SAFETY DATA SHEET

Methyl Salicylate / Diclofenac Formulation

Section 1: Identification

Product name : Methyl Salicylate / Diclofenac Formulation

Manufacturer or supplier's details
Company : MSD
Address : 33 Whakatiki Street - Private Bag 908
          Upper Hutt - New Zealand
Telephone : 908-740-4000
Emergency telephone number : 1-908-423-6000
E-mail address : EHSDATASTEWARD@msd.com
Telefax : 908-735-1496

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

Section 2: Hazard identification

GHS Classification
Specific target organ toxicity - repeated exposure : Category 2 (Gastrointestinal tract, Blood, lymphatic system, Liver, Prostate)

GHS label elements
Hazard pictograms
Signal word : Warning
Hazard statements : H373 May cause damage to organs (Gastrointestinal tract, Blood, lymphatic system, Liver, Prostate) through prolonged or repeated exposure.
Precautionary statements : Prevention:
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Response:
P314 Get medical advice/ attention if you feel unwell.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.
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Version 6.0 Revision Date: 10.10.2020 SDS Number: 656970-00011 Date of last issue: 23.03.2020 Date of first issue: 02.05.2016

Other hazards which do not result in classification
None known.

Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

<table>
<thead>
<tr>
<th>Components</th>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrolatum</td>
<td>8009-03-8</td>
<td>&gt;= 60 - &lt;= 100</td>
<td></td>
</tr>
<tr>
<td>Zinc oxide</td>
<td>1314-13-2</td>
<td>&gt;= 10 - &lt; 30</td>
<td></td>
</tr>
<tr>
<td>Methyl salicylate</td>
<td>119-36-8</td>
<td>&lt; 10</td>
<td></td>
</tr>
<tr>
<td>Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate</td>
<td>15307-79-6</td>
<td>&gt;= 1 - &lt; 3</td>
<td></td>
</tr>
<tr>
<td>(+)-Bornan-2-one</td>
<td>464-49-3</td>
<td>&lt; 10</td>
<td></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.
Get medical attention.

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

In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed : May cause damage to organs through prolonged or repeated exposure.

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 : None known.

Specific hazards during firefighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion prod-
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<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>6.0</td>
<td>10.10.2020</td>
<td>656970-00011</td>
<td>23.03.2020</td>
<td>02.05.2016</td>
</tr>
</tbody>
</table>

Chlorine compounds
Nitrogen oxides (NOx)
Sodium oxides
Metal oxides

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

Hazchem Code: 2Z

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:
- Use personal protective equipment.
- Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions:
- Avoid release to the environment.
- Prevent further leakage or spillage if safe to do so.
- Retain and dispose of contaminated wash water.
- Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up:
- Sweep up or vacuum up spillage and collect in suitable container for disposal.
- 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.

Section 7: Handling and storage

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

Local/Total ventilation:
- Use only with adequate ventilation.

Advice on safe handling:
- Do not get on skin or clothing.
- Do not breathe dust, fume, gas, mist, vapours or spray.
- Do not swallow.
- Avoid contact with eyes.
- Wash skin thoroughly after handling.
- Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment.
- Do not eat, drink or smoke when using this product.
- 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.

Conditions for safe storage
- Keep in properly labelled containers.
- Store in accordance with the particular national regulations.

Materials to avoid
- Do not store with the following product types:
  - Strong oxidizing agents

