SAFETY DATA SHEET

Fluazuron / Fipronil Formulation

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Fluazuron / Fipronil Formulation

Manufacturer or supplier's details

Company : MSD
Address : Rua Coronel Bento Soares, 530
           Cruzeiro - Sao Paulo - Brazil  CEP 12730-340
Telephone : 908-740-4000
Emergency telephone : 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. HAZARDS IDENTIFICATION

GHS Classification in accordance with ABNT NBR 14725 Standard

Flammable liquids : Category 3
Acute toxicity (Oral) : Category 5
Acute toxicity (Dermal) : Category 5
Skin irritation : Category 2
Eye irritation : Category 2A
Reproductive toxicity : Category 1B
Specific target organ toxicity - single exposure : Category 3
Specific target organ toxicity - repeated exposure : Category 2 (Central nervous system, Kidney)
Short-term (acute) aquatic hazard : Category 1
Long-term (chronic) aquatic hazard : Category 1
GHS label elements in accordance with ABNT NBR 14725 Standard

Signal Word: Danger

Hazard Statements:
- H226 Flammable liquid and vapor.
- H303 + H313 May be harmful if swallowed or in contact with skin.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H360D May damage the unborn child.
- H373 May cause damage to organs (Central nervous system, Kidney) through prolonged or repeated exposure.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention:
- P201 Obtain special instructions before use.
- P210 Keep away from heat/ sparks/ open flames/ hot surfaces.
- No smoking.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
- P312 Call a POISON CENTER/ doctor if you feel unwell.
- P391 Collect spillage.

Other hazards which do not result in classification
Vapors may form explosive mixture with air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-Butoxyethoxy)ethanol</td>
<td>112-34-5</td>
<td>Acute toxicity (Oral), Category 5</td>
<td>&gt;= 50 -&lt; 70</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute toxicity (Dermal), Category 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin irritation, Category 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye irritation, Category 2A</td>
<td></td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidine</td>
<td>872-50-4</td>
<td>Flammable liquids, Category 4</td>
<td>&gt;= 10 -&lt; 20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute toxicity (Oral), Category 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substance</td>
<td>SDS Number</td>
<td>Aquatic hazard</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>------------</td>
<td>-----------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>Flammable liquids, Category 2</td>
<td>Eye irritation, Category 2A</td>
</tr>
<tr>
<td>Fluazuron</td>
<td>86811-58-7</td>
<td>Short-term (acute) aquatic hazard, Category 1</td>
<td>Long-term (chronic) aquatic hazard, Category 1</td>
</tr>
<tr>
<td>Fipronil</td>
<td>120068-37-3</td>
<td>Acute toxicity (Oral), Category 3</td>
<td>Acute toxicity (Inhalation), Category 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute toxicity (Dermal), Category 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Specific target organ toxicity - repeated exposure (Central nervous system, Kidney), Category 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Short-term (acute) aquatic hazard, Category 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Long-term (chronic) aquatic hazard, Category 1</td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-p-cresol</td>
<td>128-37-0</td>
<td>Short-term (acute) aquatic hazard, Category 1</td>
<td>Long-term (chronic) aquatic hazard, Category 1</td>
</tr>
<tr>
<td>tert-Butyl-4-methoxyphenol</td>
<td>25013-16-5</td>
<td>Acute toxicity (Oral), Category 4</td>
<td>Skin irritation, Category 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye irritation, Category 2A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carcinogenicity, Category 2</td>
</tr>
</tbody>
</table>
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Reproductive toxicity, Category 2
Short-term (acute) aquatic hazard, Category 2
Long-term (chronic) aquatic hazard, Category 2

# Voluntarily-disclosed non-hazardous substance

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 plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

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: May be harmful if swallowed or in contact with skin. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May damage the unborn child. May cause damage to organs through prolonged or repeated exposure.

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: High volume water jet

Specific hazards during fire: Do not use a solid water stream as it may scatter and spread.
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fighting fire. Flash back possible over considerable distance. Vapors may form explosive mixtures with air. Exposure to combustion products may be a hazard to health.

