### Acute dermal toxicity
- LD50 (Rabbit): > 5,000 mg/kg

### Xylene:
- **Acute oral toxicity**: LD50 (Rat): 3,523 mg/kg
- **Acute inhalation toxicity**: LC50 (Rat): 27.571 mg/l
  - Exposure time: 4 h
  - Test atmosphere: vapor
- **Acute dermal toxicity**: LD50 (Rabbit): > 4,200 mg/kg

### Dichlofenthion (ISO):
- **Acute oral toxicity**:
  - LD50 (Rat): 172 mg/kg
  - LD50 (Rat): 270 mg/kg
- **Acute inhalation toxicity**: LC50 (Rat): 1.75 mg/l
- **Acute dermal toxicity**: LD50 (Rabbit): 355 mg/kg
  - LD50 (Rabbit): 6,000 mg/kg

### Sodium hydroxide:
- **Acute inhalation toxicity**: Assessment: Corrosive to the respiratory tract.

### Phenol:
- **Acute oral toxicity**:
  - LD50 (Rat): 650 mg/kg
  - Method: OECD Test Guideline 401
  - Acute toxicity estimate (Humans): 140 - 290 mg/kg
  - Method: Expert judgment
- **Acute inhalation toxicity**:
  - LC0 (Rat): 0.9 mg/l
  - Exposure time: 8 h
  - Test atmosphere: dust/mist
  - Assessment: Corrosive to the respiratory tract.
  - Acute toxicity estimate (Humans): > 0.9 mg/l
  - Exposure time: 4 h
  - Test atmosphere: dust/mist
  - Method: Expert judgment
- **Acute dermal toxicity**: LD50 (Rabbit): 660 mg/kg
  - Method: OECD Test Guideline 402
  - Acute toxicity estimate (Humans): 300 mg/kg
  - Method: Expert judgment

### m-Cresol:
- **Acute oral toxicity**: LD50 (Rat): 121 mg/kg
SAFETY DATA SHEET

Dichlofenthion Formulation

Remarks: Based on data from similar materials

Acute inhalation toxicity : Assessment: Corrosive to the respiratory tract.
Acute dermal toxicity : LD50 (Rabbit): 301 mg/kg
Remarks: Based on data from similar materials

p-Cresol:
Acute oral toxicity : LD50 (Rat): 172 - 250 mg/kg
Acute inhalation toxicity : Assessment: Corrosive to the respiratory tract.
Acute dermal toxicity : LD50 (Rabbit): 213 - 426 mg/kg

Skin corrosion/irritation
Causes severe burns.

Components:

Tar, wood:
Method : OECD Test Guideline 439
Result : Skin irritation

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

Tar, coal:
Species : Rabbit
Result : Mild skin irritation

Xylene:
Species : Rabbit
Result : Skin irritation

Dichlofenthion (ISO):
Result : Mild skin irritation
Remarks : Based on data from similar materials

Sodium hydroxide:
Result : Corrosive after 3 minutes or less of exposure

Phenol:
Species : Rabbit
Result : Corrosive after 3 minutes to 1 hour of exposure

m-Cresol:
Species : Rabbit
Result : Corrosive after 3 minutes to 1 hour of exposure

p-Cresol:
Species : Rabbit
Result : Corrosive after 3 minutes to 1 hour of exposure

Serious eye damage/eye irritation
Causes serious eye damage.

Components:

Tar, wood:
Result : Irritation to eyes, reversing within 7 days

Rosin:
Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

Tar, coal:
Species : Human
Result : Irreversible effects on the eye

Xylene:
Species : Rabbit
Result : Irritation to eyes, reversing within 21 days

Sodium hydroxide:
Result : Irreversible effects on the eye
Remarks : Based on skin corrosivity.

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

m-Cresol:
Species : Rabbit
Result : Irreversible effects on the eye

p-Cresol:
Species : Rabbit
Result : Irreversible effects on the eye

Respiratory or skin sensitization

Skin sensitization
May cause an allergic skin reaction.
Respiratory sensitization
Not classified based on available information.

