Safety Data Sheet
ZAMPRO FUNGICIDE

1. Product and Company Identification

Company
BASF Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1, CANADA

24 Hour Emergency Response Information
CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

PCP# 30321
Synonyms: ametoctradin + dimethomorph

2. Hazards Identification

Emergency overview
WARNING:
POISON.
Contains 1,2-benzisothiazolin-3-one as a preservative.
Contains 2-methyl-4-isothiazolin-3-one as a preservative.
Contains the allergen soy.
KEEP OUT OF REACH OF CHILDREN.
Harmful if swallowed.
Fatal if swallowed.
Wash thoroughly after handling.

State of matter: liquid
Colour: white
Odour: faintly aromatic

Potential health effects

Acute toxicity:

Irritation / corrosion:
May cause slight irritation to the skin. May cause slight but temporary irritation to the eyes.

Sensitization:
Skin sensitizing effects were not observed in animal studies.

Potential environmental effects

Aquatic toxicity:
Acutely harmful for fish. There is a high probability that the product is not acutely harmful to aquatic invertebrates. Acutely harmful for aquatic plants.
3. Composition / Information on Ingredients

Not WHMIS controlled.

4. First-Aid Measures

General advice:
First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:
Remove the affected individual into fresh air and keep the person calm.

If on skin:
Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:
Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:
Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Have person sip a glass of water if able to swallow.

Note to physician
Antidote: No known specific antidote.
Treatment: Treat symptomatically.

5. Fire-Fighting Measures

Flash point: (Directive 92/69/EEC, A.9) No flash point - Measurement made up to the boiling point.
Autoignition: 463 °C (Directive 92/69/EEC, A.15) As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Lower explosion limit:
Upper explosion limit:

Flammability: Based on the structure or composition there is no indication of flammability

Suitable extinguishing media:
water spray, carbon dioxide, foam, dry powder

Hazards during fire-fighting:
carbon monoxide, carbon dioxide, nitrogen oxides, organochloric compounds
The substances/groups of substances mentioned can be released in case of fire.

**Protective equipment for fire-fighting:**
Wear self-contained breathing apparatus and chemical-protective clothing.

**Further information:**
In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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6. Accidental release measures

**Personal precautions:**
Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

**Environmental precautions:**
Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

**Cleanup:**
Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

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7. Handling and Storage

**Handling**

**General advice:**
No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

**Protection against fire and explosion:**
The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

**Storage**

**General advice:**
Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

**Storage incompatibility:**
General advice: Segregate from foods and animal feeds.

**Temperature tolerance**
Protect from temperatures below: -5 °C
The product can crystallize below the limit temperature.
Protect from temperatures above: 40 °C
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.
8. Exposure Controls and Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Advice on system design:
Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal protective equipment

Respiratory protection:
Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:
Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:
Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form:</td>
<td>suspension</td>
</tr>
<tr>
<td>Odour:</td>
<td>faintly aromatic</td>
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<tr>
<td>Odour threshold:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Colour:</td>
<td>white</td>
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<tr>
<td>pH value:</td>
<td>approx. 6 - 8 (1 % (m), 20 °C)</td>
</tr>
<tr>
<td>Freezing point:</td>
<td>-6.2 °C</td>
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<tr>
<td>Boiling point:</td>
<td>approx. 100 °C (1.013 hPa)</td>
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<tr>
<td>Density:</td>
<td>approx. 1.11 g/cm³ (approx. 20 °C)</td>
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<tr>
<td>Vapour density:</td>
<td>not determined</td>
</tr>
<tr>
<td>Viscosity, dynamic:</td>
<td>approx. 81 mPa.s (20 °C) (OECD 114)</td>
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<tr>
<td>Solubility in water:</td>
<td>dispersible</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

Conditions to avoid:
Substances to avoid:
strong oxidizing agents
strong acids, strong bases, strong oxidizing agents

Hazardous reactions:
The product is chemically stable.
Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.
No hazardous reactions if stored and handled as prescribed/indicated.

Decomposition products:
Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological information

Acute toxicity

Oral:
Type of value: LD50
Species: rat (female)
Value: > 500 - < 2,000 mg/kg (OECD Guideline 423)

Inhalation:
Type of value: LC50
Species: rat (male/female)
Value: > 5.1 mg/l (OECD Guideline 403)
Exposure time: 4 h
An aerosol was tested.

Dermal:
Type of value: LD50
Species: rat (male/female)
Value: > 5,000 mg/kg (OECD Guideline 402)

Irritation / corrosion

Skin:
May cause slight irritation to the skin.

Eye:
May cause slight but temporary irritation to the eyes.

Genetic toxicity

Information on: ametoctradin
No mutagenic effect was found in various tests with microorganisms and mammalian cell culture. The substance was not mutagenic in studies with mammals.

Information on: dimethomorph
In the majority of studies performed with microorganisms and in mammalian cell culture, a mutagenic effect was not found. A mutagenic effect was also not observed in in vivo tests.

Carcinogenicity

Information on: ametoctradin
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.
Information on: dimethomorph
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Information on: ametoctradin
The results of animal studies gave no indication of a fertility impairing effect.
Information on: dimethomorph
The results of animal studies gave no indication of a fertility impairing effect.

Development:

Information on: ametoctradin
No indications of a developmental toxic / teratogenic effect were seen in animal studies.
Information on: dimethomorph
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Other Information:

Misuse can be harmful to health.

12. Ecological Information

Fish

Acute:
OECD 203; ISO 7346; 92/69/EEC, C.1 static
Oncorhynchus mykiss/LC50 (96 h): 23.2 mg/l

Aquatic invertebrates

Acute:
OECD Guideline 202, part 1 Daphnia magna/EC50 (48 h): > 100 mg/l

Aquatic plants

Toxicity to aquatic plants:
OECD Guideline 201 green algae/EC50 (72 h): 74.2 mg/l

Bioaccumulation

Information on: Dimethomorph
No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

Information on: ametoctradin
Sunfish, bluegill Bioconcentration factor 197 - 202
Accumulation in organisms is not to be expected.

Environmental mobility:

Information on: Dimethomorph
Assessment transport between environmental compartments:
The substance will not evaporate into the atmosphere from the water surface.
Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Information on: ametoctradin
Assessment transport between environmental compartments:
Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Other adverse effects:
Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:
See product label for disposal and recycling instructions.

Container disposal:
Rinse the container or liner as needed for disposal. Add rinsate to spray tank. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Consult the product label for additional details.

14. Transport Information

Land transport
TDG
Not classified as a dangerous good under transport regulations

Sea transport
IMDG
Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO
Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:
Chemical  DSL, CA  released; restriction on quantity / not listed
Crop Protection  DSL, CA  released / exempt

WHMIS does not apply to this product.
THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.
16. Other Information

Recommended use: fungicide

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

SDS Prepared by:
BASF NA Product Regulations

BASF HOTLINE (800) 454 – COPE (2673)
SDS Prepared on: 2013/12/13

END OF DATA SHEET