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

Ezetimibe / Rosuvastatin Formulation

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

1.1 Product identifier
Trade name : Ezetimibe / Rosuvastatin 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
Shotton Lane
NE23 3JU Cramlington NU - Great Britain

Telephone : 44 1 670 59 30 00
Telefax : 908-735-1496
E-mail address of person responsible for the SDS : EHSDATASTEWARD@msd.com

1.4 Emergency telephone number
1-908-423-6000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
Carcinogenicity, Category 1B
Reproductive toxicity, Category 1B
Specific target organ toxicity - single exposure, Category 2
Specific target organ toxicity - repeated exposure, Category 2
Long-term (chronic) aquatic hazard, Category 2

H350: May cause cancer.
H360FD: May damage fertility. May damage the unborn child.
H371: May cause damage to organs.
H373: May cause damage to organs through prolonged or repeated exposure.
H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H350 May cause cancer.
**Hazardous components which must be listed on the label:**

Rosuvastatin

### 2.3 Other hazards

Dust contact with the eyes can lead to mechanical irritation. May form explosive dust-air mixture during processing, handling or other means.

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Registration number</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ezetimibe</td>
<td>163222-33-1</td>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 1; H410</td>
<td>&gt;= 2.5 - &lt; 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M-Factor (Chronic aquatic toxicity): 1</td>
<td></td>
</tr>
<tr>
<td>Rosuvastatin</td>
<td>147098-20-2</td>
<td></td>
<td></td>
<td></td>
<td>Carc. 1B; H350 Repr. 1B; H360FD STOT SE 1; H370 STOT RE 1; H372 Aquatic Chronic 1; H410</td>
<td>&gt;= 2.5 - &lt; 10</td>
</tr>
<tr>
<td>Sodium n-dodecyl sulfate</td>
<td>151-21-3</td>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4; H302</td>
<td>&gt;= 1 - &lt; 2.5</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1 Description of first aid measures

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

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

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

4.2 Most important symptoms and effects, both acute and delayed

Risks: May cause cancer.
May damage fertility. May damage the unborn child.
May cause damage to organs.
May cause damage to organs through prolonged or repeated exposure.

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:
- 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

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 and personal protective equipment recommendations.

6.2 Environmental precautions

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

7.2 Conditions for safe storage, including any incompatibilities
Requirements for storage: Keep in properly labelled containers. Store locked up. Keep
areas and containers 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

<table>
<thead>
<tr>
<th>Occupational Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
</tr>
<tr>
<td>Cellulose</td>
</tr>
</tbody>
</table>

Further information:
For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with.

<table>
<thead>
<tr>
<th></th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA (Respirable dust)</td>
<td>4 mg/m³</td>
<td>GB EH40</td>
</tr>
<tr>
<td>STEL (inhalable dust)</td>
<td>20 mg/m³</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ezetimibe</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>163222-33-1</td>
<td>TWA</td>
<td>25 µg/m³ (OEB 3)</td>
<td>Internal</td>
</tr>
<tr>
<td>Wipe limit</td>
<td></td>
<td></td>
<td>250 µg/100 cm²</td>
<td>Internal</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Ezetimibe / Rosuvastatin Formulation

Version 1.4
Revision Date: 09/13/2019
SDS Number: 3178918-00005
Date of last issue: 24.04.2019
Date of first issue: 18.09.2018

<table>
<thead>
<tr>
<th>Rosuvastatin</th>
<th>147098-20-2</th>
<th>TWA</th>
<th>20 µg/m³ (OEB 3)</th>
<th>Internal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>200 µg/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>Sodium n-dodecyl sulfate</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>285 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>4060 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>85 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>24400 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>24 mg/kg bw/day</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium n-dodecyl sulfate</td>
<td>Fresh water</td>
<td>0.176 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.018 mg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>1.35 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>6.97 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.697 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>1.29 mg/kg dry weight (d.w.)</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

**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**

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
Ezetimibe / Rosuvastatin Formulation

SECTION 9: Physical and chemical properties

9.1 Information on basic 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>Upper explosion limit / Upper flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Water solubility</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>
Ezetimibe / Rosuvastatin Formulation

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 explosive dust-air mixture 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 toxicological effects
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: > 2,000 mg/kg
Method: Calculation method

**Components:**

**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

**Skin corrosion/irritation**
Not classified based on available information.

**Components:**

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

**Sodium n-dodecyl sulfate:**
Species: Rabbit
Result: Skin irritation

**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

### 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

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

## Components:

### 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

Carcinogenicity
May cause cancer.

