1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Methyl Salicylate / Diclofenac Formulation

Manufacturer or supplier’s details
Company: MSD
Address: No. 485 Jing Tai Road
Pu Tuo District - Shanghai - China 200331
Telephone: 908-740-4000
Emergency telephone number: 86-571-87268110
E-mail address: EHSDATASTeward@msd.com

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

2. HAZARDS IDENTIFICATION

Emergency Overview

<table>
<thead>
<tr>
<th>Appearance</th>
<th>ointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>light red</td>
</tr>
<tr>
<td>Odour</td>
<td>aromatic</td>
</tr>
</tbody>
</table>

May be harmful if swallowed. Causes mild skin irritation. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.

GHS Classification

- Acute toxicity (Oral): Category 5
- Skin corrosion/irritation: Category 3
- Specific target organ toxicity - repeated exposure: Category 2
- Short-term (acute) aquatic hazard: Category 1
- Long-term (chronic) aquatic hazard: Category 1

GHS label elements

- Hazard pictograms:
- Signal word: Warning
Methyl Salicylate / Diclofenac Formulation

Hazard statements:
- H303 May be harmful if swallowed.
- H316 Causes mild skin irritation.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:
- **Prevention:**
  - P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
  - P273 Avoid release to the environment.
- **Response:**
  - P312 Call a POISON CENTER/doctor if you feel unwell.
  - P332 + P313 If skin irritation occurs: Get medical advice/ attention.
  - P391 Collect spillage.
- **Disposal:**
  - P501 Dispose of contents/ container to an approved waste disposal plant.

Physical and chemical hazards:
Not classified based on available information.

Health hazards:
May be harmful if swallowed. Causes mild skin irritation. May cause damage to organs through prolonged or repeated exposure.

Environmental hazards:
Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Other hazards which do not result in classification:
None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance / Mixture</th>
<th>Mixture</th>
</tr>
</thead>
</table>

**Components**

<table>
<thead>
<tr>
<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;= 70 - &lt; 90</td>
</tr>
<tr>
<td>Zinc oxide</td>
<td>1314-13-2</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Methyl salicylate</td>
<td>119-36-8</td>
<td>&gt;= 2.5 - &lt; 10</td>
</tr>
<tr>
<td>Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate</td>
<td>15307-79-6</td>
<td>&gt;= 1 - &lt; 2.5</td>
</tr>
<tr>
<td>(+)-Bornan-2-one</td>
<td>464-49-3</td>
<td>&gt;= 1 - &lt; 2.5</td>
</tr>
</tbody>
</table>

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 be harmful if swallowed. Causes mild skin irritation. 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.

5. FIREFIGHTING 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 products : Carbon oxides
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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions : Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so.
SAFETY DATA SHEET
according to GB/T 16483 and GB/T 17519

Methyl Salicylate / Diclofenac Formulation

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.

7. HANDLING AND STORAGE

Handling
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 swallow.
Avoid contact with eyes.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment.
Take care to prevent spills, waste and minimize release to the environment.
Avoidance of contact:
Oxidizing agents

Storage
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
Packaging material:
Unsuitable material: None known.

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>TWA (Inhalable fraction)</td>
<td>5 mg/m3</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Zinc oxide</td>
<td>1314-13-2</td>
<td>PC-TWA</td>
<td>3 mg/m3</td>
<td>GBZ 2.1-2007</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PC-STEEL</td>
<td>5 mg/m3</td>
<td>GBZ 2.1-2007</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction)</td>
<td>2 mg/m3</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>
Methyl Salicylate / Diclofenac Formulation

<table>
<thead>
<tr>
<th>Substance</th>
<th>STEL (Respirable fraction)</th>
<th>TWA</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate</td>
<td>15307-79-6</td>
<td>TWA</td>
<td>100 µg/m³ (OEB2) Internal</td>
</tr>
<tr>
<td>(+)-Bornan-2-one</td>
<td>464-49-3</td>
<td>TWA</td>
<td>2 ppm ACGIH</td>
</tr>
</tbody>
</table>

Further information: Skin

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>STEL</td>
<td>3 ppm</td>
<td>ACGIH</td>
<td></td>
</tr>
</tbody>
</table>

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

Eye/face 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).

