1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Ezetimibe / Rosuvastatin Formulation

Manufacturer or supplier's details
Company: MSD
Address: Briahnager - Off Pune Nagar Road
Wagholi - Pune - India 412 207
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: Pharmaceutical

2. HAZARDS IDENTIFICATION

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

Classification
Not classified as hazardous according to criteria laid down in Part I of Schedule-1.

GHS Classification
Skin corrosion/irritation: Category 3
Carcinogenicity: Category 1B
Reproductive toxicity: Category 1B
Specific target organ toxicity - single exposure (Oral): Category 2 (Liver, Kidney, muscle)
Specific target organ toxicity - repeated exposure (Oral): Category 2 (Eye)
Long-term (chronic) aquatic hazard: Category 2

GHS label elements
Hazard pictograms: 
Signal word: Danger
Hazard statements:
- H316 Causes mild skin irritation.
- H350 May cause cancer.
- H360FD May damage fertility. May damage the unborn child.
- H371 May cause damage to organs (Liver, Kidney, muscle) if swallowed.
- H373 May cause damage to organs (Eye) through prolonged or repeated exposure if swallowed.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:
- Prevention:
  - P201 Obtain special instructions before use.
  - P202 Do not handle until all safety precautions have been read and understood.
  - P260 Do not breathe dust.
  - P264 Wash skin thoroughly after handling.
  - P270 Do not eat, drink or smoke when using this product.
  - P273 Avoid release to the environment.
  - P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response:
  - P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor.
  - P332 + P313 If skin irritation occurs: Get medical advice/ attention.
  - P391 Collect spillage.
- Storage:
  - P405 Store locked up.
- Disposal:
  - P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification:
Dust contact with the eyes can lead to mechanical irritation.
May form explosive dust-air mixture during processing, handling or other means.

3. COMPOSITION/INFORMATION ON INGREDIENTS

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

<table>
<thead>
<tr>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>Cellulose</td>
</tr>
<tr>
<td>Ezetimibe</td>
</tr>
<tr>
<td>Rosuvastatin</td>
</tr>
<tr>
<td>Sodium n-dodecyl sulfate</td>
</tr>
<tr>
<td>Magnesium stearate</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: If in eyes, rinse well with water. Get medical attention if irritation develops and persists.  

If swallowed: If swallowed, DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.  

Most important symptoms and effects, both acute and delayed: Causes mild skin irritation. May cause cancer. May damage fertility. May damage the unborn child. May cause damage to organs if swallowed. May cause damage to organs through prolonged or repeated exposure if swallowed. Dust contact with the eyes can lead to mechanical irritation.  

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: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Exposure to combustion products may be a hazard to health.  

Hazardous combustion products: Carbon oxides  
Fluorine compounds  
Nitrogen oxides (NOx)  
Sulphur 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.
SAFETY DATA SHEET

Ezetimibe / Rosuvastatin Formulation

Version 1.4
Revision Date: 09/13/2019
SDS Number: 3177575-00005
Date of last issue: 24.04.2019
Date of first issue: 18.09.2018

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. 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. 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.

7. HANDLING AND STORAGE

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. 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. 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. Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage:
Keep in properly labelled containers. Store locked up. Keep tightly closed.
Materials to avoid: Do not store with the following product types:
Strong oxidizing agents

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>Cellulose</td>
<td>9004-34-6</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Ezetimibe</td>
<td>163222-33-1</td>
<td>TWA</td>
<td>25 µg/m³ (OEB 3)</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>250 µg/100 cm²</td>
<td>Internal</td>
</tr>
<tr>
<td>Rosuvastatin</td>
<td>147098-20-2</td>
<td>TWA</td>
<td>20 µg/m³ (OEB 3)</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>200 µg/100 cm²</td>
<td>Internal</td>
</tr>
<tr>
<td>Magnesium stearate</td>
<td>557-04-0</td>
<td>TWA (Inhalable fraction)</td>
<td>10 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction)</td>
<td>3 mg/m³</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

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

Personal protective equipment

Respiratory protection: If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type: Particulates type

Hand protection: Chemical-resistant gloves

Remarks: Consider double gloving.

