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

1.1 Product identifier
   Trade name : Sulfapyridine Formulation

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

1.3 Details of the supplier of the safety data sheet
   Company : MSD
             Kilsheean
             Clonmel Tipperary, IE
   Telephone : 353-51-601000
   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 3 : H301: Toxic if swallowed.
   - Skin sensitisation, Category 1 : H317: May cause an allergic skin reaction.
   - Reproductive toxicity, Category 1A : H360F: May damage fertility.
   - Specific target organ toxicity - single exposure, Category 1 : H370: Causes damage to organs.
   - Long-term (chronic) aquatic hazard, Category 3 : H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements
   Labelling (REGULATION (EC) No 1272/2008)
   Hazard pictograms :
       ![Hazard Pictogram]
   Signal word : Danger
   Hazard statements :
       - H301 : Toxic if swallowed.
       - H317 : May cause an allergic skin reaction.
       - H360F : May damage fertility.
       - H370 : Causes damage to organs.
       - H412 : Harmful to aquatic life with long lasting effects.
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:**
- P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.
- P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

Hazardous components which must be listed on the label:

Sulfapyridine
Benzyl cinnamate

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Dust contact with the eyes can lead to mechanical irritation.
Contact with dust can cause mechanical irritation or drying of the skin.
May form combustible dust concentrations in air during processing, handling or other means.

**SECTION 3: Composition/information on ingredients**

3.2 Mixtures

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No. EC-No. Index-No. Registration number</th>
<th>Classification</th>
<th>Concentration (%) w/w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfapyridine</td>
<td>144-83-2 205-642-7</td>
<td>Acute Tox. 2; H300 Skin Sens. 1; H317 Repr. 1A; H360F STOT SE 1; H370 Aquatic Chronic 2; H411 Acute toxicity esti-</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
</tbody>
</table>
## SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

### Sulfapyridine Formulation

**Version**: 2.2  
**Revision Date**: 27.08.2021  
**SDS Number**: 5638035-00004  
**Date of last issue**: 09.04.2021  
**Date of first issue**: 09.04.2020

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
<th>Acute oral toxicity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl benzoate</td>
<td>120-51-4</td>
<td>15.8 mg/kg</td>
</tr>
<tr>
<td></td>
<td>204-402-9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>607-085-00-9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute Tox. 4; H302</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aquatic Acute 1;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aquatic Chronic 2;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H411</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M-Factor (Acute</td>
<td></td>
</tr>
<tr>
<td></td>
<td>aquatic toxicity):</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute toxicity est-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>mate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute oral toxicity:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,700 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Benzyl cinnamate</td>
<td>103-41-3</td>
<td>&gt;= 0.25 - &lt; 1</td>
</tr>
<tr>
<td></td>
<td>203-109-3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin Sens. 1B; H317</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aquatic Acute 1;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aquatic Chronic 2;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H411</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M-Factor (Acute</td>
<td></td>
</tr>
<tr>
<td></td>
<td>aquatic toxicity):</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.

### 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. Get medical attention.

**In case of skin contact**

In case of contact, immediately flush skin with soap and 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**

If in eyes, rinse well with water. Get medical attention if irritation develops and persists.
If swallowed: If swallowed, DO NOT induce vomiting.
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:
Toxic if swallowed.
May cause an allergic skin reaction.
May damage fertility.
Causes damage to organs.
Contact with dust can cause mechanical irritation or drying of the skin.
Dust contact with the eyes can lead to mechanical irritation.

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:
None known.

5.2 Special hazards arising from the substance or mixture
Specific hazards during firefighting:
Exposure to combustion products may be a hazard to health.
Hazardous combustion products:
Carbon oxides

5.3 Advice for firefighters
Special protective equipment for firefighters:
In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
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.
SECTION 6: Accidental release measures

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

6.2 Environmental precautions
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.

6.3 Methods and material for containment and cleaning up
Methods for cleaning up: Sweep up or vacuum up spillage and collect in suitable container for disposal.
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.
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.

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: Static electricity may accumulate and ignite suspended dust causing an explosion.
Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
Local/Total ventilation: If sufficient ventilation is unavailable, use with local exhaust 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.
Keep container tightly closed.
Minimize dust generation and accumulation. Keep container closed when not in use. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. 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. Contaminated work clothing should not be allowed out of the workplace. 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: Keep in properly labelled containers. Store locked up. Keep tightly closed. Store in accordance with the particular national regulations.

