SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Dichlofenthion Formulation

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

1.1 Product identifier
   Trade name : Dichlofenthion Formulation

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Use of the Substance/Mixture : Veterinary product

1.3 Details of the supplier of the safety data sheet
   Company : MSD
           : Shotton Lane
           : NE23 3JU Cramlington NU - Great Britain
   Telephone : 44 1 670 59 30 00
   Telefax : 908-735-1496
   E-mail address of person responsible for the SDS : EHSDATASTEWARD@msd.com

1.4 Emergency telephone number
   1-908-423-6000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

   Classification (REGULATION (EC) No 1272/2008)
   Acute toxicity, Category 4 : H302: Harmful if swallowed.
   Skin corrosion, Sub-category 1B : H314: Causes severe skin burns and eye damage.
   Serious eye damage, Category 1 : H318: Causes serious eye damage.
   Skin sensitisation, Category 1 : H317: May cause an allergic skin reaction.
   Germ cell mutagenicity, Category 2 : H341: Suspected of causing genetic defects.
   Carcinogenicity, Category 1A : H350: May cause cancer if swallowed.
   Reproductive toxicity, Category 2 : H361d: Suspected of damaging the unborn child.
   Specific target organ toxicity - single exposure, Category 1 : H370: Causes damage to organs.
   Specific target organ toxicity - single exposure, Category 3 : H335: May cause respiratory irritation.
   Specific target organ toxicity - repeated exposure, Category 2 : H373: May cause damage to organs through pro-longed or repeated exposure.
   Aspiration hazard, Category 1 : H304: May be fatal if swallowed and enters air-ways.
   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.
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.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements:

EUH071 Corrosive to the respiratory tract.

Precautionary statements:

Prevention:
P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
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/ doctor.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P391 Collect spillage.

Hazardous components which must be listed on the label:

Tar, wood
Rosin
Tar, coal
Ethylbenzene
Dichlofenthion (ISO)
Sodium hydroxide
Phenol

Additional Labelling

Restricted to professional users.
### 2.3 Other hazards
Vapours may form explosive mixture with air.

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

**Components**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tar, wood</td>
<td>91722-33-7</td>
<td>294-436-0</td>
<td></td>
<td>Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317 Aquatic Chronic 3; H412</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Rosin</td>
<td>8050-09-7</td>
<td>232-475-7</td>
<td>650-015-00-7</td>
<td>Skin Sens. 1; H317</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Tar, coal</td>
<td>8007-45-2</td>
<td>232-361-7</td>
<td>648-081-00-7</td>
<td>Acute Tox. 4; H302 Eye Dam. 1; H318 Skin Sens. 1; H317 Muta. 2; H341 Carc. 1A; H350 STOT SE 1; H370 STOT SE 3; H335 STOT RE 2; H373 Aquatic Chronic 2; H411</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>202-849-4</td>
<td>601-023-00-4</td>
<td>Flam. Liq. 2; H225 Acute Tox. 4; H332 STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Chronic 3; H412</td>
<td>&gt;= 2.5 - &lt; 10</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>215-535-7</td>
<td>601-022-00-9</td>
<td>Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Chronic 3; H412</td>
<td>&gt;= 2.5 - &lt; 10</td>
</tr>
<tr>
<td>Dichlofenthion (ISO)</td>
<td>97-17-6</td>
<td>202-564-5</td>
<td>015-068-00-7</td>
<td>Acute Tox. 3; H301 Acute Tox. 4; H332 Acute Tox. 3; H311 Repr. 2; H361d STOT RE 1; H372 Aquatic Acute 1; H400</td>
<td>&gt;= 3 - &lt; 10</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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>
<tbody>
<tr>
<td>3.3</td>
<td>23.03.2020</td>
<td>1560319-00007</td>
<td>13.09.2019</td>
<td>14.04.2017</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures

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

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

If inhaled: If inhaled, remove to fresh air. 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.