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

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

Hygiene measures: If exposure to chemical is likely during typical use, provide eye
flushing systems and safety showers close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.
The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>powder</td>
</tr>
<tr>
<td>Colour</td>
<td>white to off-white</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>May form explosive dust-air mixture during processing, handling or other means.</td>
</tr>
<tr>
<td>Flammability (liquids)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit / Upper flammability limit</td>
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</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
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<tr>
<td>Vapour pressure</td>
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<tr>
<td>Relative vapour density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
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</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Water solubility</td>
</tr>
<tr>
<td></td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Decomposition temperature : No data available

Viscosity
  Viscosity, kinematic : Not applicable

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.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : May form explosive dust-air mixture during processing, handling or other means.
  Can react with strong oxidizing agents.

Conditions to avoid : Heat, flames and sparks.
  Avoid dust formation.
Incompatible materials : Oxidizing agents
Hazardous decomposition products : No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

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

Acute toxicity
Not classified based on available information.

Product:
Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
  Method: Calculation method

Components:
Cellulose:
  Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
  Acute inhalation toxicity : LC50 (Rat): > 5.8 mg/l
  Exposure time: 4 h
  Test atmosphere: dust/mist
  Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
**Ezetimibe:**

- **Acute oral toxicity**: LD50 (Rat): > 5,000 mg/kg
  
  LD50 (Mouse): > 5,000 mg/kg
  
  LD50 (Dog): > 3,000 mg/kg

- **Acute inhalation toxicity**: Remarks: No data available

- **Acute dermal toxicity**: Remarks: No data available

- **Acute toxicity (other routes of administration)**:
  - LD50 (Rat): > 2,000 mg/kg
  - Application Route: Intraperitoneal
  
  LD50 (Mouse): > 1,000 - < 2,000 mg/kg
  - Application Route: Intraperitoneal

**Rosuvastatin:**

- **Acute oral toxicity**: LD50 (Rat): > 2,000 mg/kg
  
  Target Organs: Liver, Stomach, muscle, Kidney

**Sodium n-dodecyl sulfate:**

- **Acute oral toxicity**: LD50 (Rat): 1,200 mg/kg
  - Method: OECD Test Guideline 401

- **Acute dermal toxicity**: LD50 (Rat): > 2,000 mg/kg
  - Method: OECD Test Guideline 402
  - Remarks: Based on data from similar materials

**Magnesium stearate:**

- **Acute oral toxicity**: LD50 (Rat): > 2,000 mg/kg
  - Method: OECD Test Guideline 423
  
  Assessment: The substance or mixture has no acute oral toxicity
  
  Remarks: Based on data from similar materials

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

**Skin corrosion/irritation**

Causes mild skin irritation.

**Components:**

**Ezetimibe:**

- **Species**: Rabbit
  
  **Result**: No skin irritation

**Sodium n-dodecyl sulfate:**

- **Species**: Rabbit
  
  **Result**: Skin irritation
**Magnesium stearate:**
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:**

**Ezetimibe:**
Species: Rabbit
Result: No eye irritation

**Sodium n-dodecyl sulfate:**
Species: Rabbit
Method: OECD Test Guideline 405
Result: Irreversible effects on the eye

**Magnesium stearate:**
Species: Rabbit
Result: No 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:**

**Ezetimibe:**
Test Type: Maximisation Test
Species: Guinea pig
Result: negative

**Sodium n-dodecyl sulfate:**
Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Result: negative
Remarks: Based on data from similar materials

**Magnesium stearate:**
Test Type: Maximisation 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:**

**Cellulose:**
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  Result: negative
- Test Type: In vitro mammalian cell gene mutation test
  Result: negative

Genotoxicity in vivo:
- Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
  Species: Mouse
  Application Route: Ingestion
  Result: negative

**Ezetimibe:**
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  Metabolic activation: with and without metabolic activation
  Result: negative
- Test Type: Chromosomal aberration
  Test system: Human lymphocytes
  Result: negative

Genotoxicity in vivo:
- Test Type: Micronucleus test
  Species: Mouse
  Cell type: Bone marrow
  Application Route: Oral
  Result: negative

**Rosuvastatin:**
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  Test system: Escherichia coli
  Result: negative
- Test Type: Chromosomal aberration
  Test system: Chinese hamster lung cells
  Result: negative

Genotoxicity in vivo:
- Test Type: Micronucleus test
  Species: Mouse
  Cell type: Bone marrow
  Application Route: Ingestion
  Result: negative