### Section 8: Exposure controls/personal protection

**Components 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>Petrolatum</td>
<td>8009-03-8</td>
<td>WES-TWA (Mist)</td>
<td>5 mg/m³</td>
<td>NZ OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WES- STEL (Mist)</td>
<td>10 mg/m³</td>
<td>NZ OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Inhalable particulate matter)</td>
<td>5 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Zinc oxide</td>
<td>1314-13-2</td>
<td>WES-STEL (Fumes)</td>
<td>10 mg/m³</td>
<td>NZ OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WES-TWA (Fume, respirable fraction)</td>
<td>3 mg/m³</td>
<td>NZ OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WES-TWA (Respirable dust)</td>
<td>10 mg/m³</td>
<td>NZ OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable particulate matter)</td>
<td>2 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL (Respirable particulate matter)</td>
<td>10 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Sodium [2-[(2,6-dichloro-phenyl)amino]phenyl]acetate</td>
<td>15307-79-6</td>
<td>TWA</td>
<td>100 µg/m³ (OEB 2)</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>1000 µg/100 cm²</td>
<td>Internal</td>
</tr>
<tr>
<td>(+)-Bornan-2-one</td>
<td>464-49-3</td>
<td>WES-TWA</td>
<td>2 ppm</td>
<td>NZ OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 mg/m³</td>
<td>NZ OEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>WES- STEL</td>
<td>3 ppm</td>
<td>NZ OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>19 mg/m³</td>
<td>NZ OEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>2 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>3 ppm</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

Further information: Skin
- Wipe limit: 1000 µg/100 cm²
- Internal
- NZ OEL
- ACGIH
Engineering measures: Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations.

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 vapour type

Hand protection

Material: Chemical-resistant gloves

Remarks: Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.

Wash hands before breaks and at the end of workday.

Eye protection: Wear the following personal protective equipment: Safety glasses

Skin and body protection: Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Section 9: Physical and chemical properties

Appearance: ointment

Colour: light red

Odour: aromatic

Odour Threshold: No data available

pH: No data available

Melting point/freezing point: No data available

Initial boiling point and boiling range: No data available

Flash point: No data available

Evaporation rate: No data available

Flammability (solid, gas): Not classified as a flammability hazard

Flammability (liquids): No data available

Upper explosion limit / Upper flammability limit: No data available
Section 10: Stability and reactivity

Reactivity: Not classified as a reactivity hazard.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: Can react with strong oxidizing agents.
Conditions to avoid: None known.
Incompatible materials: Oxidizing agents
Hazardous decomposition products: No hazardous decomposition products are known.

Section 11: Toxicological information

Exposure routes:
- Skin contact
- Ingestion
- Eye contact

Acute toxicity
Not classified based on available information.

Product:
Acute oral toxicity: Acute toxicity estimate: > 2,000 mg/kg
Acute inhalation toxicity:  
- Acute toxicity estimate: > 5 mg/l  
- Exposure time: 4 h  
- Test atmosphere: dust/mist  
- Method: Calculation method

**Components:**

**Petrolatum:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute oral toxicity</th>
<th>Acute dermal toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrolatum</td>
<td>LD50 (Rat): &gt; 5,000 mg/kg</td>
<td>LD50 (Rat): &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 401</td>
<td>Method: OECD Test Guideline 402</td>
</tr>
<tr>
<td></td>
<td>Remarks: Based on data from similar materials</td>
<td>Assessment: The substance or mixture has no acute dermal toxicity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remarks: Based on data from similar materials</td>
</tr>
</tbody>
</table>

**Zinc oxide:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute oral toxicity</th>
<th>Acute inhalation toxicity</th>
<th>Acute dermal toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc oxide</td>
<td>LD50 (Rat): &gt; 5,000 mg/kg</td>
<td>LC50 (Rat): &gt; 5.7 mg/l</td>
<td>LD50 (Rat): &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 401</td>
<td>Exposure time: 4 h</td>
<td>Method: OECD Test Guideline 402</td>
</tr>
<tr>
<td></td>
<td>Remarks: Based on data from similar materials</td>
<td>Test atmosphere: dust/mist</td>
<td>Assessment: The substance or mixture has no acute inhalation toxicity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Remarks: Based on data from similar materials</td>
</tr>
</tbody>
</table>

**Methyl salicylate:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute oral toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl salicylate</td>
<td>LD50 (Rat): 887 mg/kg</td>
</tr>
</tbody>
</table>

**Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute oral toxicity</th>
<th>Acute toxicity (other routes of administration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate</td>
<td>LD50 (Rat): 55 - 240 mg/kg</td>
<td>LD50 (Rat): 97 - 161 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Application Route: Intravenous</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LD50 (Mouse): 92 - 147 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Application Route: Intravenous</td>
</tr>
</tbody>
</table>

**(+)-Bornan-2-one:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute oral toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+)-Bornan-2-one</td>
<td>LD50 (Mouse): &gt; 300 - 2,000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Remarks: Based on data from similar materials</td>
</tr>
</tbody>
</table>
### Acute toxicity estimate (Humans)

- **Method:** Expert judgement
- **Remarks:** Based on data from similar materials

**Acute inhalation toxicity**

- **LC50 (Rat):** > 0.5 mg/l
- **Exposure time:** 4 h
- **Test atmosphere:** dust/mist
- **Remarks:** Based on data from similar materials

**Acute dermal toxicity**

- **LD50 (Rat):** > 2,000 mg/kg
- **Remarks:** Based on data from similar materials

### Skin corrosion/irritation

Not classified based on available information.

#### Components:

**Petrolatum:**

- **Species:** Rabbit
- **Method:** OECD Test Guideline 404
- **Result:** No skin irritation
- **Remarks:** Based on data from similar materials

**Zinc oxide:**

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

**Methyl salicylate:**

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

**Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:**

- **Result:** irritating

**(+)-Bornan-2-one:**

- **Species:** Rabbit
- **Result:** No skin irritation
- **Remarks:** Based on data from similar materials

### Serious eye damage/eye irritation

Not classified based on available information.

#### Components:

**Petrolatum:**

- **Species:** Rabbit
- **Result:** No eye irritation
- **Method:** OECD Test Guideline 405
Remarks: Based on data from similar materials

**Zinc oxide:**
- **Species:** Rabbit
- **Result:** No eye irritation
- **Method:** OECD Test Guideline 405

**Methyl salicylate:**
- **Species:** Rabbit
- **Result:** No eye irritation

**Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:**
- **Result:** Mild eye irritation

**(+)-Bornan-2-one:**
- **Result:** Eye irritation
- **Remarks:** Based on data from similar materials

**Respiratory or skin sensitisation**

**Skin sensitisation**
Not classified based on available information.

**Respiratory sensitisation**
Not classified based on available information.

**Components:**

**Petrolatum:**
- **Test Type:** Buehler Test
- **Exposure routes:** Skin contact
- **Species:** Guinea pig
- **Result:** negative
- **Remarks:** Based on data from similar materials

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

**Methyl salicylate:**
- **Test Type:** Local lymph node assay (LLNA)
- **Exposure routes:** Skin contact
- **Species:** Mouse
- **Result:** negative

**(+)-Bornan-2-one:**
- **Test Type:** Buehler Test
## Exposure routes
- **Species**: Guinea pig
- **Method**: OECD Test Guideline 406
- **Result**: negative
- **Remarks**: Based on data from similar materials

## Chronic toxicity
### Germ cell mutagenicity
Not classified based on available information.

## Components

### Petrolatum:
- **Genotoxicity in vitro**
  - **Test Type**: Chromosome aberration test in vitro
  - **Result**: negative
  - **Remarks**: Based on data from similar materials

### Zinc oxide:
- **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**: equivocal
  - **Test Type**: Chromosome aberration test in vitro
    - **Result**: equivocal

- **Genotoxicity in vivo**
  - **Test Type**: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
    - **Species**: Rat
    - **Application Route**: Inhalation (dust/mist/fume)
    - **Method**: OECD Test Guideline 474
    - **Result**: negative
    - **Test Type**: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
      - **Species**: Rat
      - **Application Route**: Inhalation (dust/mist/fume)
      - **Result**: positive
    - **Test Type**: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
      - **Species**: Mouse
      - **Application Route**: Intraperitoneal injection
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Method: OECD Test Guideline 474
Result: negative

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

Methyl salicylate:

