

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Fenbendazole (10%) Liquid Formulation

|         |                |               |                                 |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number:   | Date of last issue: 09/28/2024  |
| 3.0     | 04/14/2025     | 3572223-00018 | Date of first issue: 10/24/2018 |

### SECTION 1. IDENTIFICATION

Product name : Fenbendazole (10%) Liquid Formulation  
Other means of identification : COOPERS PANACUR 100 ORAL ANTHELMINTIC FOR CATTLE AND HORSES (37088)

#### Manufacturer or supplier's details

Company name of supplier : Merck & Co., Inc  
Address : 126 E. Lincoln Avenue  
Rahway, New Jersey U.S.A. 07065  
Telephone : 908-740-4000  
Emergency telephone : 1-908-423-6000  
E-mail address : EHSDATASTEWARD@merck.com

#### Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product  
Restrictions on use : Not applicable

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Reproductive toxicity : Category 2  
Specific target organ toxicity : Category 2 (Liver, Stomach, Nervous system, Lymph nodes)  
- repeated exposure (Oral)

#### Other hazards

None known.

#### GHS label elements

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.  
H373 May cause damage to organs (Liver, Stomach, Nervous system, Lymph nodes) 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 vapors.  
P280 Wear protective gloves, protective clothing, eye protection and face protection.

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### Response:

P308 + P313 IF exposed or concerned: Get medical attention.

### Storage:

P405 Store locked up.

### Disposal:

P501 Dispose of contents and container to an approved waste disposal plant.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

| Chemical name   | CAS No./Unique ID | Concentration (% w/w) | Trade secret |
|-----------------|-------------------|-----------------------|--------------|
| fenbendazole    | 43210-67-9*       | $\geq 7 - \leq 13$    | TSC          |
| Silicon dioxide | 7631-86-9*        | $\geq 1 - \leq 5$     | TSC          |
| Benzyl alcohol  | 100-51-6*         | $\geq 0.1 - \leq 1$   | TSC          |

\* Indicates that the identifier is a CAS No.

TSC- the actual concentration or concentration range is withheld as a trade secret

## 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.  
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.  
Remove contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution.  
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention.  
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : Suspected of damaging fertility. Suspected of damaging the unborn child.  
May cause 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

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Notes to physician : when the potential for exposure exists (see section 8).  
: Treat symptomatically and supportively.

### SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
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 (NO<sub>x</sub>)  
Sulfur oxides  
Metal oxides

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

Special protective equipment for fire-fighters : 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.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material.  
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.

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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.

### SECTION 7. HANDLING AND STORAGE

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Do not breathe mist or vapors.  
Do not swallow.  
Avoid contact with eyes.  
Avoid prolonged or repeated contact with skin.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers.  
Store locked up.  
Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents  
Gases

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

| Components      | CAS-No.    | Value type<br>(Form of exposure) | Control parameters / Permissible concentration    | Basis     |
|-----------------|------------|----------------------------------|---------------------------------------------------|-----------|
| fenbendazole    | 43210-67-9 | TWA                              | 100 µg/m <sup>3</sup> (OEB 2)                     | Internal  |
| Silicon dioxide | 7631-86-9  | TWA (Dust)                       | 20 Million particles per cubic foot (Silica)      | OSHA Z-3  |
|                 |            | TWA (Dust)                       | 80 mg/m <sup>3</sup> / %SiO <sub>2</sub> (Silica) | OSHA Z-3  |
|                 |            | TWA                              | 6 mg/m <sup>3</sup> (Silica)                      | NIOSH REL |
| Benzyl alcohol  | 100-51-6   | TWA                              | 10 ppm                                            | US WEEL   |

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

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All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.  
Laboratory operations do not require special containment.

### Personal protective equipment

- Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
- Hand protection  
Material : Chemical-resistant gloves
- 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  
Hygiene measures : Work uniform or laboratory coat.  
: 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.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : suspension
- Color : white
- Odor : characteristic
- Odor Threshold : No data available
- pH : 6 - 7
- Melting point/freezing point : < 36 °F / < 2 °C
- Initial boiling point and boiling : No data available