Components:

Tar, wood:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: positive
Assessment: Probability or evidence of low to moderate skin sensitization rate in humans

Rosin:
Assessment: Probability or evidence of skin sensitization in humans
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Tar, coal:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: positive
Remarks: Based on data from similar materials
Assessment: Probability or evidence of skin sensitization in humans

Xylene:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: negative

Dichlofenthion (ISO):
Routes of exposure: Dermal
Assessment: Does not cause skin sensitization.
Result: Weak sensitizer
Remarks: Based on data from similar materials

Sodium hydroxide:
Test Type: Human repeat insult patch test (HRIPT)
Routes of exposure: Skin contact
Result: negative

Phenol:
Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
<table>
<thead>
<tr>
<th>Component</th>
<th>Test Type</th>
<th>Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Method</strong></td>
<td><strong>OECD Test Guideline 406</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Result</strong></td>
<td><strong>negative</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>p-Cresol:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Type</td>
<td><strong>Draize Test</strong></td>
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<td></td>
</tr>
<tr>
<td>Routes of exposure</td>
<td><strong>Skin contact</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td><strong>Guinea pig</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Result</td>
<td><strong>negative</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Germ cell mutagenicity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suspected of causing genetic</td>
<td>defects.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Components:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tar, wood:</strong></td>
<td><strong>Test Type: Bacterial reverse mutation assay</strong></td>
<td><strong>AMES</strong></td>
<td><strong>negative</strong></td>
</tr>
<tr>
<td>Genotoxicity in vitro</td>
<td><strong>Method: OECD Test Guideline 471</strong></td>
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<td></td>
</tr>
<tr>
<td></td>
<td><strong>Result: negative</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rosin:</strong></td>
<td><strong>Test Type: Bacterial reverse mutation assay</strong></td>
<td><strong>AMES</strong></td>
<td><strong>negative</strong></td>
</tr>
<tr>
<td>Genotoxicity in vitro</td>
<td><strong>Method: OECD Test Guideline 471</strong></td>
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<tr>
<td></td>
<td><strong>Result: negative</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tar, coal:</strong></td>
<td><strong>Test Type: Bacterial reverse mutation assay</strong></td>
<td><strong>AMES</strong></td>
<td><strong>positive</strong></td>
</tr>
<tr>
<td>Genotoxicity in vitro</td>
<td><strong>Method: OECD Test Guideline 471</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Result: positive</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Remarks: Based on data from similar materials</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germ cell mutagenicity -</td>
<td><strong>Positive result(s) from in vivo non-mammalian somatic cell mutagenicity tests, supported by positive results from in vitro mutagenicity assays.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment</td>
<td><strong>Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ethylbenzene:</strong></td>
<td><strong>Test Type: Bacterial reverse mutation assay</strong></td>
<td><strong>AMES</strong></td>
<td><strong>negative</strong></td>
</tr>
<tr>
<td>Genotoxicity in vitro</td>
<td><strong>Method: OECD Test Guideline 476</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Result: negative</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Test Type: In vitro mammalian cell gene mutation test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Method: OECD Test Guideline 476</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Result: negative</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Test Type: Chromosome aberration test in vitro</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Method: OECD Test Guideline 486</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Genotoxicity in vivo</td>
<td><strong>Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Species: Mouse</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Application Route: Inhalation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Method: OECD Test Guideline 486</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Xylene:
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  Result: negative
- Test Type: Chromosome aberration test in vitro
  Result: negative
- Test Type: In vitro mammalian cell gene mutation test
  Result: negative
- Test Type: In vitro sister chromatid exchange assay in mammalian cells
  Result: negative

Genotoxicity in vivo:
- Test Type: Rodent dominant lethal test (germ cell) (in vivo)
  Species: Mouse
  Application Route: Skin contact
  Result: negative

Phenol:
Genotoxicity in vitro:
- Test Type: Chromosome aberration test in vitro
  Method: OECD Test Guideline 473
  Result: positive
- Test Type: Bacterial reverse mutation assay (AMES)
  Method: OECD Test Guideline 471
  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: positive