Advice on common storage: Do not store with the following product types: Strong oxidizing agents Organic peroxides 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>Petrolatum</td>
<td>8009-03-8</td>
<td>OELV - 8 hrs (TWA) (inhalable fraction)</td>
<td>5 mg/m3</td>
<td>IE OEL</td>
</tr>
<tr>
<td>Sulfapyridine</td>
<td>144-83-2</td>
<td>TWA</td>
<td>0.25 mg/m3 (OEB 2)</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Further information: DSEN</td>
<td>Wipe limit</td>
<td>0.1 mg/100 cm2</td>
</tr>
</tbody>
</table>

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>Benzyl benzoate</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>5.1 mg/m3</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>Petrolatum</td>
<td>Oral (Secondary Poisoning)</td>
<td>9.33 mg/kg food</td>
</tr>
<tr>
<td>Benzyl benzoate</td>
<td>Fresh water</td>
<td>0.017 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.002 mg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>100 mg/l</td>
</tr>
<tr>
<td>Fresh water sediment</td>
<td></td>
<td>10.66 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td>Marine sediment</td>
<td></td>
<td>1.07 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td>Soil</td>
<td></td>
<td>2.12 mg/kg dry weight (d.w.)</td>
</tr>
</tbody>
</table>

### 8.2 Exposure controls

**Engineering measures**

Use feasible engineering controls to minimize exposure to compound. All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

**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

- **Skin and body protection**: Work uniform or laboratory coat.

- **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

Physical state: solid
Colour: No data available
Odour: No data available
Odour Threshold: No data available
Melting point/freezing point: No data available
Initial boiling point and boiling range: No data available
Flammability (solid, gas): May form combustible dust concentrations in air during processing, handling or other means.
Flammability (liquids): No data available
Upper explosion limit / Upper flammability limit: No data available
Lower explosion limit / Lower flammability limit: No data available
Flash point: Not applicable
Auto-ignition temperature: No data available
Decomposition temperature: No data available
pH: No data available
Viscosity
Viscosity, kinematic: Not applicable
Solubility(ies)
Water solubility: No data available
Partition coefficient: n-octanol/water: Not applicable
Vapour pressure: Not applicable
Relative density: No data available
Density: No data available
Relative vapour density: Not applicable
Particle characteristics
Particle size: No data available

9.2 Other information
Explosives: Not explosive
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: May form combustible dust concentrations in air during processing, handling or other means. Can react with strong oxidizing agents.

10.4 Conditions to avoid
Conditions to avoid: Heat, flames and sparks. Avoid dust formation.

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 hazard classes as defined in Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Information on likely routes of exposure</th>
<th>Inhalation</th>
<th>Skin contact</th>
<th>Ingestion</th>
<th>Eye contact</th>
</tr>
</thead>
</table>

Acute toxicity
Toxic if swallowed.

Product:
Acute oral toxicity: Acute toxicity estimate: 158 mg/kg
Method: Calculation method

Components:

Sulfapyridine:
Acute oral toxicity: LD50 (Rat): 15.8 mg/kg
Acute toxicity estimate: 15.8 mg/kg
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Sulfapyridine Formulation

Method: Calculation method

Benzyl benzoate:
Acute oral toxicity : LD50 (Rat): 1,700 mg/kg
Acute toxicity estimate: 1,700 mg/kg
Method: Calculation method

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Benzyl cinnamate:
Acute oral toxicity : LD50 (Rat): 2,610 mg/kg
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: Based on data from similar materials

Skin corrosion/irritation
Not classified based on available information.

Components:

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

Benzyl cinnamate:
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:

Benzyl benzoate:
Species : Rabbit
Result : No eye irritation

Benzyl cinnamate:
Species : Rabbit
Result : No eye irritation
Remarks : Based on data from similar materials

Respiratory or skin sensitisation

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

Components:

Sulfapyridine:
Assessment: May cause sensitisation by skin contact.

Benzyl benzoate:
Test Type: Local lymph node assay (LLNA)
Exposure routes: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: negative

Benzyl cinnamate:
Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Remarks: Based on data from similar materials
Assessment: Probability or evidence of low to moderate skin sensitisation rate in humans

Germ cell mutagenicity
Not classified based on available information.

Components:

Sulfapyridine:
Genotoxicity in vitro: Test Type: In vitro sister chromatid exchange assay in mammalian cells
Result: positive

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster cells
Result: negative

Genotoxicity in vivo: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Cell type: Bone marrow
Result: negative

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

Benzyl benzoate:
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Test Type: In vitro mammalian cell gene mutation test  
Result: positive  
Remarks: Based on data from similar materials

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

Genotoxicity in vivo : Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo  
Species: Rat  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

Benzyl cinnamate:  
Genotoxicity in vitro : 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: In vitro sister chromatid exchange assay in mammalian cells  
Result: negative  
Remarks: Based on data from similar materials

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

Carcinogenicity  
Not classified based on available information.