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|                                                  |                                                            |
|--------------------------------------------------|------------------------------------------------------------|
| range                                            |                                                            |
| 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                                        |
| Vapor pressure                                   | : No data available                                        |
| Relative vapor density                           | : No data available                                        |
| Relative density                                 | : No data available                                        |
| Density                                          | : 1.062 - 1.072 g/cm <sup>3</sup>                          |
| Solubility(ies)                                  |                                                            |
| Water solubility                                 | : soluble                                                  |
| Partition coefficient: n-octanol/water           | : Not applicable                                           |
| Autoignition temperature                         | : No data available                                        |
| Decomposition temperature                        | : No data available                                        |
| Viscosity                                        |                                                            |
| Viscosity, dynamic                               | : 100 - 300 mPa.s                                          |
| 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 characteristics                         |                                                            |
| Particle size                                    | : Not applicable                                           |

### SECTION 10. STABILITY AND REACTIVITY

|                    |                                          |
|--------------------|------------------------------------------|
| Reactivity         | : Not classified as a reactivity hazard. |
| Chemical stability | : Stable under normal conditions.        |

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|                                    |   |                                                |
|------------------------------------|---|------------------------------------------------|
| 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

#### Information on likely routes of exposure

Inhalation  
Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Not classified based on available information.

#### Components:

##### **fenbendazole:**

|                     |   |                              |
|---------------------|---|------------------------------|
| Acute oral toxicity | : | LD50 (Rat): > 10,000 mg/kg   |
|                     |   | LD50 (Mouse): > 10,000 mg/kg |

##### **Silicon dioxide:**

|                           |   |                                                                                                                                                      |
|---------------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Acute oral toxicity       | : | LD50 (Rat): > 5,000 mg/kg<br>Method: OECD Test Guideline 401                                                                                         |
| Acute inhalation toxicity | : | LC50 (Rat): > 2.08 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Assessment: The substance or mixture has no acute inhalation toxicity |
| Acute dermal toxicity     | : | LD50 (Rabbit): > 5,000 mg/kg                                                                                                                         |

##### **Benzyl alcohol:**

|                           |   |                                                                                                                                                                                        |
|---------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Acute oral toxicity       | : | LD50 (Rat): 1,200 mg/kg                                                                                                                                                                |
| Acute inhalation toxicity | : | LC50 (Rat): > 5.4 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 403<br>Assessment: The substance or mixture has no acute inhalation toxicity |

#### **Skin corrosion/irritation**

Not classified based on available information.

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### **Components:**

#### **fenbendazole:**

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

#### **Silicon dioxide:**

|         |                           |
|---------|---------------------------|
| Species | : Rabbit                  |
| Method  | : OECD Test Guideline 404 |
| Result  | : No skin irritation      |

#### **Benzyl alcohol:**

|         |                           |
|---------|---------------------------|
| Species | : Rabbit                  |
| Method  | : OECD Test Guideline 404 |
| Result  | : No skin irritation      |

### **Serious eye damage/eye irritation**

Not classified based on available information.

### **Components:**

#### **fenbendazole:**

|         |                     |
|---------|---------------------|
| Species | : Rabbit            |
| Result  | : No eye irritation |

#### **Silicon dioxide:**

|         |                           |
|---------|---------------------------|
| Species | : Rabbit                  |
| Result  | : No eye irritation       |
| Method  | : OECD Test Guideline 405 |

#### **Benzyl alcohol:**

|         |                                                |
|---------|------------------------------------------------|
| Species | : Rabbit                                       |
| Result  | : Irritation to eyes, reversing within 21 days |
| Method  | : OECD Test Guideline 405                      |

### **Respiratory or skin sensitization**

#### **Skin sensitization**

Not classified based on available information.

#### **Respiratory sensitization**

Not classified based on available information.

### **Components:**

#### **Benzyl alcohol:**

|                    |                                          |
|--------------------|------------------------------------------|
| Test Type          | : Human repeat insult patch test (HRIPT) |
| Routes of exposure | : Skin contact                           |
| Species            | : Humans                                 |
| Result             | : positive                               |

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Assessment : Probability or evidence of low to moderate skin sensitization rate in humans

### Germ cell mutagenicity

Not classified based on available information.

### Components:

#### fenbendazole:

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

Test Type: DNA Repair  
Result: negative

Test Type: Chromosomal aberration  
Result: negative

Test Type: in vitro test  
Test system: mouse lymphoma cells  
Metabolic activation: Metabolic activation  
Result: equivocal

#### Silicon dioxide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
Species: Rat  
Application Route: Ingestion  
Result: negative

#### Benzyl alcohol:

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

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

### Carcinogenicity

Not classified based on available information.