Remarks: Annex VI From 1272/2008

Germ cell mutagenicity - Assessment:
Positive result(s) from in vivo mammalian somatic cell mutagenicity tests.

m-Cresol:
Genotoxicity in vitro:
- Test Type: Chromosome aberration test in vitro
  Method: OECD Test Guideline 473
  Result: positive
- Test Type: Bacterial reverse mutation assay (AMES)
  Method: OECD Test Guideline 471
  Result: negative

Genotoxicity in vivo:
- Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
  Species: Mouse
  Application Route: Ingestion
  Method: OECD Test Guideline 475
  Result: negative
p-Cresol:
Genotoxicity in vitro: Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: positive

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo: Test Type: Rodent dominant lethal test (germ cell) (in vivo)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 478
Result: negative

Carcinogenicity
May cause cancer if swallowed.

Components:

Tar, coal:
Species: Mouse
Application Route: Ingestion
Exposure time: 2 Years
Result: positive

Carcinogenicity - Assessment: Positive evidence from human epidemiological studies (oral)
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Ethylbenzene:
Species: Rat
Application Route: Inhalation (vapor)
Exposure time: 104 weeks
Result: positive
Remarks: The mechanism or mode of action may not be relevant in humans.

Xylene:
Species: Rat
Application Route: Ingestion
Exposure time: 103 weeks
Result: negative

Phenol:
Species: Mouse
Application Route: Ingestion
Exposure time: 103 weeks
Method: OECD Test Guideline 451
Result: negative
m-Cresol:
- Species: Mouse, males
- Application Route: Ingestion
- Exposure time: 105 weeks
- Result: equivocal
- Remarks: Based on data from similar materials

Species: Mouse, female
Application Route: Ingestion
Exposure time: 106 - 107 weeks
Result: positive
Remarks: Based on data from similar materials

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

Reproductive toxicity
- Suspected of damaging the unborn child.

Components:

Rosin:
- Effects on fertility: Test Type: Reproduction/Developmental toxicity screening test
  Species: Rat
  Application Route: Ingestion
  Method: OECD Test Guideline 421
  Result: negative

Effects on fetal development: Test Type: Reproduction/Developmental toxicity screening test
  Species: Rat
  Application Route: Ingestion
  Method: OECD Test Guideline 421
  Result: negative

Ethylbenzene:
- Effects on fertility: Test Type: Two-generation reproduction toxicity study
  Species: Rat
  Application Route: Inhalation (vapor)
  Method: OECD Test Guideline 416
  Result: negative

Effects on fetal development: Test Type: Embryo-fetal development
  Species: Rat
  Application Route: Inhalation
**SAFETY DATA SHEET**

**Dichlofenthion Formulation**

Method: OECD Test Guideline 414  
Result: negative

**Xylene:**

Effects on fertility  
Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: inhalation (vapor)  
Result: negative

Effects on fetal development  
Test Type: Embryo-fetal development  
Species: Rat  
Application Route: inhalation (vapor)  
Result: negative

**Dichlofenthion (ISO):**

Effects on fetal development  
Test Type: Development  
Species: Mouse  
Application Route: Intraperitoneal  
Developmental Toxicity: LOAEL: 80 mg/kg body weight  
Result: Reduced fetal weight., Embryotoxic effects.  
Remarks: Based on data from similar materials

Test Type: Development  
Species: Rat  
Application Route: Intraperitoneal  
Developmental Toxicity: LOAEL: 10 mg/kg body weight  
Result: Reduced fetal weight., Embryotoxic effects., No teratogenic effects.  
Remarks: Based on data from similar materials

**Reproductive toxicity - Assessment**  
Suspected of damaging the unborn child.

**Phenol:**

Effects on fertility  
Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 416  
Result: negative

Effects on fetal development  
Test Type: Embryo-fetal development  
Species: Mouse  
Application Route: Ingestion  
Method: OECD Test Guideline 414  
Result: negative

**m-Cresol:**

Effects on fertility  
Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: negative

Effects on fetal development  
Test Type: Prenatal development toxicity study (teratogenicity)
### Dichlofenthion Formulation

**Species:** Rat  
**Application Route:** Ingestion  
**Result:** negative

#### p-Cresol:
**Effects on fertility:**  
Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: negative

**Effects on fetal development:**  
Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

#### STOT-single exposure

May cause respiratory irritation.  
Causes damage to organs (Nervous system).