Hazardous combustion products
Carbon oxides
Nitrogen oxides (NOx)
Chlorine compounds
Fluorine compounds
Sulfur 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
Remove all sources of ignition.
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
Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapors/mists with a water spray jet.
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.
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: If sufficient ventilation is unavailable, use with local exhaust ventilation.
Use explosion-proof electrical, ventilating and lighting equipment.

Advice on safe handling:
- Do not get on skin or clothing.
- Do not breathe mist or vapors.
- 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 assessment
- Non-sparking tools should be used.
- Keep container tightly closed.
- Already sensitized individuals should consult their physician regarding working with respiratory irritants or sensitizers.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Take precautionary measures against static discharges.
- Do not eat, drink or smoke when using this product.
- Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures:
- If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.
- When using do not eat, drink or smoke.
- 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 labeled containers.
- Store locked up.
- Keep tightly closed.
- Keep in a cool, well-ventilated place.
- Store in accordance with the particular national regulations.
- Keep away from heat and sources of ignition.

Materials to avoid:
- Do not store with the following product types:
  - Strong oxidizing agents
  - Organic peroxides
  - Flammable solids
  - Pyrophoric liquids
  - Pyrophoric solids
  - Self-heating substances and mixtures
  - Substances and mixtures which in contact with water emit flammable gases
  - Explosives
  - Gases
### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingredients with workplace control parameters**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-Butoxyethoxy)ethanol</td>
<td>112-34-5</td>
<td>TWA (Inhalable fraction and vapor)</td>
<td>10 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>LT</td>
<td>780 ppm (1.480 mg/m³)</td>
<td>BR OEL</td>
</tr>
<tr>
<td>Fluazuron</td>
<td>86811-58-7</td>
<td>TWA</td>
<td>60 µg/m³ (OEB 3)</td>
<td>Internal</td>
</tr>
<tr>
<td>Fipronil</td>
<td>120068-37-3</td>
<td>TWA</td>
<td>2 µg/m³ (OEB 4)</td>
<td>Internal</td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-p-cresol</td>
<td>128-37-0</td>
<td>TWA (Inhalable fraction and vapor)</td>
<td>2 mg/m³</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

Further information: Degree of harmfulness: minimum

<table>
<thead>
<tr>
<th>Further information:</th>
<th>STEL</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>1,000 ppm</td>
<td>ACGIH</td>
<td></td>
</tr>
<tr>
<td>Fluazuron</td>
<td>60 µg/m³ (OEB 3)</td>
<td>Internal</td>
<td></td>
</tr>
<tr>
<td>Fipronil</td>
<td>600 µg/100 cm²</td>
<td>Internal</td>
<td></td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-p-cresol</td>
<td>20 µg/100 cm²</td>
<td>Internal</td>
<td></td>
</tr>
</tbody>
</table>

**Biological occupational exposure limits**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>872-50-4</td>
<td>5-Hydroxy-N-methyl-2-pyrrolidone</td>
<td>Urine</td>
<td>End of workday</td>
<td>100 mg/l</td>
<td>BR BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5-Hydroxy-N-methyl-2-pyrrolidone</td>
<td>Urine</td>
<td>End of shift (As soon as possible after exposure ceases)</td>
<td>100 mg/l</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

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

Use explosion-proof electrical, ventilating and lighting equipment.
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Fluazuron / Fipronil Formulation

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: Combined particulates and organic vapor type

Hand protection:

Material: Chemical-resistant gloves

Remarks: Consider double gloving. Take note that the product is flammable, which may impact the selection of hand protection.

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: liquid
Color: light yellow
Odor: solvent
Odor Threshold: No data available
pH: No data available
Melting point/freezing point: No data available
Initial boiling point and boiling range: No data available
Flash point: 32 °C
Evaporation rate: No data available
Flammability (solid, gas): Not applicable
Flammability (liquids): Not applicable
Upper explosion limit / Upper flammability limit: No data available
Lower explosion limit / Lower: No data available
flammmability limit
Vapor pressure : No data available
Relative vapor density : No data available
Relative density : No data available
Solubility(ies)
Water solubility : No data available
Partition coefficient: n-octanol/water : No data available
Autoignition 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 : No data available

SECTION 10. STABILITY AND REACTIVITY
Reactivity : Not classified as a reactivity hazard.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions
Flammable liquid and vapor.
Vapors may form explosive mixture with air.
Can react with strong oxidizing agents.
Conditions to avoid : Heat, flames and sparks.
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
May be harmful if swallowed or in contact with skin.