### Components:

#### fenbendazole:

Species : Mouse  
Application Route : oral (feed)

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|               |                         |
|---------------|-------------------------|
| Exposure time | : 2 Years               |
| NOAEL         | : 405 mg/kg body weight |
| Result        | : negative              |

|                   |                       |
|-------------------|-----------------------|
| Species           | : Rat                 |
| Application Route | : Oral                |
| Exposure time     | : 2 Years             |
| NOAEL             | : 5 mg/kg body weight |
| Result            | : negative            |
| Target Organs     | : Lymph nodes, Liver  |

### Silicon dioxide:

|                   |             |
|-------------------|-------------|
| Species           | : Rat       |
| Application Route | : Ingestion |
| Exposure time     | : 103 weeks |
| Result            | : negative  |

### Benzyl alcohol:

|                   |                           |
|-------------------|---------------------------|
| Species           | : Mouse                   |
| Application Route | : Ingestion               |
| Exposure time     | : 103 weeks               |
| Method            | : OECD Test Guideline 451 |
| Result            | : negative                |

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### Reproductive toxicity

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

### Components:

#### fenbendazole:

|                              |                                                                                                                                                                                                                                                 |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Effects on fertility         | : Test Type: Three-generation reproduction toxicity study<br>Species: Rat<br>Application Route: oral (feed)<br>General Toxicity Parent: NOAEL: 15 mg/kg body weight<br>Fertility: LOAEL: 45 mg/kg body weight<br>Result: Effects on fertility.  |
| Effects on fetal development | : Test Type: Development<br>Species: Dog, female<br>Application Route: Oral<br>Developmental Toxicity: LOAEL: 100 mg/kg body weight<br>Result: Embryotoxic effects and adverse effects on the offspring were detected., No teratogenic effects. |

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|                                    |                                                                                                                                                                                    |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | Test Type: Embryo-fetal development<br>Species: Rabbit<br>Application Route: Oral<br>Developmental Toxicity: NOAEL: 25 mg/kg body weight<br>Result: Fetotoxicity.                  |
|                                    | Test Type: Embryo-fetal development<br>Species: Rabbit<br>Application Route: Oral<br>Developmental Toxicity: LOAEL: 63 mg/kg body weight                                           |
|                                    | Test Type: Embryo-fetal development<br>Species: Rat<br>Application Route: Oral<br>Developmental Toxicity: NOAEL: 120 mg/kg body weight<br>Result: No effects on fetal development. |
| Reproductive toxicity - Assessment | : Some evidence of adverse effects on sexual function and fertility, based on animal experiments., Some evidence of adverse effects on development, based on animal experiments.   |

### Silicon dioxide:

|                              |                                                                                                           |
|------------------------------|-----------------------------------------------------------------------------------------------------------|
| Effects on fetal development | : Test Type: Embryo-fetal development<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative |
|------------------------------|-----------------------------------------------------------------------------------------------------------|

### Benzyl alcohol:

|                              |                                                                                                                                                                         |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Effects on fertility         | : Test Type: Fertility/early embryonic development<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative<br>Remarks: Based on data from similar materials |
| Effects on fetal development | : Test Type: Embryo-fetal development<br>Species: Mouse<br>Application Route: Ingestion<br>Result: negative                                                             |

### STOT-single exposure

Not classified based on available information.

### STOT-repeated exposure

May cause damage to organs (Liver, Stomach, Nervous system, Lymph nodes) through prolonged or repeated exposure if swallowed.

### Components:

#### fenbendazole:

|                    |             |
|--------------------|-------------|
| Routes of exposure | : Ingestion |
|--------------------|-------------|

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|               |                                                                      |
|---------------|----------------------------------------------------------------------|
| Target Organs | : Liver, Stomach, Nervous system, Lymph nodes                        |
| Assessment    | : May cause damage to organs through prolonged or repeated exposure. |

### Repeated dose toxicity

#### Components:

##### **fenbendazole:**

|                   |                 |
|-------------------|-----------------|
| Species           | : Rat           |
| LOAEL             | : 500 mg/kg     |
| Application Route | : Oral          |
| Exposure time     | : 2 Weeks       |
| Target Organs     | : Kidney, Liver |

|                   |                                                |
|-------------------|------------------------------------------------|
| Species           | : Rat                                          |
| NOAEL             | : > 2,500 mg/kg                                |
| Application Route | : Oral                                         |
| Exposure time     | : 30 Days                                      |
| Remarks           | : No significant adverse effects were reported |

|                   |                          |
|-------------------|--------------------------|
| Species           | : Rat                    |
| LOAEL             | : 1,600 mg/kg            |
| Application Route | : Oral                   |
| Exposure time     | : 90 Days                |
| Target Organs     | : Central nervous system |
| Symptoms          | : Tremors                |

|               |                                        |
|---------------|----------------------------------------|
| Species       | : Dog                                  |
| NOAEL         | : 4 mg/kg                              |
| LOAEL         | : 8 mg/kg                              |
| Exposure time | : 6 Months                             |
| Target Organs | : Stomach, Nervous system, Lymph nodes |