Genotoxicity in vitro:
- Test Type: Chromosome aberration test in vitro
  Result: negative

Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:

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

Genotoxicity in vivo:
- Test Type: Chromosomal aberration
  Species: CHO
  Result: negative

(+)-Bornan-2-one:

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

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

  Test Type: Chromosome aberration test in vitro
  Result: negative

Genotoxicity in vivo:
- Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
  Species: Mouse
  Application Route: Ingestion
  Result: negative
  Remarks: Based on data from similar materials

  Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
  Species: Mouse
  Application Route: Skin contact
  Result: negative
  Remarks: Based on data from similar materials
Carcinogenicity
Not classified based on available information.

Components:

Petrolatum:
Species: Rat
Application Route: Ingestion
Exposure time: 2 Years
Result: negative

Zinc oxide:
Species: Mouse
Application Route: Ingestion
Exposure time: 1 Year
Result: negative
Remarks: Based on data from similar materials

Methyl salicylate:
Species: Rat
Application Route: Ingestion
Exposure time: 2 Years
Result: negative

Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:
Species: Rat
Application Route: Oral
Exposure time: 2 Years
Result: negative
Species: Mouse
Application Route: Oral
Exposure time: 2 Years
Result: negative

Reproductive toxicity
Not classified based on available information.

Components:

Petrolatum:
Effects on fertility:
Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials
Effects on foetal development:
Test Type: Embryo-foetal development
Species: Rat
Application Route: Skin contact
Result: negative
Remarks: Based on data from similar materials
<table>
<thead>
<tr>
<th>Compound</th>
<th>Effects on fertility</th>
<th>Effects on foetal development</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc oxide:</td>
<td>Test Type: Two-generation reproduction toxicity study</td>
<td>Test Type: Embryo-foetal development</td>
<td>Based on data from similar materials</td>
</tr>
<tr>
<td></td>
<td>Species: Rat</td>
<td>Species: Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Application Route: Ingestion</td>
<td>Application Route: inhalation (dust/mist/fume)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
<td>Method: OECD Test Guideline 414</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remarks:</td>
<td>Result: negative</td>
<td></td>
</tr>
<tr>
<td>Methyl salicylate:</td>
<td>Test Type: Three-generation reproduction toxicity study</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Species: Rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Application Route: Ingestion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium [2-((2,6-dichlorophenyl)amino)phenyl]acetate:</td>
<td>Test Type: Fertility</td>
<td>Test Type: Development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Species: Rat, male and female</td>
<td>Species: Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Application Route: Oral</td>
<td>Application Route: Oral</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fertility: NOAEL: 4 mg/kg body weight</td>
<td>Developmental Toxicity: LOAEL: 1 mg/kg body weight</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Result: No effects on fertility</td>
<td>Result: Embryo-foetal toxicity, No teratogenic effects</td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity - Assessment</td>
<td>Suspected of damaging the unborn child.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(+)-Bornan-2-one:</td>
<td>Test Type: Embryo-foetal development</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Species: Rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Application Route: Ingestion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STOT - single exposure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not classified based on available information.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Components:

(+)-Bornan-2-one:

| Assessment | May cause respiratory irritation. |
| Remarks    | Based on data from similar materials |

STOT - repeated exposure

May cause damage to organs (Gastrointestinal tract, Blood, lymphatic system, Liver, Prostate) through prolonged or repeated exposure.

Components:

Zinc oxide:

| Assessment | No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less. |

Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:

| Target Organs | Gastrointestinal tract, Blood, lymphatic system, Liver, Prostate |
| Assessment    | Causes damage to organs through prolonged or repeated exposure. |

Repeated dose toxicity

Components:

Petrolatum:

| Species      | Rat |
| NOAEL        | 5,000 mg/kg |
| Application Route | Ingestion |
| Exposure time | 2 yr |

Zinc oxide:

| Species      | Rat, male |
| NOAEL        | 0.0015 mg/l |
| Application Route | inhalation (dust/mist/fume) |
| Exposure time | 3 Months |
| Method       | OECD Test Guideline 413 |