Product:
Acute oral toxicity : Acute toxicity estimate: 2.242 mg/kg
Method: Calculation method
Acute inhalation toxicity: Acute toxicity estimate: > 10 mg/l
   Exposure time: 4 h
   Test atmosphere: dust/mist
   Method: Calculation method

Acute dermal toxicity: Acute toxicity estimate: 3.646 mg/kg
   Method: Calculation method

**Components:**

**2-(2-Butoxyethoxy)ethanol:**
Acute oral toxicity: LD50 (Mouse): 2.410 mg/kg
Acute dermal toxicity: LD50 (Rabbit): 2.764 mg/kg

**N-Methyl-2-pyrrolidone:**
Acute oral toxicity: LD50 (Rat): 4.150 mg/kg
Acute inhalation toxicity: LC50 (Rat): > 5.1 mg/l
   Exposure time: 4 h
   Test atmosphere: dust/mist
   Method: OECD Test Guideline 403
Acute dermal toxicity: LD50 (Rat): > 5.000 mg/kg

**Ethanol:**
Acute oral toxicity: LD50 (Rat): > 5.000 mg/kg
   Method: OECD Test Guideline 401
Acute inhalation toxicity: LC50 (Rat): 124.7 mg/l
   Exposure time: 4 h
   Test atmosphere: vapor

**Fluazuron:**
Acute oral toxicity: LD50 (Rat): > 5.000 mg/kg
   Method: OECD Test Guideline 401
Acute inhalation toxicity: LC50 (Rat): > 6.0 mg/l
   Exposure time: 4 h
   Test atmosphere: dust/mist
   Method: OECD Test Guideline 403
Acute dermal toxicity: LD50 (Rat): > 2.000 mg/kg
   Method: OECD Test Guideline 402

**Fipronil:**
Acute oral toxicity: LD50 (Rat): 92 mg/kg
Acute inhalation toxicity: LC50 (Rat): 0.36 mg/l
   Exposure time: 4 h
Test atmosphere: dust/mist

**Acute dermal toxicity**

: LD50 (Rabbit): 354 mg/kg

**2,6-Di-tert-butyl-p-cresol:**

**Acute oral toxicity**

: LD50 (Rat): > 6,000 mg/kg

Method: OECD Test Guideline 401

**Acute dermal toxicity**

: LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal toxicity

**tert-Butyl-4-methoxyphenol:**

**Acute oral toxicity**

: LD50 (Mouse): 1,100 mg/kg

**Acute dermal toxicity**

: LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation**

Causes skin irritation.

**Components:**

**2-(2-Butoxyethoxy)ethanol:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: Mild skin irritation

**N-Methyl-2-pyrrolidone:**

Result: Skin irritation

**Ethanol:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

**Fluazuron:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

**Fipronil:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

**2,6-Di-tert-butyl-p-cresol:**
**Species:** Rabbit  
**Method:** OECD Test Guideline 404  
**Result:** No skin irritation  
**Remarks:** Based on data from similar materials

**tert-Butyl-4-methoxyphenol:**  
**Result:** Skin irritation

**Serious eye damage/eye irritation**  
Causes serious eye irritation.

**Components:**

**2-(2-Butoxyethoxy)ethanol:**

| Species   | Rabbit       | Result                                      | Irritation to eyes, reversing within 21 days |

**N-Methyl-2-pyrrolidone:**

| Species   | Rabbit       | Result                                      | Irritation to eyes, reversing within 21 days |

**Ethanol:**

| Species   | Rabbit       | Result                                      | Irritation to eyes, reversing within 21 days |

**Fluazuron:**

| Species   | Rabbit       | Result                                      | Mild eye irritation |

**Fipronil:**

| Species   | Rabbit       | Result                                      | No eye irritation |

**2,6-Di-tert-butyl-p-cresol:**

| Species   | Rabbit       | Result                                      | No eye irritation |

**tert-Butyl-4-methoxyphenol:**

| Species   | Rabbit       | Result                                      | Irritation to eyes, reversing within 21 days |

| Remarks   | Based on data from similar materials | Based on data from similar materials |
Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethanol:
Test Type: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative

N-Methyl-2-pyrrolidone:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: negative
Remarks: Based on data from similar materials

Ethanol:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: negative

Fluazuron:
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative

Fipronil:
Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

2,6-Di-tert-butyl-p-cresol:
Test Type: Human repeat insult patch test (HRIPT)
Routes of exposure: Skin contact
Species: Humans
Result: negative

tert-Butyl-4-methoxyphenol:
Test Type: Human repeat insult patch test (HRIPT)
Routes of exposure: Skin contact
Result: negative

Germ cell mutagenicity
Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethanol:
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  Result: negative
- Test Type: In vitro mammalian cell gene mutation test
  Result: negative
- Test Type: Chromosome aberration test in vitro
  Result: negative

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

N-Methyl-2-pyrrolidone:
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
  Method: OECD Test Guideline 476
  Result: negative
- Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
  Result: negative

Genotoxicity in vivo:
- Test Type: Mammalian erythrocyte micrornucleus test (in vivo cytogenetic assay)
  Species: Mouse
  Application Route: Ingestion
  Method: OECD Test Guideline 474
  Result: negative
- Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
  Species: Hamster
  Application Route: Ingestion
  Method: OECD Test Guideline 475
  Result: negative

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

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

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

Genotoxicity in vivo:
- Test Type: Cytogenetic assay
  - Species: Hamster
  - Result: equivocal

**Fipronil:**
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
  - Method: OECD Test Guideline 476
  - Result: negative
- Test Type: Chromosome aberration test in vitro
  - Method: OECD Test Guideline 473
  - Result: negative

Genotoxicity in vivo:
- Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
  - Species: Mouse
  - Application Route: Ingestion
  - Method: OECD Test Guideline 474
  - Result: negative
- Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo
  - Species: Rat
  - Application Route: Ingestion
  - Method: OECD Test Guideline 486
  - Result: negative

**2,6-Di-tert-butyl-p-cresol:**
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  - Result: negative
Test Type: In vitro mammalian cell gene mutation test  
Result: negative

Test Type: Chromosome aberration test in vitro  
Result: negative

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

tert-Butyl-4-methoxyphenol:
Genotoxicity in vitro  
: Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

Test Type: Chromosome aberration test in vitro  
Result: negative

Genotoxicity in vivo  
: Test Type: Sex-linked recessive lethal test in Drosophila melanogaster (in vivo)  
Species: Drosophila melanogaster (vinegar fly)  
Application Route: Ingestion  
Result: negative

Carcinogenicity
Not classified based on available information.

Components:

N-Methyl-2-pyrrolidone:
Species: Rat  
Application Route: Ingestion  
Exposure time: 2 Years  
Result: negative

Species: Rat  
Application Route: inhalation (vapor)  
Exposure time: 2 Years  
Result: negative

Fluazuron:
Species: Rat  
Application Route: Ingestion  
Exposure time: 2 Years  
Method: OECD Test Guideline 453  
Result: negative
Species: Mouse
Application Route: Ingestion
Exposure time: 2 Years
Result: negative

Fipronil:
Species: Mouse
Application Route: Ingestion
Exposure time: 78 weeks
Result: negative

Species: Rat
Application Route: Ingestion
Exposure time: 104 weeks
Result: positive
Remarks: The mechanism or mode of action is not relevant in humans.

2,6-Di-tert-butyl-p-cresol:
Species: Rat
Application Route: Ingestion
Exposure time: 22 Months
Result: negative

tert-Butyl-4-methoxyphenol:
Species: Hamster
Application Route: Ingestion
Exposure time: 24 weeks
Result: positive

Species: Rat
Application Route: Ingestion
Exposure time: 15 Months
Result: positive

Carcinogenicity - Assessment: Limited evidence of carcinogenicity in animal studies

Reproductive toxicity
May damage the unborn child.

Components:

2-(2-Butoxyethoxy)ethanol:
Effects on fertility: Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 415
Result: negative

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

N-Methyl-2-pyrrolidone:
Effects on fertility: Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative

Effects on fetal development: Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: positive

Reproductive toxicity - Assessment: Clear evidence of adverse effects on development, based on animal experiments.