Aquatic Chronic 1; H410

M-Factor (Acute aquatic toxicity): 100
M-Factor (Chronic aquatic toxicity): 100

Sodium hydroxide

011-002-00-6 011-002-00-6 011-002-00-6

Met. Corr. 1; H290
Skin Corr. 1A; H314
Eye Dam. 1; H318

Phenol

203-632-7 203-632-7 203-632-7
604-001-00-2 604-001-00-2 604-001-00-2

Acute Tox. 3; H301
Acute Tox. 3; H331
Acute Tox. 3; H311
Skin Corr. 1B; H314
Eye Dam. 1; H318
Muta. 2; H341
STOT RE 2; H373
Aquatic Chronic 2; H411

m-Cresol

203-577-9 203-577-9 203-577-9
604-004-00-9 604-004-00-9 604-004-00-9

Acute Tox. 3; H301
Acute Tox. 3; H311
Skin Corr. 1B; H314
Eye Dam. 1; H318
Aquatic Chronic 3; H412

p-Cresol

106-44-5 106-44-5 106-44-5
203-398-6 203-398-6 203-398-6
604-004-00-9 604-004-00-9 604-004-00-9

Acute Tox. 3; H301
Acute Tox. 3; H311
Skin Corr. 1B; H314
Eye Dam. 1; H318
Aquatic Chronic 3; H412

For explanation of abbreviations see section 16.
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.
Get medical attention immediately.

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

4.2 Most important symptoms and effects, both acute and delayed
Risks: Harmful if swallowed.
May be fatal if swallowed and enters airways.
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.
May cause damage to organs through prolonged or repeated exposure.
Corrosive to the respiratory tract.
Causes severe burns.

Causes digestive tract burns.

4.3 Indication of any immediate medical attention and special treatment needed
Treatment: Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media: Water spray
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 firefighting: Do not use a solid water stream as it may scatter and spread fire.
## Dichlofenthion Formulation

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.3</td>
<td>Advice for firefighters</td>
</tr>
<tr>
<td></td>
<td>Hazardous combustion products: Carbon oxides, Metal oxides, Nitrogen oxides (NOx)</td>
</tr>
<tr>
<td>6.1</td>
<td>Personal precautions, protective equipment and emergency procedures</td>
</tr>
<tr>
<td>Personal precautions</td>
<td>Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.</td>
</tr>
<tr>
<td>6.2</td>
<td>Environmental precautions</td>
</tr>
<tr>
<td>Environmental precautions</td>
<td>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.</td>
</tr>
<tr>
<td>6.3</td>
<td>Methods and material for containment and cleaning up</td>
</tr>
<tr>
<td>Methods for cleaning up</td>
<td>Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapours/mists with a water spray jet. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. 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...</td>
</tr>
</tbody>
</table>
certain local or national requirements.

6.4 Reference to other sections
See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures: See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation:
- If sufficient ventilation is unavailable, use with local exhaust ventilation.
- 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 vapours 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 sensitised individuals should consult their physician regarding working with respiratory irritants or sensitisers.
- 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 engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:

Advice on common storage:
- 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

7.3 Specific end use(s)
Specific use(s): No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosin</td>
<td>8050-09-7</td>
<td>OELV - 8 hrs (TWA)</td>
<td>0.05 mg/m³ (airborne total resin acid)</td>
<td>IE OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Further information: Chemical agents which following exposure may cause sensitisation of the respiratory tract and lead to asthma, rhinitis or extrinsic allergic alveolitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OELV - 15 min (STEL)</td>
<td>0.15 mg/m³ (airborne total resin acid)</td>
<td>IE OEL</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>TWA</td>
<td>100 ppm 442 mg/m³</td>
<td>2000/39/EC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Further information: Identifies the possibility of significant uptake through the skin, Indicative</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>200 ppm 884 mg/m³</td>
<td>2000/39/EC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OELV - 8 hrs (TWA)</td>
<td>100 ppm 442 mg/m³</td>
<td>IE OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Further information: Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OELV - 15 min (STEL)</td>
<td>200 ppm 884 mg/m³</td>
<td>IE OEL</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>TWA</td>
<td>50 ppm 221 mg/m³</td>
<td>2000/39/EC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Further information: Identifies the possibility of significant uptake through the skin, Indicative</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>100 ppm 442 mg/m³</td>
<td>2000/39/EC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OELV - 8 hrs (TWA)</td>
<td>50 ppm 221 mg/m³</td>
<td>IE OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Further information: Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body, Indicative Occupational Exposure Limit Value</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OELV - 15 min (STEL)</td>
<td>100 ppm 442 mg/m³</td>
<td>IE OEL</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>
<tr>
<td></td>
<td></td>
<td>Further information: Skin</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>200 µg/100 cm²</td>
<td>Internal</td>
</tr>
</tbody>
</table>
## Dichlofenthion Formulation

