Safety Data Sheet
HEAT
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Version: 1.0
(30469770/SDS_CPA_CA/EN)

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)

Molecular formula: C17 H17 Cl F4 N4 O5 S
Synonyms: Saflufenacil

2. Hazards Identification

Emergency overview
CAUTION:
KEEP OUT OF REACH OF CHILDREN.
HARMFUL IF SWALLOWED.
Avoid contact with skin and eyes.
CAUSES SKIN IRRITATION.
Avoid inhalation of dusts/mists/vapours.

State of matter: solid
Colour: light brown
Odour: mild

Potential health effects
Acute toxicity:
Slightly toxic after single ingestion. Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

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

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

Potential environmental effects
Aquatic toxicity:
There is a high probability that the product is not acutely harmful to fish. There is a high probability that the product is not acutely harmful to aquatic invertebrates. Very toxic (acute effect) to aquatic plants.

Terrestrial toxicity:
With high probability not acutely harmful to terrestrial organisms.
3. Composition / Information on Ingredients

Not WHMIS controlled.

4. First-Aid Measures

General advice:
Avoid contact with the skin, eyes and clothing. Remove contaminated clothing. If difficulties occur: Obtain medical attention. Show container, label and/or safety data sheet to physician.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

If on skin:
After contact with skin, wash immediately with plenty of water and soap. If irritation develops, seek medical attention.

If in eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Rinse mouth immediately and then drink plenty of water, seek medical attention.

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

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

Unsuitable extinguishing media for safety reasons:
water jet

Hazards during fire-fighting:
carbon monoxide, carbon dioxide, ammonia, nitrogen oxides, sulfur oxides, acid halides
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.

6. Accidental release measures

Personal precautions:
Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Remove contaminated clothes, undergarments and shoes immediately. Information regarding personal protective measures see, chapter 8.
Environmental precautions:
Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Cleanup:
Cleaning operations should be carried out only while wearing breathing apparatus. Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. For small amounts: Pick up with suitable appliance and dispose of. Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Contain with dust binding material and dispose of.

7. Handling and Storage

Handling
General advice:
Handle in accordance with good industrial hygiene and safety practice. No special measures necessary if stored and handled correctly.

Storage
General advice:
Attention - The product has not yet been fully tested. Protect against moisture. Keep away from heat. Protect from direct sunlight. Store protected against freezing.

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

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) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. 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. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).
General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is recommended. Keep away from food, drink and animal feeding stuffs. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift. Remove contaminated clothing immediately and dispose of safely.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>solid, granules</td>
</tr>
<tr>
<td>Odour</td>
<td>mild</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available.</td>
</tr>
<tr>
<td>Colour</td>
<td>light brown</td>
</tr>
<tr>
<td>pH value</td>
<td>5.0 (10 g/l, 25 °C)</td>
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<tr>
<td>Bulk density</td>
<td>574 - 628 kg/m³</td>
</tr>
<tr>
<td>Partitioning coefficient n-octanol/water (log Pow):</td>
<td>2.6 (20 °C)</td>
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<tr>
<td>Solubility in water</td>
<td>dispersible</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

Dust explosivity characteristics:
Kst: 139 m.bar/s
Pmax = 7.35 bar
ASTM standard method E1226

Dust explosion class:
Dust explosion class 1 (Kst-value >0 up to 200 bar m s-1) (St 1)

Conditions to avoid:
Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme temperatures. Avoid prolonged exposure to extreme heat. Avoid contamination. Avoid electro-static discharge. Avoid prolonged storage. This product may form an explosive mixture if: 1. the dust is suspended in the atmosphere as a dust cloud AND 2. the concentration of the dust is above the lower explosion limit (LEL) AND 3. the limiting oxygen concentration (LOC) is exceeded.

Substances to avoid:
strong oxidizing agents

Hazardous reactions:
The product is chemically stable.
No hazardous reactions if stored and handled as prescribed/indicated.

Decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated., Prolonged thermal loading can result in products of degradation being given off.

Corrosion to metals:
Corrosive effects to metal are not anticipated.

11. Toxicological information

Acute toxicity

Oral:
Type of value: LD50
Species: rat
Value: > 2,000 mg/kg
Inhalation:
Type of value: LC50
Value: > 5 mg/l
Exposition time: 4 h

Dermal:
Type of value: LD50
Species: rat
Value: > 2,000 mg/kg

Irritation / corrosion

Skin:
Species: rabbit
Result: non-irritant

Eye:
Species: rabbit
Result: non-irritant

Sensitization:
modified Buehler test
Species: guinea pig
Result: Non-sensitizing.

Reproductive toxicity

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

Development:

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

12. Ecological Information

Fish

Information on: Saflufenacil
Acute:
OECD Guideline 203 static
Oncorhynchus mykiss/LC50 (96 h): > 120 mg/l
OECD Guideline 203 static
Lepomis macrochirus/LC50 (96 h): > 120 mg/l
OECD Guideline 203 static
Lepomis macrochirus/NOEC (96 h): >= 120 mg/l

Aquatic invertebrates

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

Aquatic plants

Information on: Saflufenacil
Toxicity to aquatic plants:
OECD Guideline 201 static green algae/EC50 (72 h): 0.108 mg/l

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

13. Disposal considerations

Waste disposal of substance:
Dispose of in a licensed facility. Observe all local regulations.

Container disposal:
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport Information

Reference Bill of Lading

15. Regulatory Information

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

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

BASF supports 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.

Local Contact Information
Product Stewardship

END OF DATA SHEET