Ethanol:
Effects on fertility: Test Type: Two-generation reproduction toxicity study
Species: Mouse
Application Route: Ingestion
Result: negative

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

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

Species: Rabbit
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative
Fipronil:
Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rabbit
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

2,6-Di-tert-butyl-p-cresol:
Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

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

tert-Butyl-4-methoxyphenol:
Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on fetal development : Test Type: Fertility/early embryonic development
Species: Mouse
Application Route: Ingestion
Result: positive

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

STOT-single exposure
May cause respiratory irritation.

Components:
N-Methyl-2-pyrrolidone:
Assessment : May cause respiratory irritation.

STOT-repeated exposure
May cause damage to organs (Central nervous system, Kidney) through prolonged or repeated exposure.

Components:
Fipronil:
Routes of exposure : Ingestion
Target Organs: Central nervous system, Kidney
Assessment: Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less.

2,6-Di-tert-butyl-p-cresol:
Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Repeated dose toxicity

Components:

2-(2-Butoxyethoxy)ethanol:
Species: Rat
NOAEL: 250 mg/kg
LOAEL: 1,000 mg/kg
Application Route: Ingestion
Exposure time: 90 Days
Method: OECD Test Guideline 408

Species: Rat
NOAEL: >= 0,094 mg/l
Application Route: inhalation (vapor)
Exposure time: 90 Days
Method: OECD Test Guideline 413

Species: Rat, male
NOAEL: 169 mg/kg
LOAEL: 433 mg/kg
Application Route: Ingestion
Exposure time: 90 Days
Method: OECD Test Guideline 408

Species: Rat
NOAEL: 0,5 mg/l
LOAEL: 1 mg/l
Application Route: inhalation (dust/mist/fume)
Exposure time: 96 Days
Method: OECD Test Guideline 413

Species: Rabbit
NOAEL: 826 mg/kg
LOAEL: 1,653 mg/kg
Application Route: Skin contact
Exposure time: 20 Days

Ethanol:
SAFETY DATA SHEET

Fluazuron / Fipronil Formulation

Species: Rat
NOAEL: 1.280 mg/kg
LOAEL: 3.156 mg/kg
Application Route: Ingestion
Exposure time: 90 Days

Fluazuron:
Species: Rat
NOAEL: 240 mg/kg
LOAEL: 3.156 mg/kg
Application Route: Ingestion
Exposure time: 13 Weeks
Target Organs: Liver, Thyroid, Pituitary gland

Species: Rat
NOAEL: 10 mg/kg
LOAEL: 100 mg/kg
Application Route: Skin contact
Exposure time: 3 Weeks

Species: Dog
NOAEL: 7.5 mg/kg
LOAEL: 110 mg/kg
Application Route: Ingestion
Exposure time: 52 Weeks
Target Organs: Liver

Fipronil:
Species: Rabbit
NOAEL: 5 mg/kg
LOAEL: 10 mg/kg
Application Route: Skin contact
Exposure time: 21 Days
Method: OECD Test Guideline 410

Species: Rat, male
NOAEL: 0.059 mg/kg
LOAEL: 0.019 mg/kg
Application Route: Ingestion
Exposure time: 89 Weeks

2,6-Di-tert-butyl-p-cresol:
Species: Rat
NOAEL: 25 mg/kg
Application Route: Ingestion
Exposure time: 22 Months

tert-Butyl-4-methoxyphenol:
Species: Rat
NOAEL: 50 mg/kg
LOAEL: 250 mg/kg
Application Route: Ingestion
Exposure time: 8 Months

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

**Experience with human exposure**

**Components:**

**N-Methyl-2-pyrrolidone:**
Skin contact: Symptoms: Skin irritation

### SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

**Components:**

**2-(2-Butoxyethoxy)ethanol:**

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>(\text{LC50} (\text{Lepomis macrochirus (Bluegill sunfish)}): 1.300 \text{ mg/l}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>96 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
<th>(\text{EC50} (\text{Daphnia magna (Water flea)}): &gt; 100 \text{ mg/l}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>48 h</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 202</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to algae/aquatic plants</th>
<th>(\text{ErC50} (\text{Desmodesmus subspicatus (green algae)}): &gt; 100 \text{ mg/l}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>96 h</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 201</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to microorganisms</th>
<th>(\text{EC10}: &gt; 1.995 \text{ mg/l}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>30 min</td>
</tr>
</tbody>
</table>