**Sodium n-dodecyl sulfate:**
### Genotoxicity in vitro
- **Test Type**: Bacterial reverse mutation assay (AMES)
  - Method: OECD Test Guideline 471
  - Result: negative
- **Test Type**: In vitro mammalian cell gene mutation test
  - Result: negative

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

### Magnesium stearate:
- **Genotoxicity in vitro**
  - **Test Type**: In vitro mammalian cell gene mutation test
    - **Result**: negative
    - **Remarks**: Based on data from similar materials

### Carcinogenicity
- May cause cancer.

### Components:

#### Cellulose:
- **Species**: Rat
- **Application Route**: Ingestion
- **Exposure time**: 72 weeks
- **Result**: negative

#### Ezetimibe:
- **Species**: Rat, female
  - **Application Route**: oral (feed)
  - **Exposure time**: 104 weeks
  - **Result**: negative
- **Species**: Rat, male
  - **Application Route**: oral (feed)
  - **Exposure time**: 104 weeks
  - **Result**: negative
- **Species**: Mouse
  - **Application Route**: oral (feed)
  - **Exposure time**: 104 weeks
  - **Result**: negative
Rosuvastatin:
Species: Rat
Application Route: Oral
Exposure time: 104 weeks
LOAEL: 80 mg/kg body weight
Result: positive
Symptoms: Tumour
Target Organs: Uterus (including cervix)

Species: Mouse
Application Route: Oral
Exposure time: 107 weeks
LOAEL: 200 mg/kg body weight
Result: positive
Symptoms: liver adenoma, carcinoma
Target Organs: Liver

Sodium n-dodecyl sulfate:
Species: Rat
Application Route: Ingestion
Exposure time: 2 Years
Method: OECD Test Guideline 453
Result: negative
Remarks: Based on data from similar materials

Reproductive toxicity
May damage fertility. May damage the unborn child.

Components:

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

Effects on foetal development: Test Type: Fertility/early embryonic development
Species: Rat
Application Route: Ingestion
Result: negative

Ezetimibe:
Effects on fertility: Test Type: Fertility/early embryonic development
Species: Rat, male and female
Fertility: NOAEL: > 1,000 mg/kg body weight
Result: No effects on fertility, No fetotoxicity

Effects on foetal development: Test Type: Development
Species: Rat
Application Route: Oral
Developmental Toxicity: NOAEL: > 1,000 mg/kg body weight
Result: No adverse effects
Rosuvastatin:

Effects on fertility: Test Type: Fertility Species: Rat Application Route: Oral Fertility: NOAEL: 50 mg/kg body weight

Result:

Species: Monkey Application Route: Oral Fertility: LOAEL: 30 mg/kg body weight Result: Effects on male and female reproductive organs.

Effects on foetal development: Test Type: Development Species: Rat Application Route: Oral Developmental Toxicity: LOAEL: 50 mg/kg body weight Result: foetal mortality

Species: Rabbit Application Route: Oral Developmental Toxicity: LOAEL: 3 mg/kg body weight Result: foetal mortality, Maternal toxicity observed.

Reproductive toxicity - Assessment: May damage fertility. May damage the unborn child.

Sodium n-dodecyl sulfate:

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

Magnesium stearate:

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
### SAFETY DATA SHEET

**Ezetimibe / Rosuvastatin 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>1.4</td>
<td>09/13/2019</td>
<td>3177575-00005</td>
<td>24.04.2019</td>
<td>18.09.2018</td>
</tr>
</tbody>
</table>

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**
May cause damage to organs (Liver, Kidney, muscle) if swallowed.

**Components:**

**Rosuvastatin:**
- Exposure routes: Oral
- Target Organs: Liver, Kidney, muscle
- Assessment: Causes damage to organs.

**STOT - repeated exposure**
May cause damage to organs (Eye) through prolonged or repeated exposure if swallowed.

**Components:**

**Rosuvastatin:**
- Exposure routes: Oral
- Target Organs: Eye
- Assessment: Causes damage to organs through prolonged or repeated exposure.