Methyl salicylate:

| Species | Rat |
| NOAEL   | 50 mg/kg |
| LOAEL   | 250 mg/kg |
| Application Route | Ingestion |
| Exposure time | 2 yr |

Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:

| Species | Rat |
| LOAEL   | 0.25 mg/kg |
| Application Route | Oral |
| Exposure time | 98 w |
| Target Organs | Gastrointestinal tract, Blood, lymphatic system, Liver, Prostate |
Species: Dog  
LOAEL: 1 mg/kg  
Application Route: Oral  
Exposure time: 12 w  
Target Organs: Blood

Species: Baboon  
NOAEL: 0.5 mg/kg  
LOAEL: 5 mg/kg  
Application Route: Oral  
Exposure time: 52 w  
Target Organs: Gastrointestinal tract, Blood  
Symptoms: constipation, Diarrhoea

(+)-Bornan-2-one:  
Species: Rat  
NOAEL: > 200 mg/kg  
Application Route: Skin contact  
Exposure time: 13 Weeks  
Remarks: Based on data from similar materials

Aspiration toxicity  
Not classified based on available information.

Experience with human exposure

Components:

Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:  
Ingestion: Symptoms: Abdominal pain, Diarrhoea, constipation, heart-burn, Ulceration, Dizziness, Headache, Breathing difficulties, Rash

Section 12: Ecological information

Ecotoxicity

Components:

Petrolatum:

Toxicity to fish: LL50 (Pimephales promelas (fathead minnow)): > 100 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: EC50 (Daphnia magna (Water flea)): > 10,000 mg/l  
  Exposure time: 48 h  
  Test substance: Water Accommodated Fraction  
  Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants: NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
### Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
- **Test substance**: Water Accommodated Fraction
- **Method**: OECD Test Guideline 201
- **Remarks**: Based on data from similar materials

<table>
<thead>
<tr>
<th>Test substance</th>
<th>EC50 (Daphnia magna (Water flea))</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 100 mg/l</td>
<td>48 h</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Test substance</th>
<th>EC50 (Ceriodaphnia dubia (water flea))</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 0.01 - 0.1 mg/l</td>
<td>72 h</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Test substance</th>
<th>NOEC (Daphnia magna (Water flea))</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 10 mg/l</td>
<td>21 d</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Test substance</th>
<th>NOEC (Ceriodaphnia dubia (water flea))</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 0.01 - 0.1 mg/l</td>
<td>7 d</td>
<td></td>
</tr>
</tbody>
</table>

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

---

### Zinc oxide:

#### Toxicity to fish
- **Test substance**: Water Accommodated Fraction
- **Method**: OECD Test Guideline 203
- **Remarks**: Based on data from similar materials

<table>
<thead>
<tr>
<th>Test substance</th>
<th>LC50: &gt; 0.1 - 1 mg/l</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 100 mg/l</td>
<td>96 h</td>
<td></td>
</tr>
</tbody>
</table>

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

#### Toxicity to algae/aquatic plants
- **Test substance**: Water Accommodated Fraction
- **Method**: OECD Test Guideline 201
- **Remarks**: Based on data from similar materials

<table>
<thead>
<tr>
<th>Test substance</th>
<th>ErC50 (Pseudokirchneriella subcapitata (green algae))</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.136 mg/l</td>
<td>72 h</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Test substance</th>
<th>NOEC (Pseudokirchneriella subcapitata (green algae))</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 0.01 - 0.1 mg/l</td>
<td>72 h</td>
<td></td>
</tr>
</tbody>
</table>

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

#### Toxicity to fish (Chronic toxicity)
- **Test substance**: Water Accommodated Fraction
- **Method**: OECD Test Guideline 201
- **Remarks**: Based on data from similar materials