Components:
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:
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

Test Type: Fertility
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

Test Type: Development
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

STOT - single exposure
May cause damage to organs.

Components:

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

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

Components:

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

**Repeated dose toxicity**

**Components:**

**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  

Species : Mouse  
LOAEL  : 500 mg/kg  
Application Route : Oral  
Exposure time : 90 d  
Remarks : No significant adverse effects were reported  

Species : Dog  
NOAEL  : 300 mg/kg  
Application Route : Oral  
Exposure time : 1 yr  
Remarks : No significant adverse effects were reported  

**Rosuvastatin:**  
Species : Dog  
LOAEL  : 90 mg/kg  
Application Route : Oral  
Exposure time : 24 Days  
Target Organs : Brain  
Symptoms : Oedema, Blood disorders, Necrosis  
Remarks : Based on data from similar materials  

Species : Dog  
LOAEL  : 6 mg/kg  
Application Route : Oral  
Exposure time : 52 Weeks  
Target Organs : Cornea  
Symptoms : Corneal opacity  
Remarks : Based on data from similar materials  

Species : Dog  
LOAEL  : 30 mg/kg  
Application Route : Oral
Ezetimibe / Rosuvastatin Formulation

Exposure time: 12 Weeks
Target Organs: Eye
Symptoms: Eye disease
Remarks: Based on data from similar materials

Species: Dog
LOAEL: 90 mg/kg
Application Route: Oral
Exposure time: 4 Weeks
Target Organs: eye - retina
Symptoms: Eye disease
Remarks: Based on data from similar materials

Sodium n-dodecyl sulfate:
Species: Rat
NOAEL: 488 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
### SECTION 12: Ecological information

#### 12.1 Toxicity

**Components:**

**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)
  - 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
## 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>
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<tbody>
<tr>
<td>1.4</td>
<td>09/13/2019</td>
<td>3178918-00005</td>
<td>24.04.2019</td>
<td>18.09.2018</td>
</tr>
</tbody>
</table>

### Toxicity (Chronic aquatic toxicity) Species: Daphnia magna (Water flea) Remarks: No toxicity at the limit of solubility

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

<table>
<thead>
<tr>
<th>( \text{M-Factor} )</th>
<th>( \text{LC50} ) (Pimephales promelas (fathead minnow))</th>
<th>( &gt; 1,000 \text{ mg/l} )</th>
<th>Exposure time: 96 hrs</th>
<th>Method: FDA 4.11</th>
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</table>

<table>
<thead>
<tr>
<th>( \text{LC50} ) (Lepomis macrochirus (Bluegill sunfish))</th>
<th>( &gt; 1,000 \text{ mg/l} )</th>
<th>Exposure time: 96 hrs</th>
<th>Method: FDA 4.11</th>
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### Rosuvastatin:

#### Toxicity to fish

<table>
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<tr>
<th>( \text{LC50} ) (Pimephales promelas (fathead minnow))</th>
<th>( &gt; 1,000 \text{ mg/l} )</th>
<th>Exposure time: 96 hrs</th>
<th>Method: FDA 4.11</th>
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</table>

<table>
<thead>
<tr>
<th>( \text{LC50} ) (Lepomis macrochirus (Bluegill sunfish))</th>
<th>( &gt; 1,000 \text{ mg/l} )</th>
<th>Exposure time: 96 hrs</th>
<th>Method: FDA 4.11</th>
</tr>
</thead>
</table>

#### Toxicity to daphnia and other aquatic invertebrates

<table>
<thead>
<tr>
<th>( \text{EC50} ) (Daphnia magna (Water flea))</th>
<th>( 63 \text{ mg/l} )</th>
<th>Exposure time: 48 hrs</th>
<th>Method: OECD Test Guideline 202</th>
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### Toxicity to algae/aquatic plants