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.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:
ointment

Colour:
light red

Odour:
aromatic

Odour Threshold:
No data available
SAFETY DATA SHEET
according to GB/T 16483 and GB/T 17519

Methyl Salicylate / Diclofenac Formulation

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
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 : No data available
Solubility(ies)
   Water solubility : No data available
Partition coefficient: n-octanol/water : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Viscosity
   Viscosity, kinematic : No data available
 Explosive properties : Not explosive
Oxidizing properties : The substance or mixture is not classified as oxidizing.
Molecular weight : No data available
Particle size : No data available

10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.
**Safety Data Sheet**

**Methyl Salicylate / Diclofenac 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>6.0</td>
<td>2019/09/16</td>
<td>656960-00009</td>
<td>2019/04/24</td>
<td>2016/05/02</td>
</tr>
</tbody>
</table>

- **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.

### 11. TOXICOLOGICAL INFORMATION

**Exposure routes**
- Skin contact
- Ingestion
- Eye contact

**Acute toxicity**

- **May be harmful if swallowed.**

**Product**

- **Acute oral toxicity**
  - Acute toxicity estimate: 4,003 mg/kg
  - Method: Calculation method

- **Acute inhalation toxicity**
  - Acute toxicity estimate: > 10 mg/l
  - Exposure time: 4 h
  - Test atmosphere: dust/mist
  - Method: Calculation method

**Components**

**Petrolatum**

- **Acute oral toxicity**
  - LD50 (Rat): > 5,000 mg/kg
  - Method: OECD Test Guideline 401
  - Remarks: Based on data from similar materials

- **Acute dermal toxicity**
  - LD50 (Rat): > 2,000 mg/kg
  - Method: OECD Test Guideline 402
  - Assessment: The substance or mixture has no acute dermal toxicity
  - Remarks: Based on data from similar materials

**Zinc oxide**

- **Acute oral toxicity**
  - LD50 (Rat): > 5,000 mg/kg

- **Acute inhalation toxicity**
  - LC50 (Rat): > 5.7 mg/l
  - Exposure time: 4 h
  - Test atmosphere: dust/mist
  - Assessment: The substance or mixture has no acute inhalation toxicity

- **Acute dermal toxicity**
  - LD50 (Rat): > 2,000 mg/kg
  - Method: OECD Test Guideline 402
  - Assessment: The substance or mixture has no acute dermal toxicity
**SAFETY DATA SHEET**
according to GB/T 16483 and GB/T 17519

**Methyl Salicylate / Diclofenac Formulation**

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<tr>
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</tr>
</tbody>
</table>

**Methyl salicylate:**

- **Acute oral toxicity**: LD50 (Rat): 887 mg/kg

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

- **Acute oral toxicity**: LD50 (Rat): 55 - 240 mg/kg
  - LD50 (Mouse): 170 - 389 mg/kg
- **Acute toxicity (other routes of administration)**: LD50 (Rat): 97 - 161 mg/kg
  - Application Route: Intravenous
  - LD50 (Mouse): 92 - 147 mg/kg
  - Application Route: Intravenous

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

- **Acute oral toxicity**: LD50 (Mouse): > 300 - 2,000 mg/kg
  - Remarks: Based on data from similar materials
- **Acute toxicity estimate (Humans)**: > 50 - 500 mg/kg
  - 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**

- Causes mild skin irritation.

**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
Methyl Salicylate / Diclofenac Formulation

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
SAFETY DATA SHEET
according to GB/T 16483 and GB/T 17519

Methyl Salicylate / Diclofenac Formulation

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: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative
Remarks: Based on data from similar materials

Germ cell mutagenicity
Not classified based on available information.

Components:

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

Genotoxicity in vivo: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
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
Methyl Salicylate / Diclofenac Formulation

Genotoxicity in vivo:
- Test Type: Chromosome aberration test in vitro
  Result: equivocal
- 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
  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
  Test Type: Bacterial reverse mutation assay (AMES)
  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

(+)-Boman-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
Genotoxicity in vivo

Test Type: Chromosome aberration test in vitro
Result: negative

Remarks: Based on data from similar materials

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 Years
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
Methyl Salicylate / Diclofenac Formulation