<table>
<thead>
<tr>
<th>Test substance</th>
<th>NOEC (Jordanella floridae (flagfish))</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 0.01 - 0.1 mg/l</td>
<td>14 Weeks</td>
<td></td>
</tr>
</tbody>
</table>

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

#### Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
- **Test substance**: Water Accommodated Fraction
- **Method**: OECD Test Guideline 201
- **Remarks**: Based on data from similar materials

<table>
<thead>
<tr>
<th>Test substance</th>
<th>NOEC (Ceriodaphnia dubia (water flea))</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 0.01 - 0.1 mg/l</td>
<td>7 d</td>
<td></td>
</tr>
</tbody>
</table>

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

---

### Methyl salicylate:

#### Toxicity to fish
- **Test substance**: Water Accommodated Fraction
- **Method**: OECD Test Guideline 203
- **Remarks**: Based on data from similar materials

<table>
<thead>
<tr>
<th>Test substance</th>
<th>LC50 (Danio rerio (zebra fish))</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 100 mg/l</td>
<td>96 h</td>
<td></td>
</tr>
</tbody>
</table>

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

#### Toxicity to daphnia and other aquatic invertebrates
- **Test substance**: Water Accommodated Fraction
- **Method**: OECD Test Guideline 201
- **Remarks**: Based on data from similar materials

<table>
<thead>
<tr>
<th>Test substance</th>
<th>EC50 (Daphnia magna (Water flea))</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 100 mg/l</td>
<td>48 h</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Test substance</th>
<th>ErC50 (Desmodesmus subspicatus (green algae))</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>27 mg/l</td>
<td>72 h</td>
<td></td>
</tr>
</tbody>
</table>

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

#### Toxicity to algae/aquatic plants
- **Test substance**: Water Accommodated Fraction
- **Method**: OECD Test Guideline 201
- **Remarks**: Based on data from similar materials

<table>
<thead>
<tr>
<th>Test substance</th>
<th>NOEC (Desmodesmus subspicatus (green algae))</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6.25 mg/l</td>
<td>72 h</td>
<td></td>
</tr>
</tbody>
</table>

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

#### Toxicity to microorganisms
- **Test substance**: Water Accommodated Fraction
- **Method**: OECD Test Guideline 201
- **Remarks**: Based on data from similar materials

<table>
<thead>
<tr>
<th>Test substance</th>
<th>EC10 (Pseudomonas putida)</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>140 mg/l</td>
<td>16 h</td>
<td></td>
</tr>
</tbody>
</table>

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

---

### Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:

...
### Toxicity to Fish
- **LC50** (Pimephales promelas (fathead minnow)): 166.6 mg/l
  - Exposure time: 96 h
  - Method: OECD Test Guideline 203

### Toxicity to Daphnia and Other Aquatic Invertebrates
- **EC50** (Daphnia magna (Water flea)): 80.1 mg/l
  - Exposure time: 48 h
  - Method: OECD Test Guideline 202

### Toxicity to Algae/Aquatic Plants
- **EC50** (Pseudokirchneriella subcapitata (green algae)): 71.9 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201
  - **NOEC** (Pseudokirchneriella subcapitata (green algae)): 49.2 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201

### Toxicity to Fish (Chronic Toxicity)
- **NOEC** (Pimephales promelas (fathead minnow)): 0.32 mg/l
  - Exposure time: 32 d
  - Method: OECD Test Guideline 210

### Toxicity to Daphnia and Other Aquatic Invertebrates (Chronic Toxicity)
- **NOEC** (Daphnia magna (Water flea)): 10 mg/l
  - Exposure time: 21 d
  - Method: OECD Test Guideline 211

### (+)-Bornan-2-one:

#### Toxicity to Fish
- **LC50** (Danio rerio (zebra fish)): > 10 - 100 mg/l
  - Exposure time: 96 h
  - Method: OECD Test Guideline 203
  - Remarks: Based on data from similar materials

#### Toxicity to Daphnia and Other Aquatic Invertebrates
- **EC50** (Daphnia magna (Water flea)): > 1 - 10 mg/l
  - Exposure time: 48 h
  - Method: OECD Test Guideline 202
  - Remarks: Based on data from similar materials