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<thead>
<tr>
<th>( \text{EC50} ) (Microcystis aeruginosa (blue-green algae))</th>
<th>( &gt; 640 \text{ mg/l} )</th>
<th>Exposure time: 96 hrs</th>
<th>Method: FDA 4.01</th>
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<table>
<thead>
<tr>
<th>( \text{NOEC} ) (Microcystis aeruginosa (blue-green algae))</th>
<th>( 330 \text{ mg/l} )</th>
<th>Exposure time: 96 hrs</th>
<th>Method: FDA 4.01</th>
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<table>
<thead>
<tr>
<th>( \text{EC50} ) (Pseudokirchneriella subcapitata (green algae))</th>
<th>( &gt; 800 \text{ mg/l} )</th>
<th>Exposure time: 96 hrs</th>
<th>Method: FDA 4.01</th>
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</table>

<table>
<thead>
<tr>
<th>( \text{NOEC} ) (Pseudokirchneriella subcapitata (green algae))</th>
<th>( 350 \text{ mg/l} )</th>
<th>Exposure time: 96 hrs</th>
<th>Method: FDA 4.01</th>
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### Toxicity to microorganisms

<table>
<thead>
<tr>
<th>( \text{EC50} )</th>
<th>( &gt; 100 \text{ mg/l} )</th>
<th>Exposure time: 3 hrs</th>
<th>Test Type: Respiration inhibition</th>
<th>Method: OECD Test Guideline 209</th>
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</table>

<table>
<thead>
<tr>
<th>( \text{NOEC} )</th>
<th>( 100 \text{ mg/l} )</th>
<th>Exposure time: 3 hrs</th>
<th>Test Type: Respiration inhibition</th>
<th>Method: OECD Test Guideline 209</th>
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</table>

### Toxicity to fish (Chronic toxicity)

<table>
<thead>
<tr>
<th>( \text{NOEC} )</th>
<th>( 1 \text{ mg/l} )</th>
<th>Exposure time: 32 Days</th>
<th>Species: Pimephales promelas (fathead minnow)</th>
<th>Method: OECD Test Guideline 210</th>
</tr>
</thead>
</table>

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

| \( \text{NOEC} \) | \( 0.018 \text{ mg/l} \) | Exposure time: 21 Days | Method: OECD Test Guideline 210 |
|--------------------|-----------------------------|-----------------------|---------------------------------|--------------------------|
**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

**Ezetimibe / Rosuvastatin Formulation**

**Version** 1.4  
**Revision Date:** 09/13/2019  
**SDS Number:** 3178918-00005  
**Date of last issue:** 24.04.2019  
**Date of first issue:** 18.09.2018

<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 microorganisms</th>
<th>Toxicity to fish (Chronic toxicity)</th>
<th>Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sodium n-dodecyl sulfate:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211</td>
<td><strong>ic toxicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M-Factor (Chronic aquatic toxicity)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LC50 (Pimephales promelas (fathead minnow)): 29 mg/l</strong></td>
<td><strong>EC50 (Ceriodaphnia dubia (water flea)): 5.55 mg/l</strong></td>
<td><strong>EC50 (Desmodesmus subspicatus (green algae)): &gt; 120 mg/l</strong></td>
<td><strong>NOEC (Desmodesmus subspicatus (green algae)): 30 mg/l</strong></td>
<td><strong>EC50 : 135 mg/l</strong></td>
<td><strong>NOEC: &gt;= 1.357 mg/l</strong></td>
<td><strong>NOEC: 0.88 mg/l</strong></td>
</tr>
<tr>
<td>Exposure time: 96 h</td>
<td>Exposure time: 48 h</td>
<td>Exposure time: 72 h</td>
<td>Exposure time: 72 h</td>
<td>Exposure time: 3 h</td>
<td>Exposure time: 42 d</td>
<td>Exposure time: 7 d</td>
</tr>
<tr>
<td><strong>NOEC (Desmodesmus subspicatus (green algae)): 30 mg/l</strong></td>
<td><strong>EC50 (Pimephales promelas (fathead minnow)): 29 mg/l</strong></td>
<td><strong>NOEC: &gt;= 1.357 mg/l</strong></td>
<td><strong>NOEC: 0.88 mg/l</strong></td>
<td><strong>EC50 : 135 mg/l</strong></td>
<td><strong>NOEC: &gt;= 1.357 mg/l</strong></td>
<td><strong>NOEC: 0.88 mg/l</strong></td>
</tr>
<tr>
<td><strong>Exposure time:</strong> 96 h</td>
<td><strong>Exposure time:</strong> 48 h</td>
<td><strong>Exposure time:</strong> 72 h</td>
<td><strong>Exposure time:</strong> 72 h</td>
<td><strong>Exposure time:</strong> 3 h</td>
<td><strong>Exposure time:</strong> 42 d</td>
<td><strong>Exposure time:</strong> 7 d</td>
</tr>
</tbody>
</table>