**Components:**

**Tar, coal:**

<table>
<thead>
<tr>
<th>Routes of exposure</th>
<th>Target Organs</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingestion</td>
<td>Nervous system</td>
<td>Shown to produce significant health effects in animals at concentrations of 300 mg/kg bw or less.</td>
</tr>
</tbody>
</table>

**Xylene:**

| Assessment | May cause respiratory irritation. |

#### STOT-repeated exposure

Causes damage to organs (Nervous system) through prolonged or repeated exposure.  
May cause damage to organs (Central nervous system, Kidney, Liver, Skin, Respiratory Tract, Auditory system) through prolonged or repeated exposure.

**Components:**

**Tar, coal:**

<table>
<thead>
<tr>
<th>Routes of exposure</th>
<th>Target Organs</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation (dust/mist/fume)</td>
<td>Respiratory Tract</td>
<td>Shown to produce significant health effects in animals at concentrations of &gt;0.02 to 0.2 mg/l/6h/d.</td>
</tr>
</tbody>
</table>

**Ethylbenzene:**

<table>
<thead>
<tr>
<th>Routes of exposure</th>
<th>Target Organs</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation (vapor)</td>
<td>Auditory system</td>
<td>Shown to produce significant health effects in animals at concentrations of &gt;0.2 to 1 mg/l/6h/d.</td>
</tr>
</tbody>
</table>
Xylene:
Routes of exposure : inhalation (vapor)
Target Organs : Auditory system
Assessment : Shown to produce significant health effects in animals at concentrations of >0.2 to 1 mg/l/6h/d.

Dichlofenthion (ISO):
Target Organs : Nervous system
Assessment : Causes damage to organs through prolonged or repeated exposure.
Remarks : Based on human experience.

Phenol:
Target Organs : Central nervous system, Kidney, Liver, Skin
Assessment : May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Ethylbenzene:
Species : Rat
LOAEL : 0.868 mg/l
Application Route : inhalation (vapor)
Exposure time : 13 Weeks

Species : Rat
NOAEL : 75 mg/kg
LOAEL : 250 mg/kg
Application Route : Ingestion
Method : OECD Test Guideline 408

Xylene:
Species : Rat
LOAEL : > 0.2 - 1 mg/l
Application Route : inhalation (vapor)
Exposure time : 13 Weeks
Remarks : Based on data from similar materials

Species : Rat
LOAEL : 150 mg/kg
Application Route : Ingestion
Exposure time : 90 Days

Dichlofenthion (ISO):
Species : Rat
NOAEL : 0.75 mg/kg
Application Route : Oral
Exposure time : 90 d
Species: Dog  
NOAEL: 0.75 mg/kg  
Application Route: Oral  
Exposure time: 90 d

Phenol:
Species: Rat  
LOAEL: 300 mg/kg  
Application Route: Ingestion  
Exposure time: 90 Days  
Method: OECD Test Guideline 408

Species: Rat  
NOAEL: >= 0.1 mg/l  
Application Route: inhalation (vapor)  
Exposure time: 74 Days

Species: Rabbit  
LOAEL: 260 mg/kg  
Application Route: Skin contact  
Exposure time: 18 Days

m-Cresol:
Species: Rat  
NOAEL: 150 mg/kg  
Application Route: Ingestion  
Exposure time: 13 Weeks  
Method: OECD Test Guideline 408

p-Cresol:
Species: Rat  
NOAEL: 50 mg/kg  
LOAEL: 175 mg/kg  
Application Route: Ingestion  
Exposure time: 90 Days  
Method: OECD Test Guideline 408

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:
Ethylbenzene:
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.
**Experience with human exposure**

**Components:**

**Dichlofenthion (ISO):**

- **Skin contact:**
  - Symptoms: irritating, central nervous system effects, sweating
  - Remarks: Can be absorbed through skin. May cause sensitization by skin contact.

