SAFETY DATA SHEET

Netobimin Formulation

Section 1: Identification

Product name: Netobimin Formulation

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

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

Section 2: Hazard identification

GHS Classification
Acute toxicity (Inhalation): Category 4
Serious eye damage/eye irritation: Category 2B
Reproductive toxicity: Category 2
Specific target organ toxicity - repeated exposure (Oral): Category 1 (Testis, Liver, Skin, Gastrointestinal tract)

GHS label elements
Hazard pictograms: (diagram)
Signal word: Danger
Hazard statements: H320 Causes eye irritation.
H332 Harmful if inhaled.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H372 Causes damage to organs (Testis, Liver, Skin, Gastrointestinal tract) through prolonged or repeated exposure if swallowed.

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 mist or vapours.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

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
None known.

Section 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>Netobimin</td>
</tr>
</tbody>
</table>

Section 4: First-aid measures

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

If inhaled : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. 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: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.

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

Most important symptoms and effects, both acute and delayed: Causes eye irritation. Harmful if inhaled. Suspected of damaging fertility. Suspected of damaging the unborn child. Causes damage to organs through prolonged or repeated exposure if swallowed.

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

Notes to physician: Treat symptomatically and supportively.

Section 5: Fire-fighting measures

Suitable extinguishing media: Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media: None known.

Specific hazards during fire-fighting: Exposure to combustion products may be a hazard to health.

Hazardous combustion products: Carbon oxides
Nitrogen oxides (NOx)
Sulphur compounds

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

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

Section 6: Accidental release measures

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

Environmental precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
SAFETY DATA SHEET

Netobimin Formulation

Methods and materials for containment and cleaning up:
Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate contain-
ment to keep material from spreading. If dyked material can
be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorb-
ent.
Local or national regulations may apply to releases and dis-
posal of this material, as well as those materials and items
employed in the cleanup of releases. You will need to deter-
mine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding
certain local or national requirements.

Section 7: Handling and storage

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

Local/Total ventilation:
If sufficient ventilation is unavailable, use with local exhaust
ventilation.

Advice on safe handling:
Do not get on skin or clothing.
Do not breathe mist or vapours.
Do not swallow.
Do not get in eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety
practice, based on the results of the workplace exposure as-
essment
Keep container tightly closed.
Do not eat, drink or smoke when using this product.
Take care to prevent spills, waste and minimize release to the
environment.

Hygiene measures:
If exposure to chemical is likely during typical use, provide eye
flushing systems and safety showers close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.
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.

Conditions for safe storage:
Keep in properly labelled containers.
Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.

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

Section 8: Exposure controls/personal protection

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type</th>
<th>Control parameter</th>
<th>Basis</th>
</tr>
</thead>
</table>

4 / 13
Section 8: Exposure limits

<table>
<thead>
<tr>
<th>Compound</th>
<th>Form of exposure</th>
<th>TWA permissible concentration</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netobimin</td>
<td>88255-01-0</td>
<td>20 ug/m³ (OEB 3)</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>Internal</td>
</tr>
</tbody>
</table>

Further information:
- Skin Wipe limit: 200 ug/100 cm³ Internal

Engineering measures:
- Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., dripless quick connections).
  - 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:
  - Material: 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.

Section 9: Physical and chemical properties

- Appearance: suspension
- Colour: yellow
- Odour: No data available
- Odour Threshold: No data available
- pH: 4.5 - 6.5
- Melting point/freezing point: No data available
Initial boiling point and boiling range: No data available
Flash point: No data available
Evaporation rate: No data available
Flammability (solid, gas): Not applicable
Flammability (liquids): No data available
Upper explosion limit / Upper flammability limit: No data available
Lower explosion limit / Lower flammability limit: No data available
Vapour pressure: No data available
Relative vapour density: No data available
Relative density: No data available
Density: 1,070 - 1,085 g/cm³
Solubility(ies)
   Water solubility: No data available
Partition coefficient: n-octanol/water: Not applicable
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity
   Viscosity, kinematic: No data available
Explosive properties: Not explosive
Oxidizing properties: The substance or mixture is not classified as oxidizing.
Molecular weight: No data available
Particle size: Not applicable

Section 10: Stability and reactivity
Reactivity: Not classified as a reactivity hazard.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: Can react with strong oxidizing agents.
Conditions to avoid: None known.
Incompatible materials: Oxidizing agents
Hazardous decomposition products: No hazardous decomposition products are known.

Section 11: Toxicological information

Exposure routes:
- Inhalation
- Skin contact
- Ingestion
- Eye contact

**Acute toxicity**

Harmful if inhaled.

**Product:**

- **Acute inhalation toxicity**: Acute toxicity estimate: 1.27 mg/l
  - Exposure time: 4 h
  - Test atmosphere: dust/mist
  - Method: Calculation method

**Components:**

**Netobimin:**

- **Acute oral toxicity**: LD50 (Rat): > 2,000 mg/kg
- **Acute inhalation toxicity**: LCLo (Rat): 0.19 mg/l
  - Test atmosphere: dust/mist

**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

**Netobimin:**

- **Species**: Rabbit
- **Method**: Draize Test
- **Result**: Mild skin irritation

**Serious eye damage/eye irritation**

Causes eye irritation.

**Components:**

**Netobimin:**

- **Species**: Rabbit
- **Result**: Mild eye irritation
- **Method**: Draize Test

**Respiratory or skin sensitisation**

**Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.
Chronic toxicity

Germ cell mutagenicity
Not classified based on available information.