**12.2 Persistence and degradability**

**Components:**

**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.
12.3 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

12.4 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

12.5 Results of PBT and vPvB assessment

Not relevant

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

**Contaminated packaging:**
- Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

<table>
<thead>
<tr>
<th>ADN</th>
<th>ADR</th>
<th>RID</th>
<th>IMDG</th>
<th>IATA</th>
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</thead>
<tbody>
<tr>
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<td>UN 3077</td>
<td>UN 3077</td>
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</table>

14.2 UN proper shipping name

<table>
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<th>ADR</th>
<th>RID</th>
<th>IMDG</th>
<th>IATA</th>
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<tbody>
<tr>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Ezetimibe, Rosuvastatin)</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Ezetimibe, Rosuvastatin)</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Ezetimibe, Rosuvastatin)</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Ezetimibe, Rosuvastatin)</td>
<td>Environmentally hazardous substance, solid, n.o.s. (Ezetimibe, Rosuvastatin)</td>
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</tbody>
</table>

14.3 Transport hazard class(es)

<table>
<thead>
<tr>
<th>ADN</th>
<th>ADR</th>
<th>RID</th>
<th>IMDG</th>
<th>IATA</th>
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</thead>
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<tr>
<td>9</td>
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14.4 Packing group

<table>
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<tr>
<td>Packing group: III</td>
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<tr>
<td>Labels: 9</td>
<td>Labels: 9</td>
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</table>
14.5 Environmental hazards

**ADN**
Environmentally hazardous : yes

**ADR**
Environmentally hazardous : yes

**RID**
Environmentally hazardous : yes

**IMDG**
Marine pollutant : yes

**IATA (Passenger)**
Environmentally hazardous : yes

**IATA (Cargo)**
Environmentally hazardous : yes

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

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Remarks : Not applicable for product as supplied.
SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable
REACH - List of substances subject to authorisation (Annex XIV): Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable
Regulation (EC) No 850/2004 on persistent organic pollutants: 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 - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII): Not applicable

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
H302: Harmful if swallowed.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H350: May cause cancer.
H360FD: May damage fertility. May damage the unborn child.
Ezetimibe / Rosuvastatin Formulation

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H370 : Causes damage to organs if swallowed.
H372 : Causes damage to organs through prolonged or repeated exposure if swallowed.
H410 : Very toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

**Full text of other abbreviations**

| Acute Tox. | : Acute toxicity |
| Aquatic Chronic | : Long-term (chronic) aquatic hazard |
| Carc. | : Carcinogenicity |
| Eye Dam. | : Serious eye damage |
| Repr. | : Reproductive toxicity |
| Skin Irrit. | : Skin irritation |
| STOT RE | : Specific target organ toxicity - repeated exposure |
| STOT SE | : Specific target organ toxicity - single exposure |
| GB EH40 | : UK EH40 WEL - Workplace Exposure Limits |
| GB EH40 / TWA | : Long-term exposure limit (8-hour TWA reference period) |
| GB EH40 / STEL | : Short-term exposure limit (15-minute reference period) |

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; 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; MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

**Further information**

Sources of key data used to : Internal technical data, data from raw material SDSs, OECD
Ezetimibe / Rosuvastatin Formulation


Classification of the mixture: Classification procedure:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Code</th>
<th>Code description</th>
<th>Method</th>
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<td>Calculation method</td>
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<tr>
<td>Repr. 1B</td>
<td>H360FD</td>
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<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 2</td>
<td>H371</td>
<td></td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 2</td>
<td>H373</td>
<td></td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 2</td>
<td>H411</td>
<td></td>
<td>Calculation method</td>
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</tbody>
</table>

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.

GB / EN