### Sodium hydroxide

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosin</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>117 mg/m3</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>17 mg/kg bw/day</td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>35 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>10 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>10 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>1 mg/m3</td>
</tr>
<tr>
<td>Rosin</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>1 mg/m3</td>
</tr>
<tr>
<td>Tar, wood</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>70.53 mg/m3</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>355.56 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Phenol</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>8 mg/m3</td>
</tr>
</tbody>
</table>

Further information: Identifies the possibility of significant uptake through the skin, Indicative

Further information: Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body, Indicative Occupational Exposure Limit Value

Further information: Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body, Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit value should be used, Indicative Occupational Exposure Limit Value

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

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>1 mg/m3</td>
</tr>
<tr>
<td>Rosin</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>117 mg/m3</td>
</tr>
<tr>
<td>Tar, wood</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>70.53 mg/m3</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>355.56 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Phenol</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>8 mg/m3</td>
</tr>
<tr>
<td>Compound</td>
<td>Worker Contact Type</td>
<td>Effects Type</td>
<td>Value (mg/m³ or mg/kg bw/day)</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>---------------------</td>
<td>------------------------</td>
<td>-------------------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inhalation</td>
<td>Acute local effects</td>
<td>16 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Dichlofenthion Formulation</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>1.23 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>1.32 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>0.4 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>0.4 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>m-Cresol</td>
<td>Workers</td>
<td>Inhalation Long-term systemic effects</td>
<td>3.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact Long-term systemic effects</td>
<td>0.5 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact Acute systemic effects</td>
<td>1.47 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation Long-term systemic effects</td>
<td>0.75 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact Long-term systemic effects</td>
<td>0.25 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact Acute systemic effects</td>
<td>0.74 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion Long-term systemic effects</td>
<td>0.25 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion Acute systemic effects</td>
<td>0.74 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>p-Cresol</td>
<td>Workers</td>
<td>Inhalation Long-term systemic effects</td>
<td>3.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact Long-term systemic effects</td>
<td>7 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact Acute systemic effects</td>
<td>0.5 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact Long-term systemic effects</td>
<td>1 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation Long-term systemic effects</td>
<td>0.75 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact Long-term systemic effects</td>
<td>1.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact Acute systemic effects</td>
<td>0.25 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion Long-term systemic effects</td>
<td>0.25 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Xylene</td>
<td>Workers Inhalation Long-term systemic effects</td>
<td>221 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation Acute systemic effects</td>
<td>442 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation Long-term local effects</td>
<td>221 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>
### Effects to Workers