#### Toxicity to Algae/Aquatic Plants
- **ErC50** (Pseudokirchneriella subcapitata (green algae)): > 1 - 10 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201
  - Remarks: Based on data from similar materials
  - **NOEC** (Pseudokirchneriella subcapitata (green algae)): > 0.01 - 0.1 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201
  - Remarks: Based on data from similar materials

#### Toxicity to Microorganisms
- **EC50**: > 100 mg/l
  - Exposure time: 3 h
  - Method: OECD Test Guideline 209
  - Remarks: Based on data from similar materials
Persistence and degradability

Components:

Petrolatum:

<table>
<thead>
<tr>
<th>Biodegradability</th>
<th>Result: Not readily biodegradable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodegradation</td>
<td>31 %</td>
</tr>
<tr>
<td>Exposure time</td>
<td>28 d</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 301F</td>
</tr>
<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

Methyl salicylate:

<table>
<thead>
<tr>
<th>Biodegradability</th>
<th>Result: Readily biodegradable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodegradation</td>
<td>98.4 %</td>
</tr>
<tr>
<td>Exposure time</td>
<td>28 d</td>
</tr>
</tbody>
</table>

(+)-Bornan-2-one:

<table>
<thead>
<tr>
<th>Biodegradability</th>
<th>Result: Readily biodegradable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method</td>
<td>OECD Test Guideline 301F</td>
</tr>
<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

Bioaccumulative potential

Components:

Zinc oxide:

<table>
<thead>
<tr>
<th>Bioaccumulation</th>
<th>Species: Oncorhynchus mykiss (rainbow trout)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioconcentration factor (BCF)</td>
<td>78 - 2,060</td>
</tr>
</tbody>
</table>

Methyl salicylate:

| Partition coefficient: n-octanol/water | log Pow: 2.55 |

Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:

| Partition coefficient: n-octanol/water | log Pow: 4.51 |

(+)-Bornan-2-one:

| Partition coefficient: n-octanol/water | log Pow: 2.3 |

Mobility in soil

No data available

Other adverse effects

No data available

Section 13: Disposal considerations

Disposal methods

<table>
<thead>
<tr>
<th>Waste from residues</th>
<th>Dispose of in accordance with local regulations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contaminated packaging</td>
<td>Empty containers should be taken to an approved waste handling site for recycling or disposal.</td>
</tr>
</tbody>
</table>
Section 14: Transport information

International Regulations

UNRTDG
UN number: UN 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate)
Class: 9
Packing group: III
Labels: 9

IATA-DGR
UN/ID No.: UN 3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Zinc oxide, Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate)
Class: 9
Packing group: III
Labels: Miscellaneous
Packing instruction (cargo aircraft): 956
Packing instruction (passenger aircraft): 956
Environmentally hazardous: yes

IMDG-Code
UN number: UN 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate)
Class: 9
Packing group: III
Labels: 9
EmS Code: F-A, S-F
Marine pollutant: yes

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

National Regulations

NZS 5433
UN number: UN 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate)
Class: 9
Packing group: III
Labels: 9
Hazchem Code: 2Z
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

HSNO Approval Number
HSR100759 Veterinary Medicines Non dispersive Open System Application Group Standard 2017

HSW Controls
Certified handler certificate not required.
Tracking hazardous substance not required.
Refer to the Health and Safety at Work (Hazardous Substances) Regulations 2017, for further information.

The components of this product are reported in the following inventories:
AICS : not determined
DSL : not determined
IECSC : not determined

Section 16: Other information

Further information

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

Date format : dd.mm.yyyy

Full text of other abbreviations
ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NZ OEL : New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
NZ OEL / WES-TWA : Workplace Exposure Standard - Time Weighted average
NZ OEL / WES- STEL : Workplace Exposure Standard - Short-Term ExposureLimit
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.

NZ / EN