- **Eye contact:**
  - Symptoms: constriction of pupils, central nervous system effects

- **Ingestion:**
  - Symptoms: Nausea, Diarrhea, Vomiting, sweating, Lachrymation, constriction of pupils, Central nervous system depression, Gastrointestinal disturbance, bronchospasm, central nervous system effects, Edema

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

**Tar, wood:**

- **Toxicity to daphnia and other aquatic invertebrates:**
  - EC50 (Daphnia magna (Water flea)): 28 mg/l
  - Exposure time: 48 h
  - Method: OECD Test Guideline 202

- **Toxicity to algae/aquatic plants:**
  - EC50 (Desmodesmus subspicatus (green algae)): 17 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201
  - EC10 (Desmodesmus subspicatus (green algae)): 14 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201

**Rosin:**

- **Toxicity to fish:**
  - LL50 (Danio rerio (zebra fish)): > 1 - < 10 mg/l
  - Exposure time: 96 h
  - Test substance: Water Accommodated Fraction
  - Method: OECD Test Guideline 203

- **Toxicity to daphnia and other aquatic invertebrates:**
  - EL50 (Daphnia magna (Water flea)): 911 mg/l
  - Exposure time: 48 h
  - Test substance: Water Accommodated Fraction
  - Method: OECD Test Guideline 202

- **Toxicity to algae/aquatic plants:**
  - NOELR (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l
  - Exposure time: 72 h
  - Test substance: Water Accommodated Fraction
  - Method: OECD Test Guideline 201
### Toxicity to microorganisms

- EC50: > 10,000 mg/l
- Exposure time: 3 h
- Method: OECD Test Guideline 209

### Tar, coal:

#### Toxicity to fish

- LL50 (Danio rerio (zebra fish)): > 250 mg/l
- Exposure time: 96 h
- Test substance: Water Accommodated Fraction
- Method: OECD Test Guideline 203
- Remarks: Based on data from similar materials

#### Toxicity to daphnia and other aquatic invertebrates

- EL50 (Daphnia magna (Water flea)): 2.8 mg/l
- Exposure time: 48 h
- Test substance: Water Accommodated Fraction
- Method: OECD Test Guideline 202
- Remarks: Based on data from similar materials

#### Toxicity to algae/aquatic plants

- EL50 (Desmodesmus subspicatus (green algae)): 36 mg/l
- Exposure time: 72 h
- Method: OECD Test Guideline 201
- Remarks: Based on data from similar materials

- NOELR (Desmodesmus subspicatus (green algae)): 5 mg/l
- Exposure time: 72 h
- Method: OECD Test Guideline 201
- Remarks: Based on data from similar materials

### Ethylbenzene:

#### Toxicity to fish

- LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l
- Exposure time: 96 h
- Method: OECD Test Guideline 203

#### Toxicity to daphnia and other aquatic invertebrates

- EC50 (Daphnia magna (Water flea)): 1.8 - 2.4 mg/l
- Exposure time: 48 h

#### Toxicity to algae/aquatic plants

- EC50 (Pseudokirchneriella subcapitata (green algae)): 3.6 mg/l
- Exposure time: 96 h
- NOEC (Pseudokirchneriella subcapitata (green algae)): 3.4 mg/l
- Exposure time: 96 h

#### Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

- NOEC (Ceriodaphnia dubia (water flea)): 0.96 mg/l
- Exposure time: 7 d

#### Toxicity to microorganisms

- EC50 (Nitrosomonas sp.): 96 mg/l
- Exposure time: 24 h

### Xylene:

#### Toxicity to fish

- LC50 (Oncorhynchus mykiss (rainbow trout)): 13.5 mg/l
- Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants: EC50 (Skeletonema costatum (marine diatom)): 10 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity): NOEC (Danio rerio (zebra fish)): > 0.1 - < 1 mg/l
Exposure time: 35 d
Method: OECD Test Guideline 210
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): EL10 (Daphnia magna (Water flea)): > 1 - 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Toxicity to microorganisms: NOEC: > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