**Repeated dose toxicity**

**Components:**

**Cellulose:**
- Species: Rat
- NOAEL: >= 9,000 mg/kg
- Application Route: Ingestion
- Exposure time: 90 Days

**Ezetimibe:**
- Species: Dog
- NOAEL: 1,000 mg/kg
- Application Route: Oral
- Exposure time: 90 d
- Remarks: No significant adverse effects were reported

- Species: Rat
- NOAEL: 1,500 mg/kg
- Application Route: Oral
- Exposure time: 90 d
- Remarks: No significant adverse effects were reported
### Ezetimibe / Rosuvastatin Formulation

<table>
<thead>
<tr>
<th>Species</th>
<th>Mouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOAEL</td>
<td>500 mg/kg</td>
</tr>
<tr>
<td>Application Route</td>
<td>Oral</td>
</tr>
<tr>
<td>Exposure time</td>
<td>90 d</td>
</tr>
<tr>
<td>Remarks</td>
<td>No significant adverse effects were reported</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOAEL</td>
<td>300 mg/kg</td>
</tr>
<tr>
<td>Application Route</td>
<td>Oral</td>
</tr>
<tr>
<td>Exposure time</td>
<td>1 yr</td>
</tr>
<tr>
<td>Remarks</td>
<td>No significant adverse effects were reported</td>
</tr>
</tbody>
</table>

**Rosuvastatin:**

<table>
<thead>
<tr>
<th>Species</th>
<th>Dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOAEL</td>
<td>90 mg/kg</td>
</tr>
<tr>
<td>Application Route</td>
<td>Oral</td>
</tr>
<tr>
<td>Exposure time</td>
<td>24 Days</td>
</tr>
<tr>
<td>Target Organs</td>
<td>Brain</td>
</tr>
<tr>
<td>Symptoms</td>
<td>Oedema, Blood disorders, Necrosis</td>
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<td>Remarks</td>
<td>Based on data from similar materials</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOAEL</td>
<td>6 mg/kg</td>
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<tr>
<td>Application Route</td>
<td>Oral</td>
</tr>
<tr>
<td>Exposure time</td>
<td>52 Weeks</td>
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<tr>
<td>Target Organs</td>
<td>Cornea</td>
</tr>
<tr>
<td>Symptoms</td>
<td>Corneal opacity</td>
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<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
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<table>
<thead>
<tr>
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<th>Dog</th>
</tr>
</thead>
<tbody>
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<td>LOAEL</td>
<td>30 mg/kg</td>
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<tr>
<td>Application Route</td>
<td>Oral</td>
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<tr>
<td>Exposure time</td>
<td>12 Weeks</td>
</tr>
<tr>
<td>Target Organs</td>
<td>Eye</td>
</tr>
<tr>
<td>Symptoms</td>
<td>Eye disease</td>
</tr>
<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOAEL</td>
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</tr>
<tr>
<td>Application Route</td>
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</tr>
<tr>
<td>Exposure time</td>
<td>4 Weeks</td>
</tr>
<tr>
<td>Target Organs</td>
<td>eye - retina</td>
</tr>
<tr>
<td>Symptoms</td>
<td>Eye disease</td>
</tr>
<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

**Sodium n-dodecyl sulfate:**

<table>
<thead>
<tr>
<th>Species</th>
<th>Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOAEL</td>
<td>488 mg/kg</td>
</tr>
<tr>
<td>Application Route</td>
<td>Ingestion</td>
</tr>
<tr>
<td>Exposure time</td>
<td>90 Days</td>
</tr>
<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

**Magnesium stearate:**
**SAFETY DATA SHEET**

**Ezetimibe / Rosuvastatin Formulation**

**Species**
- Rat

**NOAEL**
- > 100 mg/kg

**Application Route**
- Ingestion

**Exposure time**
- 90 Days

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

**Aspiration toxicity**
- Not classified based on available information.

**Components:**

**Ezetimibe:**
- Not applicable

**Experience with human exposure**

**Components:**

**Ezetimibe:**
- Ingestion
  - Symptoms: Headache, Nausea, Vomiting, Diarrhoea, flatulence, muscle pain, upper respiratory tract infection, Back pain, joint pain

**Rosuvastatin:**
- Ingestion
  - Target Organs: Kidney
  - Symptoms: kidney toxicity
  - Remarks: Based on Human Evidence
  - Target Organs: muscle
  - Symptoms: musculoskeletal pain
  - Remarks: Based on Human Evidence
  - Target Organs: Liver
  - Symptoms: liver function change
  - Remarks: Based on Human Evidence

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

**Cellulose:**
- Toxicity to fish
  - LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l
  - Exposure time: 48 h
  - Remarks: Based on data from similar materials