Components:

Sulfapyridine:  
Carcinogenicity - Assessment : No data available

Benzyl cinnamate:  
Species : Rat  
Application Route : Ingestion  
Exposure time : 105 weeks  
Result : negative  
Remarks : Based on data from similar materials

Species : Mouse  
Application Route : Ingestion  
Exposure time : 105 weeks  
Result : negative  
Remarks : Based on data from similar materials
Reproductive toxicity
May damage fertility.

Components:

Sulfapyridine:
Reproductive toxicity - Assessment : Positive evidence of adverse effects on sexual function and fertility from human epidemiological studies.

Benzy benzotate:
Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative

Benzy cinnamate:
Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

STOT - single exposure
Causes damage to organs.

Components:

Sulfapyridine:
Exposure routes : Oral
Assessment : Shown to produce significant health effects in animals at concentrations of 300 mg/kg bw or less.

STOT - repeated exposure
Not classified based on available information.

Repeated dose toxicity

Components:

Benzy benzotate:
Species : Rat
NOAEL : 781 mg/kg
Application Route : Skin contact
Exposure time : 4 Weeks
Benzyl cinnamate:
Species: Rat, male
NOAEL: 275 mg/kg
Application Route: Ingestion
Exposure time: 90 Days
Remarks: Based on data from similar materials

Aspiration toxicity
Not classified based on available information.

11.2 Information on other hazards

Endocrine disrupting properties

Product:
Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Experience with human exposure

Components:

Sulfapyridine:
Skin contact: Symptoms: Sensitisation
Ingestion: Symptoms: Gastrointestinal disturbance
Symptoms: Sensitivity to light
Symptoms: Headache
Symptoms: hepatitis
Symptoms: Stevens-Johnson syndrome

SECTION 12: Ecological information

12.1 Toxicity

Components:

Sulfapyridine:
Toxicity to algae/aquatic plants: EC10 (Raphidocelis subcapitata (freshwater green alga)): 1.0 mg/l
End point: Growth rate
Exposure time: 72 h

Benzyl benzoate:
Toxicity to fish: LC50 (Danio rerio (zebra fish)): 2.32 mg/l
Exposure time: 96 h
### Toxicity to daphnia and other aquatic invertebrates

**EC50 (Daphnia magna (Water flea)): 3.09 mg/l**
- Exposure time: 48 h
- Method: OECD Test Guideline 202

**NOEC (Daphnia magna (Water flea)): 0.258 mg/l**
- Exposure time: 21 d
- Species: Daphnia magna (Water flea)
- Method: OECD Test Guideline 211

**M-Factor (Acute aquatic toxicity):** 1

### Toxicity to algae/aquatic plants

**EC50 (Pseudokirchneriella subcapitata (green algae)): 0.475 mg/l**
- Exposure time: 72 h
- Method: OECD Test Guideline 201

**NOEC (Pseudokirchneriella subcapitata (green algae)): 0.247 mg/l**
- Exposure time: 72 h
- Method: OECD Test Guideline 201

### Toxicity to microorganisms

**EC50: > 10,000 mg/l**
- Exposure time: 3 h
- Method: ISO 8192

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

**NOEC: 0.258 mg/l**
- Exposure time: 21 d
- Species: Daphnia magna (Water flea)
- Method: OECD Test Guideline 211

### Benzyl cinnamate:

**Toxicity to fish**

**LC50 (Danio rerio (zebra fish)): > 0.643 mg/l**
- Exposure time: 96 h

**Toxicity to daphnia and other aquatic invertebrates**

**EL50 (Daphnia magna (Water flea)): 2.8 mg/l**
- Exposure time: 48 h
- Test substance: Water Accommodated Fraction
- Method: OECD Test Guideline 202

**Toxicity to algae/aquatic plants**

**Ec50 (Pseudokirchneriella subcapitata (green algae)): 0.386 mg/l**
- Exposure time: 72 h
- Method: OECD Test Guideline 201

**Ec10 (Pseudokirchneriella subcapitata (green algae)): 0.122 mg/l**
- Exposure time: 72 h
- Method: OECD Test Guideline 201

**M-Factor (Acute aquatic toxicity):** 1

**Toxicity to microorganisms**

**EC50: > 100 mg/l**
- Exposure time: 3 h
- Method: ISO 8192
- Remarks: Based on data from similar materials
12.2 Persistence and degradability

**Components:**

**Benzyl benzoate:**
- Biodegradability: Result: Readily biodegradable.
- Biodegradation: 94 %
- Exposure time: 28 d

**Benzyl cinnamate:**
- Biodegradability: Result: Readily biodegradable.
- Biodegradation: 100 %
- Exposure time: 7 d
- Remarks: Based on data from similar materials