**Dichlofenthion (ISO):**

Toxicity to fish: LC50 (No species specified): 0.64 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

LC50 (Lepomis macrochirus (Bluegill sunfish)): 1.23 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 0.0011 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

**Phenol:**

Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): 24.9 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (Ceriodaphnia dubia (water flea)): 3.1 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants: EC50 (Selenastrum capricornutum (green algae)): 61.1 mg/l
Exposure time: 96 h

Toxicity to fish (Chronic toxicity): NOEC: 0.077 mg/l
Exposure time: 60 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 16 d

Toxicity to microorganisms: IC50 (Nitrosomonas sp.): 21 mg/l
### m-Cresol:

**Toxicity to fish**
- LC50 (Oncorhynchus mykiss (rainbow trout)): 8.6 mg/l
- Exposure time: 96 h

**Toxicity to daphnia and other aquatic invertebrates**
- EC50 (Daphnia pulex (Water flea)): > 99.5 mg/l
- Exposure time: 48 h

**Toxicity to fish (Chronic toxicity)**
- NOEC (Pimephales promelas (fathead minnow)): 1.35 mg/l
- Exposure time: 32 d
- Remarks: Based on data from similar materials

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**
- NOEC (Daphnia magna (Water flea)): 1 mg/l
- Exposure time: 21 d
- Remarks: Based on data from similar materials

### p-Cresol:

**Toxicity to fish**
- LC50 (Oncorhynchus mykiss (rainbow trout)): 7.4 mg/l
- Exposure time: 96 h

**Toxicity to daphnia and other aquatic invertebrates**
- EC50 (Daphnia magna (Water flea)): 7.7 mg/l
- Exposure time: 48 h
- Method: DIN 38412

**Toxicity to algae/aquatic plants**
- EC50 (Desmodesmus subspicatus (green algae)): 7.8 mg/l
- Exposure time: 48 h
- EC10 (Desmodesmus subspicatus (green algae)): 2.3 mg/l
- Exposure time: 48 h

**Toxicity to fish (Chronic toxicity)**
- NOEC (Pimephales promelas (fathead minnow)): 1.35 mg/l
- Exposure time: 32 d

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**
- NOEC (Daphnia magna (Water flea)): 1 mg/l
- Exposure time: 21 d

**Toxicity to microorganisms**
- IC50 (Nitrosomonas sp.): 260 mg/l
- Exposure time: 24 h

### Persistence and degradability

**Components:**

**Tar, wood:**
- Biodegradability: Result: Not readily biodegradable.
  - Biodegradation: 47%
  - Exposure time: 28 d
  - Method: OECD Test Guideline 301B

**Rosin:**
- Biodegradability: Result: Readily biodegradable.
Biodegradation: 71 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

**Ethylbenzene:**
Biodegradability: Readily biodegradable.
Biodegradation: 70 - 80 %
Exposure time: 28 d

**Xylene:**
Biodegradability: Readily biodegradable.
Biodegradation: > 70 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

**Phenol:**
Biodegradability: Readily biodegradable.
Biodegradation: 62 %
Exposure time: 10 d
Method: OECD Test Guideline 301C

**m-Cresol:**
Biodegradability: Readily biodegradable.
Biodegradation: 90 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

**p-Cresol:**
Biodegradability: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 8 d

**Bioaccumulative potential**

**Components:**

**Tar, wood:**
Partition coefficient: n-octanol/water: log Pow: 0.2 - 2.02

**Rosin:**
Bioaccumulation: Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): < 100
Partition coefficient: n-octanol/water: log Pow: 3 - 6.2

**Tar, coal:**
Partition coefficient: n-octanol/water: Remarks: No data available
Ethylbenzene:
Partition coefficient: n-octanol/water : log Pow: 3.6