<table>
<thead>
<tr>
<th></th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute local effects</td>
<td>Fresh water</td>
<td>442 mg/m³</td>
</tr>
<tr>
<td>Long-term systemic effects</td>
<td>Marine water</td>
<td>212 mg/kg bw/day</td>
</tr>
<tr>
<td>Long-term systemic effects</td>
<td>Intermittent use/release</td>
<td>65.3 mg/m³</td>
</tr>
<tr>
<td>Long-term systemic effects</td>
<td>Sewage treatment plant</td>
<td>260 mg/m³</td>
</tr>
<tr>
<td>Acute local effects</td>
<td>Fresh water sediment</td>
<td>65.3 mg/m³</td>
</tr>
<tr>
<td>Long-term systemic effects</td>
<td>Marine sediment</td>
<td>65.3 mg/m³</td>
</tr>
<tr>
<td>Acute local effects</td>
<td>Skin contact</td>
<td>260 mg/m³</td>
</tr>
<tr>
<td>Long-term systemic effects</td>
<td>Marine sediment</td>
<td>260 mg/m³</td>
</tr>
<tr>
<td>Long-term systemic effects</td>
<td>Ingestion</td>
<td>125 mg/kg bw/day</td>
</tr>
<tr>
<td>Long-term systemic effects</td>
<td>Marine sediment</td>
<td>12.5 mg/kg bw/day</td>
</tr>
<tr>
<td>Acute local effects</td>
<td>Ethylbenzene Inhalation</td>
<td>77 mg/m³</td>
</tr>
<tr>
<td>Long-term systemic effects</td>
<td>Ethylbenzene Marine water</td>
<td>293 mg/m³</td>
</tr>
<tr>
<td>Long-term systemic effects</td>
<td>Ethylbenzene Intermittent use/release</td>
<td>180 mg/kg bw/day</td>
</tr>
<tr>
<td>Long-term systemic effects</td>
<td>Ethylbenzene Sewage treatment plant</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td>Long-term systemic effects</td>
<td>Ethylbenzene Fresh water sediment</td>
<td>1.6 mg/kg bw/day</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosin</td>
<td>Fresh water</td>
<td>0.0016 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.00016 mg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>0.016 mg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>1000 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0.007 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.0007 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>0.00045 mg/kg</td>
</tr>
<tr>
<td>Tar, wood</td>
<td>Fresh water</td>
<td>0.003 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0.006 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.001 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>0.002 mg/kg</td>
</tr>
<tr>
<td>Phenol</td>
<td>Fresh water</td>
<td>0.0077 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.00077 mg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>0.031 mg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>2.1 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0.0915 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.00915 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>0.136 mg/kg</td>
</tr>
<tr>
<td>m-Cresol</td>
<td>Fresh water</td>
<td>0.1 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.01 mg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>0.076 mg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>1.14 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0.71 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.071 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>0.0831 mg/kg</td>
</tr>
</tbody>
</table>
Dichlofenthion Formulation

8.2 Exposure controls

Engineering measures
Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less 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
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.

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.
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.

Respiratory protection: If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection. Equipment should conform to I.S. EN 14387 Filter type: Combined particulates and organic vapour type (A-P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance: viscous liquid
- Colour: dark, brown
- Odour: strong
- Odour 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
- Flammability (solid, gas): Not applicable
- Upper explosion limit / Upper flammability limit: No data available
- Lower explosion limit / Lower flammability limit: No data available
- Vapour pressure: No data available
- Relative vapour 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
  - Auto-ignition temperature: No data available
  - Decomposition temperature: No data available
Dichlofenthion Formulation

Viscosity
- Viscosity, kinematic: No data available
- Explosive properties: Not explosive
- Oxidizing properties: The substance or mixture is not classified as oxidizing.

9.2 Other information
- Flammability (liquids): Not applicable
- Particle size: Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity
- Not classified as a reactivity hazard.

10.2 Chemical stability
- Stable under normal conditions.

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

10.4 Conditions to avoid
- Conditions to avoid: Heat, flames and sparks.

10.5 Incompatible materials
- Materials to avoid: Oxidizing agents

10.6 Hazardous decomposition products
- No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Information on likely routes of exposure:
  - Inhalation
  - Skin contact
  - Ingestion
  - Eye contact

Acute toxicity
- Harmful if swallowed.

Product:
- Acute oral toxicity: Acute toxicity estimate: 1,713 mg/kg
  Method: Calculation method
Dichlofenthion Formulation

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

Acute dermal toxicity: Acute toxicity estimate: > 2,000 mg/kg
  Method: Calculation method

Components:

Tar, wood:
Acute oral 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: vapour
Acute dermal toxicity: LD50 (Rabbit): > 5,000 mg/kg

Xylene:
Acute oral toxicity: LD50 (Rat): 3,523 mg/kg
Acute inhalation toxicity: Acute toxicity estimate: 11 mg/l
  Exposure time: 4 h
  Test atmosphere: vapour
  Method: Expert judgement
  Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI
Acute dermal toxicity: Acute toxicity estimate: 1,100 mg/kg
**SAFETY DATA SHEET**