##### **Silicon dioxide:**

|                   |                               |
|-------------------|-------------------------------|
| Species           | : Rat                         |
| NOAEL             | : 1.3 mg/m <sup>3</sup>       |
| Application Route | : inhalation (dust/mist/fume) |
| Exposure time     | : 13 Weeks                    |

##### **Benzyl alcohol:**

|                   |                               |
|-------------------|-------------------------------|
| Species           | : Rat                         |
| NOAEL             | : 1.072 mg/l                  |
| Application Route | : inhalation (dust/mist/fume) |
| Exposure time     | : 28 Days                     |
| Method            | : OECD Test Guideline 412     |

### Aspiration toxicity

Not classified based on available information.

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### Components:

#### **fenbendazole:**

|| No aspiration toxicity classification

### **Experience with human exposure**

### Components:

#### **fenbendazole:**

|| Ingestion : Symptoms: Rapid respiration, Salivation, anorexia, Diarrhea

## SECTION 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

### Components:

#### **fenbendazole:**

|| Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.009 mg/l  
Exposure time: 21 d

|| Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0088 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

|| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.00113 mg/l  
Exposure time: 21 Days  
Method: OECD Test Guideline 211

#### **Silicon dioxide:**

|| Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 10,000 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

|| Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l  
Exposure time: 24 h  
Method: OECD Test Guideline 202

|| Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

NOEC (Desmodesmus subspicatus (green algae)): 10,000 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

#### **Benzyl alcohol:**

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|                                                                        |   |                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                                       | : | LC50 (Pimephales promelas (fathead minnow)): 460 mg/l<br>Exposure time: 96 h                                                                                                                                                                             |
| Toxicity to daphnia and other aquatic invertebrates                    | : | EC50 (Daphnia magna (Water flea)): 230 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202                                                                                                                                                    |
| Toxicity to algae/aquatic plants                                       | : | EC50 (Pseudokirchneriella subcapitata (green algae)): 770 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): 310 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 51 mg/l<br>Exposure time: 21 d<br>Method: OECD Test Guideline 211                                                                                                                                                     |

### Persistence and degradability

#### Components:

##### **Benzyl alcohol:**

|                  |   |                                                                                    |
|------------------|---|------------------------------------------------------------------------------------|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 92 - 96 %<br>Exposure time: 14 d |
|------------------|---|------------------------------------------------------------------------------------|

### Bioaccumulative potential

#### Components:

##### **fenbendazole:**

|                                        |   |               |
|----------------------------------------|---|---------------|
| Partition coefficient: n-octanol/water | : | log Pow: 3.32 |
|----------------------------------------|---|---------------|

##### **Benzyl alcohol:**

|                                        |   |               |
|----------------------------------------|---|---------------|
| Partition coefficient: n-octanol/water | : | log Pow: 1.05 |
|----------------------------------------|---|---------------|

### Mobility in soil

#### Components:

##### **fenbendazole:**

|                                               |   |                                        |
|-----------------------------------------------|---|----------------------------------------|
| Distribution among environmental compartments | : | log Koc: 3.8 - 4.7<br>Method: FDA 3.08 |
|-----------------------------------------------|---|----------------------------------------|

### Other adverse effects

No data available

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### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

|                        |   |                                                                                                                                                             |
|------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste from residues    | : | Dispose of in accordance with local regulations.<br>Do not dispose of waste into sewer.                                                                     |
| Contaminated packaging | : | Empty containers should be taken to an approved waste handling site for recycling or disposal.<br>If not otherwise specified: Dispose of as unused product. |

### SECTION 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

|                           |   |                                                                       |
|---------------------------|---|-----------------------------------------------------------------------|
| UN number                 | : | UN 3082                                                               |
| Proper shipping name      | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(fenbendazole) |
| Class                     | : | 9                                                                     |
| Packing group             | : | III                                                                   |
| Labels                    | : | 9                                                                     |
| Environmentally hazardous | : | yes                                                                   |

##### IATA-DGR

|                                          |   |                                                                       |
|------------------------------------------|---|-----------------------------------------------------------------------|
| UN/ID No.                                | : | UN 3082                                                               |
| Proper shipping name                     | : | Environmentally hazardous substance, liquid, n.o.s.<br>(fenbendazole) |
| Class                                    | : | 9                                                                     |
| Packing group                            | : | III                                                                   |
| Labels                                   | : | Miscellaneous                                                         |
| Packing instruction (cargo aircraft)     | : | 964                                                                   |
| Packing instruction (passenger aircraft) | : | 964                                                                   |
| Environmentally hazardous                | : | yes                                                                   |

##### IMDG-Code

|                      |   |                                                                       |
|----------------------|---|-----------------------------------------------------------------------|
| UN number            | : | UN 3082                                                               |
| Proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(fenbendazole) |
| 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.