Components:

Netobimin:

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

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Result: negative

Genotoxicity in vivo:
Test Type: Micronucleus test
Species: Mouse
Cell type: Bone marrow
Result: positive

Carcinogenicity
Not classified based on available information.

Components:

Netobimin:

Species: Rat
Application Route: Oral
Exposure time: 1 Years
Remarks: No significant adverse effects were reported

Reproductive toxicity
Suspected of damaging fertility. Suspected of damaging the unborn child.

Components:

Netobimin:

Effects on fertility:
Test Type: Two-generation study
Species: Rat
Application Route: Oral
General Toxicity F1: NOAEL: 15 mg/kg body weight
Result: Maternal effects

Effects on foetal development:
Test Type: Development
Species: Rat
Application Route: Oral
Developmental Toxicity: NOAEL: 91 mg/kg body weight

Test Type: Development
| Species | Rat |
| Application Route | Oral |
| Developmental Toxicity | LOAEL: 228 mg/kg body weight |
| Result | Teratogenic effects, Maternal toxicity observed, Fetotoxicity |

| Test Type | Development |
| Application Route | Oral |
| Developmental Toxicity | NOAEL: 22 mg/kg body weight |

| Test Type | Development |
| Application Route | Oral |
| Developmental Toxicity | LOAEL: 60 mg/kg body weight |
| Target Organs | Testes |
| Result | Fetotoxicity |

| Test Type | Development |
| Species | Rabbit |
| Application Route | Oral |
| Developmental Toxicity | NOAEL: 15 mg/kg body weight |

| Test Type | Development |
| Species | Rabbit |
| Application Route | Oral |
| Developmental Toxicity | LOAEL: 25 mg/kg body weight |
| Result | Fetotoxicity, Maternal toxicity observed, Teratogenic effects |

| Test Type | Development |
| Species | Rabbit |
| Application Route | Oral |
| Developmental Toxicity | NOAEL: 5 mg/kg body weight |
| Result | Teratogenicity and developmental toxicity |

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

**STOT - single exposure**
Not classified based on available information.

**STOT - repeated exposure**
Causes damage to organs (Testis, Liver, Skin, Gastrointestinal tract) through prolonged or repeated exposure if swallowed.

**Components:**

**Netobimin:**

| Exposure routes | Oral |
| Target Organs | Testis, Liver, Skin, Gastrointestinal tract |
| Assessment | Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less. |
Repeated dose toxicity

**Components:**

**Netobimin:**

- **Species:** Rat
- **NOAEL:** 60 mg/kg
- **Application Route:** Oral
- **Exposure time:** 1 yr
- **Target Organs:** Testis
- **Symptoms:** Male reproductive effects

- **Species:** Rat
- **LOAEL:** 15 mg/kg
- **Application Route:** Oral
- **Exposure time:** 1 yr
- **Target Organs:** Liver
- **Symptoms:** Irregularities

- **Species:** Rat
- **NOAEL:** 7 mg/kg
- **Application Route:** Oral
- **Exposure time:** 1 yr
- **Target Organs:** Skin
- **Symptoms:** Irregularities
- **Remarks:** Based on data from similar materials

- **Species:** Rat
- **LOAEL:** 38 mg/kg
- **Application Route:** Oral
- **Exposure time:** 90 d
- **Target Organs:** Skin, Testis
- **Symptoms:** Irregularities, male reproductive effects

- **Species:** Dog
- **Application Route:** Oral
- **Exposure time:** 90 d
- **Target Organs:** Gastrointestinal tract
- **Symptoms:** Diarrhoea, Vomiting

**Aspiration toxicity**

Not classified based on available information.

**Experience with human exposure**

**Components:**

**Netobimin:**

- **Ingestion:** Symptoms: The most common side effects are: Dizziness, Headache, Abdominal pain, Gastrointestinal discomfort, Vomiting
SAFETY DATA SHEET

Netobimin Formulation

Section 12: Ecological information

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

Section 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.                   |

Section 14: Transport information

International Regulations

UNRTDG
UN number: Not applicable
Proper shipping name: Not applicable
Class: Not applicable
Subsidiary risk: Not applicable
Packing group: Not applicable
Labels: Not applicable

IATA-DGR
UN/ID No.: Not applicable
Proper shipping name: Not applicable
Class: Not applicable
Subsidiary risk: Not applicable
Packing group: Not applicable
Labels: Not applicable
Packing instruction (cargo aircraft): Not applicable
Packing instruction (passenger aircraft): Not applicable

IMDG-Code
UN number: Not applicable
Proper shipping name: Not applicable
Class: Not applicable
Subsidiary risk: Not applicable
Packing group: Not applicable
SAFETY DATA SHEET

Netobimin Formulation

Version: 3.0  Revision Date: 27.08.2021  SDS Number: 5840437-00004  Date of last issue: 10.10.2020
Date of first issue: 04.05.2020

Labels: Not applicable
EmS Code: Not applicable
Marine pollutant: Not applicable

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

National Regulations

NZS 5433
UN number: Not applicable
Proper shipping name: Not applicable
Class: Not applicable
Subsidiary risk: Not applicable
Packing group: Not applicable
Labels: Not applicable
Hazchem Code: Not applicable

Special precautions for user
Not applicable

Section 15: Regulatory information

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

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

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

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

Section 16: Other information

Further information

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

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

NZ / EN