*according to Regulation (EC) No. 1907/2006*

## 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>
<tbody>
<tr>
<td>3.3</td>
<td>23.03.2020</td>
<td>1560319-00007</td>
<td>13.09.2019</td>
<td>14.04.2017</td>
</tr>
</tbody>
</table>

Method: Expert judgement

Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

### 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 (Rat): 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 judgement

**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 judgement

**Acute dermal toxicity**
- LD50 (Rabbit): 660 mg/kg
  Method: OECD Test Guideline 402

  Acute toxicity estimate (Humans): 300 mg/kg
  Method: Expert judgement

### m-Cresol:

**Acute oral toxicity**
- LD50 (Rat): 121 mg/kg
  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:

---
Dichlofenthion Formulation

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
Dichlofenthion Formulation

Serious eye damage/eye irritation
Causes serious eye damage.

Components:

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

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

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

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

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

Respiratory or skin sensitisation

Skin sensitisation
May cause an allergic skin reaction.

Respiratory sensitisation
Not classified based on available information.

Components:

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

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

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

Xylene:
Test Type: Local lymph node assay (LLNA)
Exposure routes: Skin contact
Species: Mouse
Result: negative

Dichlofenthion (ISO):
Exposure routes: Dermal
Assessment: Does not cause skin sensitisation.
Result: Weak sensitizer
Remarks: Based on data from similar materials

Sodium hydroxide:
Test Type: Human repeat insult patch test (HRIPT)
Exposure routes: Skin contact
Result: negative

Phenol:
Test Type: Buehler Test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

p-Cresol:
Dichlofenthion Formulation

Test Type: Draize Test
Exposure routes: Skin contact
Species: Guinea pig
Result: negative

Germ cell mutagenicity
Suspected of causing genetic defects.

Components:

Tar, wood:
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Rosin:
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

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

Germ cell mutagenicity - Assessment:
Positive result(s) from in vivo non-mammalian somatic cell mutagenicity tests, supported by positive results from in vitro mutagenicity assays.
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

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

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

Test Type: Chromosome aberration test in vitro
Result: negative

Genotoxicity in vivo: Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo
Species: Mouse
Application Route: Inhalation
Method: OECD Test Guideline 486
Result: negative

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

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 (vapour)
Exposure time: 104 weeks
Result: positive
Remarks: The mechanism or mode of action may not be relevant in humans.

Phenol:
Species: Mouse
Application Route: Ingestion
Exposure time: 103 weeks
Method: OECD Test Guideline 451
Result: negative

m-Cresol:
Species: Mouse, males
Dichlofenthion Formulation

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

**p-Cresol:**
Species: Mouse
Application Route: Ingestion
Exposure time: 106 - 107 weeks
Result: negative
Remarks: Based on data from similar materials

**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 foetal 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 (vapour)
Method: OECD Test Guideline 416
Result: negative

Effects on foetal development: Test Type: Embryo-foetal development
Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 414
Xylene:
Effects on fertility:
- Test Type: One-generation reproduction toxicity study
- Species: Rat
- Application Route: Ingestion (vapour)
- Result: negative

Effects on foetal development:
- Test Type: Embryo-foetal development
- Species: Rat
- Application Route: Ingestion (vapour)
- Result: negative

Dichlofenthion (ISO):
Effects on foetal development:
- Test Type: Development
- Species: Mouse
- Application Route: Intraperitoneal
- Developmental Toxicity: LOAEL: 80 mg/kg body weight
- Result: Reduced foetal weight, Embryotoxic 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 foetal development:
- Test Type: Embryo-foetal 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 foetal development:
- Test Type: Prenatal development toxicity study (teratogenicity)
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 foetal development: Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

**STOT - single exposure**
May cause respiratory irritation.  
Causes damage to organs.  
Corrosive to the respiratory tract.

**Components:**

**Tar, coal:**
Exposure routes: Ingestion  
Target Organs: Nervous system  
Assessment: Shown to produce significant health effects in animals at concentrations of 300 mg/kg bw or less.