Xylene:
Partition coefficient: n-octanol/water : log Pow: 3.16
Remarks: Calculation

Dichlofenthion (ISO):
Partition coefficient: n-octanol/water : log Pow: 5.14

Phenol:
Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 17.5
Method: OECD Test Guideline 305
Partition coefficient: n-octanol/water : log Pow: 1.47

m-Cresol:
Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): 17 - 20
Partition coefficient: n-octanol/water : log Pow: 1.96

p-Cresol:
Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): 17 - 20
Remarks: Based on data from similar materials
Partition coefficient: n-octanol/water : log Pow: 1.94

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues : Dispose of in accordance with local regulations.
Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal. Empty containers retain residue and can be dangerous. 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. If not otherwise specified: Dispose of as unused product.
SECTION 14. TRANSPORT INFORMATION

International Regulations

**UNRTDG**
- **UN number**: UN 2920
- **Proper shipping name**: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Sodium hydroxide, Ethylbenzene)
- **Class**: 8
- **Subsidiary risk**: 3
- **Packing group**: II
- **Labels**: 8 (3)

**IATA-DGR**
- **UN/ID No.**: UN 2920
- **Proper shipping name**: Corrosive liquid, flammable, n.o.s. (Sodium hydroxide, Ethylbenzene)
- **Class**: 8
- **Subsidiary risk**: 3
- **Packing group**: II
- **Labels**: Corrosive, Flammable Liquids
- **Packing instruction (cargo aircraft)**: 855
- **Packing instruction (passenger aircraft)**: 851

**IMDG-Code**
- **UN number**: UN 2920
- **Proper shipping name**: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Sodium hydroxide, Ethylbenzene, Dichlofenthion (ISO))
- **Class**: 8
- **Subsidiary risk**: 3
- **Packing group**: II
- **Labels**: 8 (3)
- **EmS Code**: F-E, S-C
- **Marine pollutant**: yes

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**
Not applicable for product as supplied.

**Domestic regulation**

**NOM-002-SCT**
- **UN number**: UN 2920
- **Proper shipping name**: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Sodium hydroxide, Ethylbenzene)
- **Class**: 8
- **Subsidiary risk**: 3
- **Packing group**: II
- **Labels**: 8 (3)

**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.
SECTION 15. REGULATORY INFORMATION

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

NOM-165-SEMARNAT-2013, Norm establishing a list of substances subject to report for the Registry of Emissions and Pollutant Transfer Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>MPU (kg/year)</th>
<th>Transfer/Release (kg/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenol</td>
<td>108-95-2</td>
<td>5000 kg/year</td>
<td>500 kg/year</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>5000 kg/year</td>
<td>1000 kg/year</td>
</tr>
</tbody>
</table>

MPU: Applicable reporting threshold when the substance, pure or in mixture in a composition of more than 1% by weight, is used for industrial activities at facilities that are subject to report or are produced by them

Federal Law for the control of chemical precursors, essential chemical products and machinery for producing capsules, tablets and pills.

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

- AICS: not determined
- DSL: not determined
- IECSC: not determined

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

- ACGIH: USA. ACGIH Threshold Limit Values (TLV)
- ACGIH BEI: ACGIH - Biological Exposure Indices (BEI)
- MX BEI: Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for workers occupationally exposed to chemical agents
- ACGIH / TWA: 8-hour, time-weighted average
- ACGIH / STEL: Short-term exposure limit
- ACGIH / C: Ceiling limit
- NOM-010-STPS-2014 / VLE-PPT: Time weighted average limit value
- NOM-010-STPS-2014 / VLE-CT: Short term exposure limit value
- NOM-010-STPS-2014 / VLE-P: Ceiling value

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule;
SAFETY DATA SHEET

Dichlofenthion Formulation

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date</th>
<th>SDS Number</th>
<th>Date of last issue</th>
<th>Date of first issue</th>
</tr>
</thead>
</table>

ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50% of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System


Revision Date: 23.03.2020

The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.

MX / Z8