12.3 Bioaccumulative potential

**Components:**

**Benzyl benzoate:**
- Partition coefficient: n-octanol/water: log Pow: 4
  Method: OECD Test Guideline 117

**Benzyl cinnamate:**
- Partition coefficient: n-octanol/water: log Pow: 4.18
  Method: OECD Test Guideline 117

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment

**Product:**
- Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

**Product:**
- Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 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. If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number or ID number

<table>
<thead>
<tr>
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<th>ADN</th>
<th>ADR</th>
<th>RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
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14.2 UN proper shipping name

<table>
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<tr>
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<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>TOXIC SOLID, ORGANIC, N.O.S. (Sulfapyridine)</td>
<td>TOXIC SOLID, ORGANIC, N.O.S. (Sulfapyridine)</td>
<td>TOXIC SOLID, ORGANIC, N.O.S. (Sulfapyridine)</td>
<td>TOXIC SOLID, ORGANIC, N.O.S. (Sulfapyridine)</td>
<td>Toxic solid, organic, n.o.s. (Sulfapyridine)</td>
</tr>
</tbody>
</table>

14.3 Transport hazard class(es)

<table>
<thead>
<tr>
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<th>RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
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<td>6.1</td>
<td>6.1</td>
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</table>

14.4 Packing group

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>Classification Code</td>
<td>T2</td>
</tr>
</tbody>
</table>
Hazard Identification Number : 60
Labels : 6.1

**ADR**
Packing group : III
Classification Code : T2
Hazard Identification Number : 60
Labels : 6.1
Tunnel restriction code : (E)

**RID**
Packing group : III
Classification Code : T2
Hazard Identification Number : 60
Labels : 6.1

**IMDG**
Packing group : III
Labels : 6.1
EmS Code : F-A, S-A

**IATA (Cargo)**
Packing instruction (cargo aircraft) : 677
Packing instruction (LQ) : Y645
Packing group : III
Labels : Toxic

**IATA (Passenger)**
Packing instruction (passenger aircraft) : 670
Packing instruction (LQ) : Y645
Packing group : III
Labels : Toxic

### 14.5 Environmental hazards

**ADN**
Environmentally hazardous : no

**ADR**
Environmentally hazardous : no

**RID**
Environmentally hazardous : no

**IMDG**
Marine pollutant : no

### 14.6 Special precautions for user

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

### 14.7 Maritime transport in bulk according to IMO instruments

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): Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast): Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable
REACH - List of substances subject to authorisation (Annex XIV): Not applicable

<table>
<thead>
<tr>
<th>Quantity 1</th>
<th>Quantity 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 t</td>
<td>200 t</td>
</tr>
</tbody>
</table>

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
H300: Fatal if swallowed.
H302: Harmful if swallowed.
H317: May cause an allergic skin reaction.
H360F: May damage fertility.
H370: Causes damage to organs if swallowed.
Sulfapyridine Formulation

Version: 2.2
Revision Date: 27.08.2021
SDS Number: 5638035-00004
Date of last issue: 09.04.2021
Date of first issue: 09.04.2020

H400 : Very toxic to aquatic life.
H411 : Toxic 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
Repr. : Reproductive toxicity
Skin Sens. : Skin sensitisation
STOT SE : Specific target organ toxicity - single exposure
IE OEL : Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1
IE OEL / OELV - 8 hrs (TWA) : Occupational exposure limit value (8-hour 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;
AICL - Australian Inventory of Industrial Chemicals;
ASTM - American Society for the Testing of Materials;
bw - Body weight;
CLP - Classification Labelling Packaging Regulation;
EC-Number - European Community number;
ECx - Concentration 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;
ICARC - International Agency for Research on Cancer;
IBA - International Air Transport Association;
ICBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;
IC50 - Half maximal inhibitory concentration;
ICAO - International Civil Aviation Organization;
IEOC - 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;
KEDII - 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 substances;
PICCS - Philippines Inventory of Chemicals and Chemical Substances;
(Q)SAR - (Quantitative) Structure Activity Relationship;
RID - Regulations concerning the International Carriage of Dangerous Goods by Road;
SADT - Self-Accelerating Decomposition Temperature;
SDS - Safety Data Sheet;
SVHC - Substance of Very High Concern;
TECI - Taiwan Chemical Substance Inventory;
TCG - Thailand Existing Chemicals Inventory;
TRGS - Technical Rule for Hazardous Substances;
TSCA - Toxic Substances Control Act (United States);
UN - United Nations;
vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture: Classification procedure:
Acute Tox. 3 H301 Calculation method
Skin Sens. 1 H317 Calculation method
Repr. 1A H360F Calculation method
STOT SE 1 H370 Calculation method
Aquatic Chronic 3 H412 Calculation method

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.