**Xylene:**
Assessment: May cause respiratory irritation.

**STOT - repeated exposure**
May cause damage to organs through prolonged or repeated exposure.

**Components:**

**Tar, coal:**
Target Organs: Respiratory Tract  
Assessment: Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

Exposure routes: inhalation (dust/mist/fume)  
Target Organs: Respiratory Tract  
Assessment: Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

**Ethylbenzene:**
Exposure routes: inhalation (vapour)  
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 Formulation

Xylene:
Exposure routes: inhalation (vapour)
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 (vapour)
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 (vapour)
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 (vapour)
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.
Xylene:
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):**

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>Symptoms: irritating, central nervous system effects, sweating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Remarks: Can be absorbed through skin. May cause sensitisation by skin contact.</td>
</tr>
</tbody>
</table>

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

| Ingestion | Symptoms: Nausea, Diarrhoea, Vomiting, sweating, Lachrymation, constriction of pupils, Central nervous system depression, Gastrointestinal disturbance, bronchospasm, central nervous system effects, Oedema |

**SECTION 12: Ecological information**

**12.1 Toxicity**

**Components:**

**Tar, wood:**

<table>
<thead>
<tr>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
<th>EC50 (Daphnia magna (Water flea)): 28 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time: 48 h</td>
<td>Method: OECD Test Guideline 202</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to algae/aquatic plants</th>
<th>EC50 (Desmodesmus subspicatus (green algae)): 17 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time: 72 h</td>
<td>Method: OECD Test Guideline 201</td>
</tr>
</tbody>
</table>

| EC10 (Desmodesmus subspicatus (green algae)): 14 mg/l |
| Exposure time: 72 h |
| Method: OECD Test Guideline 201 |

**Rosin:**

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>LL50 (Danio rerio (zebra fish)): &gt; 1 - &lt; 10 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time: 96 h</td>
<td>Test substance: Water Accommodated Fraction</td>
</tr>
<tr>
<td>Method: OECD Test Guideline 203</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
<th>EL50 (Daphnia magna (Water flea)): 911 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time: 48 h</td>
<td>Method: OECD Test Guideline 202</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to algae/aquatic plants</th>
<th>NOELR (Pseudokirchneriella subcapitata (green algae)): &gt; 1,000 mg/l</th>
</tr>
</thead>
</table>
### Toxicity to microorganisms

Exposure time: 72 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 201

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

### Tar, coal:

#### Toxicity to fish

Exposure time: 96 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 203  
Remarks: Based on data from similar materials

Toxicity: LL50 (Danio rerio (zebra fish)): > 250 mg/l

#### Toxicity to daphnia and other aquatic invertebrates

Exposure time: 48 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 202  
Remarks: Based on data from similar materials

Toxicity: EL50 (Daphnia magna (Water flea)): 2.8 mg/l  
Exposure time: 48 h

#### Toxicity to algae/aquatic plants

Exposure time: 96 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

Toxicity: EL50 (Desmodesmus subspicatus (green algae)): 36 mg/l  
Exposure time: 72 h

Toxicity: 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

Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity: LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l

#### Toxicity to daphnia and other aquatic invertebrates

Exposure time: 48 h

Toxicity: EC50 (Daphnia magna (Water flea)): 1.8 - 2.4 mg/l

#### Toxicity to algae/aquatic plants

Exposure time: 96 h

Toxicity: EC50 (Pseudokirchneriella subcapitata (green algae)): 3.6 mg/l

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

#### Toxicity to microorganisms

Exposure time: 24 h

Toxicity: EC50 (Nitrosomonas sp.): 96 mg/l

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

Exposure time: 7 d  
Species: Ceriodaphnia dubia (water flea)

Toxicity: NOEC: 0.96 mg/l
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 microorganisms: NOEC: > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

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

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

M-Factor (Acute aquatic toxicity): 100

M-Factor (Chronic aquatic toxicity): 100

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

**EC50** (Daphnia pulex (Water flea)): > 99.5 mg/l  
Exposure time: 48 h

**NOEC** (Daphnia magna (Water flea)): 1 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Remarks: Based on data from similar materials

**NOEC** (Pimephales promelas (fathead minnow)): 1.35 mg/l  
Exposure time: 32 d  
Species: Pimephales promelas (fathead minnow)  
Remarks: Based on data from similar materials