### Reproductive toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>Effects on fertility</th>
<th>Effects on foetal development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrolatum:</td>
<td>Test Type: Reproduction/Developmental toxicity screening test</td>
<td>Test Type: Embryo-foetal development</td>
</tr>
<tr>
<td></td>
<td>Species: Rat</td>
<td>Species: Rat</td>
</tr>
<tr>
<td></td>
<td>Application Route: Ingestion</td>
<td>Application Route: Skin contact</td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
<td>Result: negative</td>
</tr>
<tr>
<td></td>
<td>Remarks: Based on data from similar materials</td>
<td>Remarks: Based on data from similar materials</td>
</tr>
<tr>
<td>Zinc oxide:</td>
<td>Test Type: Two-generation reproduction toxicity study</td>
<td>Test Type: Embryo-foetal development</td>
</tr>
<tr>
<td></td>
<td>Species: Rat</td>
<td>Species: Rat</td>
</tr>
<tr>
<td></td>
<td>Application Route: Ingestion</td>
<td>Application Route: inhalation (dust/mist/fume)</td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
<td>Method: OECD Test Guideline 414</td>
</tr>
<tr>
<td></td>
<td>Remarks: Based on data from similar materials</td>
<td>Result: negative</td>
</tr>
<tr>
<td></td>
<td>Remarks: Based on data from similar materials</td>
<td>Remarks: Based on data from similar materials</td>
</tr>
<tr>
<td>Methyl salicylate:</td>
<td>Test Type: Three-generation reproduction toxicity study</td>
<td>Test Type: Development</td>
</tr>
<tr>
<td></td>
<td>Species: Rat</td>
<td>Species: Rat</td>
</tr>
<tr>
<td></td>
<td>Application Route: Ingestion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
<td></td>
</tr>
<tr>
<td>Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:</td>
<td>Test Type: Fertility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Species: Rat, male and female</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Application Route: Oral</td>
<td>Fertility: NOAEL: 4 mg/kg body weight</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Result: No effects on fertility</td>
</tr>
</tbody>
</table>

**Exposure time:** 2 Years

**Result:** negative

**Components:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Effects on fertility</th>
<th>Effects on foetal development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrolatum:</td>
<td>Test Type: Reproduction/Developmental toxicity screening test</td>
<td>Test Type: Embryo-foetal development</td>
</tr>
<tr>
<td></td>
<td>Species: Rat</td>
<td>Species: Rat</td>
</tr>
<tr>
<td></td>
<td>Application Route: Ingestion</td>
<td>Application Route: Skin contact</td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
<td>Result: negative</td>
</tr>
<tr>
<td></td>
<td>Remarks: Based on data from similar materials</td>
<td>Remarks: Based on data from similar materials</td>
</tr>
</tbody>
</table>

### Not classified based on available information.
Application Route: Oral
Developmental Toxicity: LOAEL: 1 mg/kg body weight
Result: Embryo-foetal toxicity, No teratogenic effects

Test Type: Development
Species: Rabbit
Application Route: Oral
Developmental Toxicity: LOAEL: 5 mg/kg body weight
Result: Embryo-foetal toxicity, No teratogenic effects

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

(+) - Bornan-2-one:
Effects on foetal development: Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative

STOT - single exposure
Not classified based on available information.

Components:
(+) - Bornan-2-one:
Assessment: May cause respiratory irritation.
Remarks: Based on data from similar materials

STOT - repeated exposure
May cause damage to organs 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
SAFETY DATA SHEET
according to GB/T 16483 and GB/T 17519

Methyl Salicylate / Diclofenac Formulation

Version: 6.0
Revision Date: 2019/09/16
SDS Number: 656960-00009
Date of last issue: 2019/04/24
Date of first issue: 2016/05/02

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-
SAFETY DATA SHEET
according to GB/T 16483 and GB/T 17519

Methyl Salicylate / Diclofenac Formulation

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Petrolatum:

<table>
<thead>
<tr>
<th>Component</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
<th>Toxicity to algae/aquatic plants</th>
<th>Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LL50 (Pimephales promelas (fathead minnow)): &gt; 100 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203 Remarks: Based on data from similar materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC50 (Daphnia magna (Water flea)): &gt; 10,000 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NOEL (Pseudokirchneriella subcapitata (green algae)): &gt;= 100 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NOEC (Daphnia magna (Water flea)): 10 mg/l Exposure time: 21 d Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Zinc oxide:

<table>
<thead>
<tr>
<th>Component</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
<th>Toxicity to algae/aquatic plants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LC50 (Oncorhynchus mykiss (rainbow trout)): &gt; 0.1 - 1 mg/l Exposure time: 96 h Remarks: Based on data from similar materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC50 (Daphnia magna (Water flea)): &gt; 0.01 - 0.1 mg/l Exposure time: 48 h Remarks: Based on data from similar materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC50 (Selenastrum capricornutum (green algae)): &gt; 0.1 - 1 mg/l Exposure time: 96 h Remarks: Based on data from similar materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NOEC (Selenastrum capricornutum (green algae)): &gt; 0.001 - 0.01 mg/l Exposure time: 72 h Remarks: Based on data from similar materials</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

M-Factor (Acute aquatic tox-): 10
### Methyl Salicylate / Diclofenac 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>6.0</td>
<td>2019/09/16</td>
<td>656960-00009</td>
<td>2019/04/24</td>
<td>2016/05/02</td>
</tr>
</tbody>
</table>