#### Domestic regulation

##### 49 CFR

|                      |   |                                                     |
|----------------------|---|-----------------------------------------------------|
| UN/ID/NA number      | : | UN 3082                                             |
| Proper shipping name | : | Environmentally hazardous substance, liquid, n.o.s. |

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(fenbendazole)

|                  |   |                                                                                                                                                                                                                                                         |
|------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Class            | : | 9                                                                                                                                                                                                                                                       |
| Packing group    | : | III                                                                                                                                                                                                                                                     |
| Labels           | : | CLASS 9                                                                                                                                                                                                                                                 |
| ERG Code         | : | 171                                                                                                                                                                                                                                                     |
| Marine pollutant | : | yes(fenbendazole)                                                                                                                                                                                                                                       |
| Remarks          | : | Above applies only to containers over 119 gallons or 450 liters.<br>Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO. |

### 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.

## SECTION 15. REGULATORY INFORMATION

### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

|                             |   |                                                                                       |
|-----------------------------|---|---------------------------------------------------------------------------------------|
| <b>SARA 311/312 Hazards</b> | : | Reproductive toxicity<br>Specific target organ toxicity (single or repeated exposure) |
|-----------------------------|---|---------------------------------------------------------------------------------------|

|                 |   |                                                                                                                                                                                   |
|-----------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SARA 313</b> | : | This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. |
|-----------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### US State Regulations

#### Pennsylvania Right To Know

|                           |            |
|---------------------------|------------|
| Water                     | 7732-18-5  |
| fenbendazole              | 43210-67-9 |
| Sodium citrate, dihydrate | 6132-04-3  |
| Silicon dioxide           | 7631-86-9  |

#### California List of Hazardous Substances

|                       |           |
|-----------------------|-----------|
| Silicon dioxide       | 7631-86-9 |
| Polyvinyl pyrrolidone | 9003-39-8 |

#### California Permissible Exposure Limits for Chemical Contaminants

|                 |           |
|-----------------|-----------|
| Silicon dioxide | 7631-86-9 |
|-----------------|-----------|

### The ingredients of this product are reported in the following inventories:

|      |   |                |
|------|---|----------------|
| AICS | : | not determined |
|------|---|----------------|

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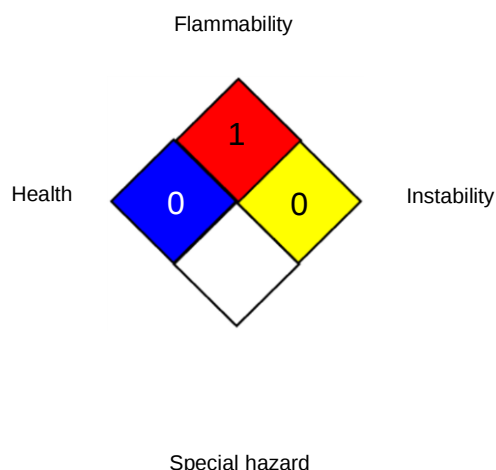
DSL : not determined

IECSC : not determined

### SECTION 16. OTHER INFORMATION

#### Further information

##### NFPA 704:



##### HMIS® IV:

|                 |   |   |
|-----------------|---|---|
| HEALTH          | * | 2 |
| FLAMMABILITY    |   | 1 |
| PHYSICAL HAZARD |   | 0 |

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

#### Full text of other abbreviations

|                 |                                                                                             |
|-----------------|---------------------------------------------------------------------------------------------|
| NIOSH REL       | : USA. NIOSH Recommended Exposure Limits                                                    |
| OSHA Z-3        | : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts                        |
| US WEEL         | : USA. Workplace Environmental Exposure Levels (WEEL)                                       |
| NIOSH REL / TWA | : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek |
| OSHA Z-3 / TWA  | : 8-hour time weighted average                                                              |
| US WEEL / TWA   | : 8-hr TWA                                                                                  |

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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

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Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Revision Date : 04/14/2025

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

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.

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