### Toxicity to Algae/Aquatic Plants

**EC50** (Selenastrum capricornutum (green algae)): 61.1 mg/l  
Exposure time: 96 h

**EC10** (Desmodesmus subspicatus (green algae)): 2.3 mg/l  
Exposure time: 48 h

**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 Microorganisms

**IC50** (Nitrosomonas sp.): 21 mg/l  
Exposure time: 24 h

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

### Toxicity to Fish (Chronic Toxicity)

**NOEC** (Oncorhynchus mykiss (rainbow trout)): 0.077 mg/l  
Exposure time: 60 d

**NOEC** (Pimephales promelas (fathead minnow)): 1.35 mg/l  
Exposure time: 32 d  
Species: Pimephales promelas (fathead minnow)  
Remarks: Based on data from similar materials

**NOEC** (Pimephales promelas (fathead minnow)): 1 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Remarks: Based on data from similar materials

### Toxicity to p-Cresol

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

**EC50** (Daphnia magna (Water flea)): 7.7 mg/l  
Exposure time: 48 h  
Method: DIN 38412

**EC50** (Daphnia magna (Water flea)): 7.7 mg/l  
Exposure time: 48 h

**EC10** (Desmodesmus subspicatus (green algae)): 2.3 mg/l  
Exposure time: 48 h

**NOEC** (Daphnia magna (Water flea)): 1 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Remarks: Based on data from similar materials

**NOEC** (Pimephales promelas (fathead minnow)): 1.35 mg/l  
Exposure time: 32 d  
Species: Pimephales promelas (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

- NOEC: 1 mg/l
- Exposure time: 21 d
- Species: Daphnia magna (Water flea)

12.2 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: Result: Readily biodegradable.
  - Biodegradation: 70 - 80 %
  - Exposure time: 28 d

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

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

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

**p-Cresol:**
- Biodegradability: Result: Readily biodegradable.
  - Biodegradation: 100 %
  - Exposure time: 8 d
12.3 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
12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
Not relevant

12.6 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product: Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

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

14.1 UN number
ADN: UN 2920
ADR: UN 2920
RID: UN 2920
IMDG: UN 2920
IATA: UN 2920

14.2 UN proper shipping name
ADN: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Sodium hydroxide, Ethylbenzene)
ADR: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Sodium hydroxide, Ethylbenzene)
RID: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Sodium hydroxide, Ethylbenzene)
IMDG: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Sodium hydroxide, Ethylbenzene, Dichlofenthion (ISO))
IATA: Corrosive liquid, flammable, n.o.s. (Sodium hydroxide, Ethylbenzene)

14.3 Transport hazard class(es)
ADN: 8
Dichlofenthion Formulation

14.4 Packing group

ADR
Packing group: II
Classification Code: CF1
Hazard Identification Number: 83
Labels: 8 (3)

RID
Packing group: II
Classification Code: CF1
Hazard Identification Number: 83
Labels: 8 (3)
Tunnel restriction code: (D/E)

IMDG
Packing group: II
Labels: 8 (3)

IATA
Packing instruction (cargo aircraft): 855
Packing instruction (LQ): Y840
Packing group: II
Labels: Corrosive, Flammable Liquids

14.5 Environmental hazards

ADR
Environmentally hazardous: yes

RID
Environmentally hazardous: yes

IMDG
Environmentally hazardous: yes
Dichlofenthion Formulation

Version 3.3
Revision Date: 23.03.2020
SDS Number: 1560319-00007
Date of last issue: 13.09.2019
Date of first issue: 14.04.2017

Marine pollutant: yes

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

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Remarks: Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII): Conditions of restriction for the following entries should be considered:
Number on list 3
Tar, coal (Number on list 28)

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable
REACH - List of substances subject to authorisation (Annex XIV): 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): Not applicable

<table>
<thead>
<tr>
<th>H3</th>
<th>STOT SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE</th>
<th>Quantity 1</th>
<th>Quantity 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FLAMMABLE LIQUIDS</td>
<td>50 t</td>
<td>200 t</td>
</tr>
</tbody>
</table>

| P5c | ENVIRONMENTAL HAZARDS                                  | 5,000 t    | 50,000 t   |
|     |                                                        |            |            |