**Ezetimibe:**
- Toxicity to fish
  - LC50 (Pimephales promelas (fathead minnow)): > 0.125 mg/l
  - Exposure time: 96 h
  - Method: OECD Test Guideline 203
  - Remarks: No toxicity at the limit of solubility

- Toxicity to daphnia and other aquatic invertebrates
  - EC50 (Daphnia magna (Water flea)): > 4 mg/l
  - Exposure time: 48 h
  - Method: OECD Test Guideline 202
## Remarks:

No toxicity at the limit of solubility

### Toxicity to algae/aquatic plants

- **EC50**: 
  - Pseudokirchneriella subcapitata (green algae): > 0.317 mg/l
  - Exposure time: 96 h
  - Method: OECD Test Guideline 201
  - Remarks: No toxicity at the limit of solubility

- **NOEC**: 
  - Pseudokirchneriella subcapitata (green algae): 0.317 mg/l
  - Exposure time: 96 h
  - Method: OECD Test Guideline 201
  - Remarks: No toxicity at the limit of solubility

### Toxicity to microorganisms

- **EC50**: > 4.4 mg/l
  - Exposure time: 3 h
  - Test Type: Respiration inhibition
  - Method: OECD Test Guideline 209
  - Remarks: No toxicity at the limit of solubility

- **NOEC**: 4.4 mg/l
  - Exposure time: 3 h
  - Test Type: Respiration inhibition
  - Method: OECD Test Guideline 209
  - Remarks: No toxicity at the limit of solubility

### Toxicity to fish (Chronic toxicity)

- **NOEC**: 0.051 mg/l
  - Exposure time: 33 d
  - Species: Pimephales promelas (fathead minnow)
  - Method: OECD Test Guideline 210

- **NOEC**: 4 mg/l
  - Exposure time: 7 d
  - Species: Cyprinodon variegatus (sheepshead minnow)
  - Method: OECD Test Guideline 209
  - Remarks: No toxicity at the limit of solubility

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

- **NOEC**: 0.282 mg/l
  - Exposure time: 21 d
  - Species: Daphnia magna (Water flea)
  - Method: OECD Test Guideline 209
  - Remarks: No toxicity at the limit of solubility

### M-Factor (Chronic aquatic toxicity)

- **M-Factor**: 1

### Rosuvastatin:

#### Toxicity to fish

- **LC50**: 
  - Pimephales promelas (fathead minnow): > 1,000 mg/l
  - Exposure time: 96 hrs
  - Method: FDA 4.11

- **LC50**: 
  - Lepomis macrochirus (Bluegill sunfish): > 1,000 mg/l
  - Exposure time: 96 hrs
  - Method: FDA 4.11

#### Toxicity to daphnia and other aquatic invertebrates

- **EC50**: 
  - Daphnia magna (Water flea): 63 mg/l
Toxicity to algae/aquatic plants:

- EC50 (Microcystis aeruginosa (blue-green algae)): > 640 mg/l
  Exposure time: 96 hrs
  Method: FDA 4.01

- NOEC (Microcystis aeruginosa (blue-green algae)): 330 mg/l
  Exposure time: 96 hrs
  Method: FDA 4.01

- EC50 (Pseudokirchneriella subcapitata (green algae)): > 800 mg/l
  Exposure time: 96 hrs
  Method: FDA 4.01

- NOEC (Pseudokirchneriella subcapitata (green algae)): 350 mg/l
  Exposure time: 96 hrs
  Method: FDA 4.01

Toxicity to microorganisms:

- EC50: > 100 mg/l
  Exposure time: 3 hrs
  Test Type: Respiration inhibition
  Method: OECD Test Guideline 209

- NOEC: 100 mg/l
  Exposure time: 3 hrs
  Test Type: Respiration inhibition
  Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity):

- NOEC: 1 mg/l
  Exposure time: 32 Days
  Species: Pimephales promelas (fathead minnow)
  Method: OECD Test Guideline 210

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

- NOEC: 0.018 mg/l
  Exposure time: 21 Days
  Species: Daphnia magna (Water flea)
  Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity):

- 1

**Sodium n-dodecyl sulfate:**

- Toxicity to fish
  - LC50 (Pimephales promelas (fathead minnow)): 29 mg/l
  - Exposure time: 96 h