#### Toxicity to fish (Chronic toxicity)
- **NOEC** (Oncorhynchus mykiss (rainbow trout)): > 0.01 - 0.1 mg/l  
  - Exposure time: 25 d  
  - Remarks: Based on data from similar materials

#### Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
- **NOEC** (Daphnia magna (Water flea)): > 0.01 - 0.1 mg/l  
  - Exposure time: 21 d  
  - Remarks: Based on data from similar materials

#### M-Factor (Chronic aquatic toxicity)
- 10

#### Methyl salicylate:

**Toxicity to fish**
- **LC50** (Danio rerio (zebra fish)): > 100 mg/l  
  - Exposure time: 96 h  
  - Method: OECD Test Guideline 203

**Toxicity to daphnia and other aquatic invertebrates**
- **EC50** (Daphnia magna (Water flea)): > 100 mg/l  
  - Exposure time: 48 h  
  - Remarks: Based on data from similar materials

**Toxicity to algae/aquatic plants**
- **ErC50** (Desmodesmus subspicatus (green algae)): 27 mg/l  
  - Exposure time: 72 h  
  - Method: OECD Test Guideline 201

- **NOEC** (Desmodesmus subspicatus (green algae)): 6.25 mg/l  
  - Exposure time: 72 h  
  - Method: OECD Test Guideline 201

**Toxicity to microorganisms**
- **EC10** (Pseudomonas putida): 140 mg/l  
  - Exposure time: 16 h

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

<table>
<thead>
<tr>
<th>Component</th>
<th>EC50 (Daphnia magna (Water flea))</th>
<th>NOEC (Daphnia magna (Water flea))</th>
<th>Exposure Time</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrolatum</td>
<td>&gt; 1 - 10 mg/l</td>
<td>&gt; 0.01 - 0.1 mg/l</td>
<td>48 h</td>
<td>OECD Test Guideline 202</td>
<td>Based on data from similar materials</td>
</tr>
<tr>
<td>Methyl salicylate</td>
<td>&gt; 10 mg/l</td>
<td>&gt; 0.01 - 0.1 mg/l</td>
<td>72 h</td>
<td>OECD Test Guideline 201</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

Toxicity to fish:

<table>
<thead>
<tr>
<th>Component</th>
<th>LC50 (Danio rerio (zebra fish))</th>
<th>Exposure Time</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrolatum</td>
<td>&gt; 10 - 100 mg/l</td>
<td>96 h</td>
<td>OECD Test Guideline 203</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

Remarks:

Environmental fate:

Persistence and degradability

Components:

Petrolatum

Biodegradability:

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

Methyl salicylate

Biodegradability:

<table>
<thead>
<tr>
<th>Component</th>
<th>Result</th>
<th>Biodegradation</th>
<th>Exposure Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl salicylate</td>
<td>Readily biodegradable.</td>
<td>98.4 %</td>
<td>28 d</td>
</tr>
</tbody>
</table>

(+)-Borman-2-one

Biodegradability:

<table>
<thead>
<tr>
<th>Component</th>
<th>Result</th>
<th>Biodegradation</th>
<th>Exposure Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+)-Borman-2-one</td>
<td>Not readily biodegradable.</td>
<td>31 %</td>
<td>28 d</td>
</tr>
</tbody>
</table>
Biodegradability: Result: Readily biodegradable. Method: OECD Test Guideline 301F Remarks: Based on data from similar materials

Bioaccumulative potential

Components:

Zinc oxide:
Bioaccumulation: Species: Oncorhynchus mykiss (rainbow trout) Bioconcentration factor (BCF): 78 - 2,060

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

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

International Regulations

UNRTDG
UN number: UN 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide) (Zinc oxide)
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) (Zinc oxide)
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) (Zinc oxide)
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
GB 6944/12268
UN number: UN 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide) (Zinc oxide)
Class: 9
Packing group: III
Labels: 9

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.

15. REGULATORY INFORMATION

National regulatory information
Law on the Prevention and Control of Occupational Diseases

The components of this product are reported in the following inventories:
AICS: not determined
DSL: not determined
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: yyyy/mm/dd

Full text of other abbreviations

ACGIH: USA. ACGIH Threshold Limit Values (TLV)

ACGIH / TWA: 8-hour, time-weighted average
ACGIH / STEL: Short-term exposure limit
GBZ 2.1-2007 / PC-TWA: Permissible concentration - time weighted average

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

vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Disclaimer
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.

CN / EN