**N-Methyl-2-pyrrolidone:**

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>(\text{LC50 (Oncorhynchus mykiss (rainbow trout)}): &gt; 500 \text{ mg/l}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>96 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
<th>(\text{EC50 (Daphnia magna (Water flea)}): &gt; 1.000 \text{ mg/l}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>24 h</td>
</tr>
<tr>
<td>Method</td>
<td>DIN 38412</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to algae/aquatic plants</th>
<th>(\text{ErC50 (Desmodesmus subspicatus (green algae)}): 600,5 \text{ mg/l}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>72 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to microorganisms</th>
<th>(\text{EC10 (Desmodesmus subspicatus (green algae)}): 92,6 \text{ mg/l}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>72 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to daphnia and other aquatic invertebrates (Chron-</th>
<th>(\text{NOEC (Daphnia magna (Water flea)}): 12,5 \text{ mg/l}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>21 d</td>
</tr>
</tbody>
</table>
Ethanol:
Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): > 1.000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:
- EC50 (Ceriodaphnia (water flea)): > 1.000 mg/l
  Exposure time: 48 h
- ErC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l
  Exposure time: 72 h
- EC10 (Chlorella vulgaris (Fresh water algae)): 11,5 mg/l
  Exposure time: 72 h

Toxicity to microorganisms:
- NOEC (Daphnia magna (Water flea)): 9,6 mg/l
  Exposure time: 9 d

Fluazuron:
Toxicity to fish: LC50 (Cyprinus carpio (Carp)): > 9,1 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:
- EC50 (Daphnia sp. (Water flea)): 0,0006 mg/l
  Exposure time: 48 h
- NOEC (Raphidocelis subcapitata (freshwater green alga)): 27,9 mg/l
  Exposure time: 72 h

M-Factor (Acute aquatic toxicity): 1.000
M-Factor (Chronic aquatic toxicity): 1.000

Fipronil:
Toxicity to fish: LC50 (Lepomis macrochirus (Bluegill sunfish)): 85,2 µg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:
- LC50 (Mysisidopsis bahia (opossum shrimp)): 0,14 µg/l
  Exposure time: 96 h

Toxicity to algae/aquatic plants:
- EC50 (Desmodesmus subspicatus (green algae)): 68 µg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 201
- NOEC (Desmodesmus subspicatus (green algae)): 40 µg/l
  Exposure time: 96 h
SAFETY DATA SHEET
Fluazuron / Fipronil Formulation

Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity): 1.000
Toxicity to fish (Chronic toxicity): NOEC (Cyprinodon variegatus (sheepshead minnow)): 2.9 µg/l
Exposure time: 35 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Mysidopsis bahia (opossum shrimp)): 0.0077 µg/l
Exposure time: 28 d

M-Factor (Chronic aquatic toxicity): 10.000
Toxicity to microorganisms: EC50: > 1.000 mg/l
Exposure time: 3 h

2,6-Di-tert-butyl-p-cresol:
Toxicity to fish: LC50 (Danio rerio (zebra fish)): > 0.57 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 0.48 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants: ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.24 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.24 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity): 1
Toxicity to fish (Chronic toxicity): NOEC (Oryzias latipes (Japanese medaka)): 0.053 mg/l
Exposure time: 30 d
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 0.316 mg/l
Exposure time: 21 d

M-Factor (Chronic aquatic toxicity): 1
Toxicity to microorganisms: EC50: > 10.000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

tert-Butyl-4-methoxyphenol:
Toxicity to fish: LC50 (Danio rerio (zebra fish)): 1.56 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates:
- EC50 (Daphnia magna (Water flea)): 2.3 mg/l
  - Exposure time: 48 h

Toxicity to algae/aquatic plants:
- ErC50 (Pseudokirchneriella subcapitata (green algae)): 5.2 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201
- NOEC (Pseudokirchneriella subcapitata (green algae)): 0.25 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201