- Toxicity to daphnia and other aquatic invertebrates
  - EC50 (Ceriodaphnia dubia (water flea)): 5.55 mg/l
  - Exposure time: 48 h

- Toxicity to algae/aquatic plants
  - ER50 (Desmodesmus subspicatus (green algae)): > 120 mg/l
  - Exposure time: 72 h
NOEC (Desmodesmus subspicatus (green algae)): 30 mg/l
Exposure time: 72 h

Toxicity to microorganisms: EC50: 135 mg/l
Exposure time: 3 h

Toxicity to fish (Chronic toxicity): NOEC: >= 1.357 mg/l
Exposure time: 42 d
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC: 0.88 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia (water flea)

Magnesium stearate:
Toxicity to fish: LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l
Exposure time: 48 h
Method: DIN 38412
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates: EL50 (Daphnia magna (Water flea)): > 1 mg/l
Exposure time: 47 h
Test substance: Water Accommodated Fraction
Remarks: Based on data from similar materials
No toxicity at the limit of solubility

Toxicity to algae/aquatic plants: EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials
No toxicity at the limit of solubility

NOELR (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to microorganisms: EC10 (Pseudomonas putida): > 100 mg/l
Exposure time: 16 h
Test substance: Water Accommodated Fraction
Remarks: Based on data from similar materials

Persistence and degradability

Components:

Cellulose:
Biodegradability: Result: Readily biodegradable.
Ezetimibe:
Biodegradability: Result: Not readily biodegradable.
   Biodegradation: 6.8 %
   Exposure time: 28 d
Stability in water: Hydrolysis: 50 % (4.5 d)
   Method: OECD Test Guideline 111

Rosuvastatin:
Biodegradability: Biodegradation: < 10 %
   Exposure time: 28 Days
   Method: OECD Test Guideline 301F
   Remarks: Not inherently biodegradable.
Stability in water: Hydrolysis: < 10 % (5 Days)

Sodium n-dodecyl sulfate:
Biodegradability: Result: Readily biodegradable.
   Biodegradation: 95 %
   Exposure time: 28 d
   Method: OECD Test Guideline 301B

Magnesium stearate:
Biodegradability: Result: Not biodegradable
   Remarks: Based on data from similar materials

Bioaccumulative potential
Components:
Ezetimibe:
Bioaccumulation: Species: Lepomis macrochirus (Bluegill sunfish)
   Exposure time: 97 d
   Bioconcentration factor (BCF): 173
   Method: OECD Test Guideline 305
   Partition coefficient: n-octanol/water: log Pow: 4.36

Rosuvastatin:
Partition coefficient: n-octanol/water: log Pow: 0.3

Sodium n-dodecyl sulfate:
Partition coefficient: n-octanol/water: log Pow: 0.83

Magnesium stearate:
Partition coefficient: n-octanol/water : log Pow: > 4

Mobility in soil

Components:

Ezetimibe:
Distribution among environmental compartments : log Koc: 4.35
Method: OECD Test Guideline 106

Rosuvastatin:
Distribution among environmental compartments : log Koc: 2.15
Method: FDA 3.08

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.
(Ezetimibe, Rosuvastatin)
Class : 9
Packing group : III
Labels : 9

IATA-DGR
UN/ID No. : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.
(Ezetimibe, Rosuvastatin)
Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 956
Packing instruction (passenger aircraft) : 956
Environmentally hazardous : yes

IMDG-Code
SAFETY DATA SHEET

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Version 1.4  Revision Date: 09/13/2019  SDS Number: 3177575-00005  Date of last issue: 24.04.2019
Date of first issue: 18.09.2018

UN number: UN 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Ezetimibe, Rosuvastatin)
Class: 9
Packing group: III
Labels: 9
EmS Code: F-A, S-F
Marine pollutant: yes

Transport in bulk according to IMO instruments
Not applicable for product as supplied.

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

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

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

16. OTHER INFORMATION

Further information
Date format: dd.mm.yyyy

Full text of other abbreviations
ACGIH: USA. ACGIH Threshold Limit Values (TLV)
ACGIH / TWA: 8-hour, 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 Sys-
SAFETY DATA SHEET

Ezetimibe / Rosuvastatin Formulation

Version 1.4    Revision Date: 09/13/2019  SDS Number: 3177575-00005  Date of last issue: 24.04.2019
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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.

IN / EN