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

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

AICS: not determined
DSL: not determined
IECSC: not determined
15.2 Chemical safety assessment
A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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

Full text of H-Statements

H225 : Highly flammable liquid and vapour.
H226 : Flammable liquid and vapour.
H290 : May be corrosive to metals.
H301 : Toxic if swallowed.
H302 : Harmful if swallowed.
H304 : May be fatal if swallowed and enters airways.
H311 : Toxic in contact with skin.
H312 : Harmful in contact with skin.
H314 : Causes severe skin burns and eye damage.
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.
H341 : Suspected of causing genetic defects.
H350 : May cause cancer if swallowed.
H361d : Suspected of damaging the unborn child.
H370 : Causes damage to organs.
H372 : Causes damage to organs through prolonged or repeated exposure.
H373 : May cause damage to organs through prolonged or repeated exposure.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H411 : Toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard
Asp. Tox. : Aspiration hazard
Carc. : Carcinogenicity
Eye Dam. : Serious eye damage
Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
Met. Corr. : Corrosive to metals
Muta. : Germ cell mutagenicity
Repr. : Reproductive toxicity
Skin Corr. : Skin corrosion
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>
<tbody>
<tr>
<td>3.3</td>
<td>23.03.2020</td>
<td>1560319-00007</td>
<td>13.09.2019</td>
<td>14.04.2017</td>
</tr>
</tbody>
</table>

Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitisation
STOT RE: Specific target organ toxicity - repeated exposure
STOT SE: Specific target organ toxicity - single exposure
IE OEL: Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1
2000/39/EC / TWA: Limit Value - eight hours
2000/39/EC / STEL: Short term exposure limit
2009/161/EU / TWA: Limit Value - eight hours
2009/161/EU / STEL: Short term exposure limit
IE OEL / OELV - 8 hrs (TWA): Occupational exposure limit value (8-hour reference period)
IE OEL / OELV - 15 min (STEL): Occupational exposure limit value (15-minute reference period)

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; AICS - Australian Inventory of Chemical Substances; 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; IECS - 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information
SOURCES OF KEY DATA USED TO COMPILe THE SAFETY DATA SHEET:


CLASSIFICATION OF THE MIXTURE:

<table>
<thead>
<tr>
<th>Property</th>
<th>Classification</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq.</td>
<td>H226</td>
<td>Based on product data or assessment</td>
</tr>
<tr>
<td>Acute Tox. 4</td>
<td>H302</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>H314</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>H318</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>H317</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Muta. 2</td>
<td>H341</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Carc. 1A</td>
<td>H350</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Repr. 2</td>
<td>H361d</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 1</td>
<td>H370</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>H335</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 2</td>
<td>H373</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Asp. Tox. 1</td>
<td>H304</td>
<td>Based on product data or assessment</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>H400</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>H410</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

THE INFORMATION PROVIDED IN THIS SAFETY DATA SHEET IS CORRECT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF AT THE DATE OF ITS PUBLICATION. THE INFORMATION IS DESIGNED ONLY AS A GUIDANCE FOR SAFE HANDLING, USE, PROCESSING, STORAGE, TRANSPORTATION, DISPOSAL AND RELEASE AND SHALL NOT BE CONSIDERED A WARRANTY OR QUALITY SPECIFICATION OF ANY TYPE. THE INFORMATION PROVIDED RELATES ONLY TO THE SPECIFIC MATERIAL IDENTIFIED AT THE TOP OF THIS SDS AND MAY NOT BE VALID WHEN THE SDS MATERIAL IS USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS, UNLESS SPECIFIED IN THE TEXT. MATERIAL USERS SHOULD REVIEW THE INFORMATION AND RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THEIR INTENDED MANNER OF HANDLING, USE, PROCESSING AND STORAGE, INCLUDING AN ASSESSMENT OF THE APPROPRIATENESS OF THE SDS MATERIAL IN THE USER’S END PRODUCT, IF APPLICABLE.