Toxicity to microorganisms:
- EC50 (Protozoa): > 1 - 10 mg/l
  - Exposure time: 48 h
  - Remarks: Based on data from similar materials

Persistence and degradability

Components:

2-(2-Butoxyethoxy)ethanol:
- Biodegradability: Result: Readily biodegradable.
  - Biodegradation: 85 %
  - Exposure time: 28 d
  - Method: OECD Test Guideline 301C

N-Methyl-2-pyrrolidone:
- Biodegradability: Result: Readily biodegradable.
  - Biodegradation: 73 %
  - Exposure time: 28 d
  - Method: OECD Test Guideline 301C

Ethanol:
- Biodegradability: Result: Readily biodegradable.
  - Biodegradation: 84 %
  - Exposure time: 20 d

Fipronil:
- Biodegradability: Result: Not readily biodegradable.
  - Biodegradation: 47 %
  - Exposure time: 28 d
  - Method: OECD Test Guideline 301B

2,6-Di-tert-butyl-p-cresol:
- Biodegradability: Result: Not readily biodegradable.
  - Biodegradation: 4.5 %
  - Exposure time: 28 d
  - Method: OECD Test Guideline 301C
tert-Butyl-4-methoxyphenol:
Biodegradability : Result: Not readily biodegradable.
     Biodegradation: 34.41 %
     Exposure time: 28 d
     Method: OECD Test Guideline 301D

Bioaccumulative potential

Components:

2-(2-Butoxyethoxy)ethanol:
Partition coefficient: n-octanol/water : log Pow: 1

N-Methyl-2-pyrrolidone:
Partition coefficient: n-octanol/water : log Pow: -0.46
     Method: OECD Test Guideline 107

Ethanol:
Partition coefficient: n-octanol/water : log Pow: -0.35

Fluazuron:
Partition coefficient: n-octanol/water : log Pow: 5.1

Fipronil:
Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
     Bioconcentration factor (BCF): 321

Partition coefficient: n-octanol/water : log Pow: 4

2,6-Di-tert-butyl-p-cresol:
Bioaccumulation : Species: Cyprinus carpio (Carp)
     Bioconcentration factor (BCF): 330 - 1.800

Partition coefficient: n-octanol/water : log Pow: 5.1

tert-Butyl-4-methoxyphenol:
Bioaccumulation : Species: Cyprinus carpio (Carp)
     Bioconcentration factor (BCF): 8.1 - 21

Partition coefficient: n-octanol/water : log Pow: 2.82
     Method: OECD Test Guideline 117

Mobility in soil
No data available

Other adverse effects
No data available
SAFETY DATA SHEET

Fluazuron / Fipronil Formulation

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. Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
UN number: UN 1170
Proper shipping name: ETHANOL SOLUTION
Class: 3
Packing group: III
Labels:

IATA-DGR
UN/ID No.: UN 1170
Proper shipping name: Ethanol solution
Class: 3
Packing group: III
Labels: Flammable Liquids
Packing instruction (cargo aircraft): 366
Packing instruction (passenger aircraft): 355

IMDG-Code
UN number: UN 1170
Proper shipping name: ETHANOL SOLUTION
(Fluazuron, Fipronil)
Class: 3
Packing group: III
Labels: 3
EmS Code: F-E, S-D
Marine pollutant: yes

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

Domestic regulation

ANTT
UN number: UN 1170
Proper shipping name: ETHANOL SOLUTION
Class: 3
Packing group: III
Labels: 3
Hazard Identification Number : 30

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

Safety, health and environmental regulations/legislation specific for the substance or mixture
National List of Carcinogenic Agents for Humans - (LINACH)
Group 2B: Possibly carcinogenic to humans
tert-Butyl-4-methoxyphenol 25013-16-5
Brazil. List of chemicals controlled by the Federal Police

Ethanol

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

SECTION 16. OTHER INFORMATION

Further information

Full text of other abbreviations
ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
BR BEI : Brazil. NR7. Parameters for Biological Control of Occupational Exposure to Some Chemical Agents
BR OEL : Brazil. NR 15 - Unhealthy activities and operations
ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
BR OEL / LT : Up to 48 hours /week

AIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with...
x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Civil Aviation Organization; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; ICh50 - Half maximal inhibitory concentration; 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 (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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.

BR / Z8