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: C12 H18 Cl N O2 S
PCP# 29194
Synonyms: dimethenamid-P

2. Hazards Identification

Emergency overview
WARNING:
POISON.
Eye irritant.
Potential skin sensitizer.
Contains the allergen soy.
KEEP OUT OF REACH OF CHILDREN.
Harmful if swallowed.
This product is an eye irritant.
This product is a skin irritant and may cause skin sensitization.
Do not get in eyes, on skin, or on clothing.
Avoid inhalation of mists/vapours.

State of matter: liquid
Colour: dark brown
Odour: aromatic

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:
Causes substantial but temporary eye injury. May cause slight irritation to the skin.

Sensitization:
Caused skin sensitization in animal studies.

Medical conditions aggravated by overexposure:
Individuals with pre-existing diseases of the respiratory system, skin or eyes may have increased susceptibility to excessive exposures.

**Signs and symptoms of overexposure:**
- Aspiration pneumonia
- Contains petroleum distillates.

**Potential environmental effects**

**Aquatic toxicity:**
- Acutely toxic for fish.
- Acutely harmful for aquatic invertebrates.
- Very toxic (acute effect) to aquatic plants.

**Terrestrial toxicity:**
- With high probability not acutely harmful to honeybees.
- With high probability not acutely harmful to terrestrial organisms.

### 3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Content (W/W)</th>
<th>Hazardous ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>163515-14-8</td>
<td>&gt;= 40.0 - &lt;= 70.0 %</td>
<td>(S)-dimethenamid</td>
</tr>
<tr>
<td>91-20-3</td>
<td>&gt;= 0.1 - &lt;= 1.0 %</td>
<td>naphthalene</td>
</tr>
</tbody>
</table>

### 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. Assist in breathing if necessary.

**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:**
Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

**Note to physician**
- Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote. Aspiration of this product during induced emesis can result in lung injury. If evacuation of stomach contents is considered necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation.

### 5. Fire-Fighting Measures

- **Flash point:** approx. 105 °C (Directive 92/69/EEC, A.9)
- **Autoignition:** approx. 425 °C (Directive 92/69/EEC, A.15)
- **Lower explosion limit:** not determined
- **Upper explosion limit:** not determined
Possible errors found in the provided text:

6. Accidental release measures

Personal precautions:
Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions:
Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

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.

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:
8. Exposure Controls and Personal Protection

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

**Components with workplace control parameters**

<table>
<thead>
<tr>
<th>Substance</th>
<th>OSHA PEL 10 ppm</th>
<th>ACGIH TWA value 10 ppm</th>
<th>STEL value 15 ppm</th>
<th>Skin Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphthalene</td>
<td>50 mg/m3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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.

**Hand protection:**
Chemical resistant protective gloves

**Eye protection:**
Safety glasses with side-shields.

**Body protection:**
light protective clothing

**General safety and hygiene measures:**
Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. 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>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>aromatic</td>
<td></td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>dark brown</td>
<td></td>
</tr>
<tr>
<td>pH value</td>
<td>approx. 2 - 4</td>
<td></td>
</tr>
<tr>
<td>Cloud point</td>
<td>approx. -1.2 °C</td>
<td></td>
</tr>
<tr>
<td>Boiling point</td>
<td>approx. 204 °C</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>approx. 0.05 hPa</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>approx. 1.13 g/cm³</td>
<td></td>
</tr>
<tr>
<td>Vapour density</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>approx. 16.3 mPa.s</td>
<td></td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>approx. 14.7 mm²/s</td>
<td></td>
</tr>
<tr>
<td>Solubility in water</td>
<td>emulsifiable</td>
<td></td>
</tr>
</tbody>
</table>

Information applies to the solvent.

*OECD Guideline 109*
10. Stability and Reactivity

Conditions to avoid:

Substances to avoid:
Nitric Acid, Sulfuric acid, 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.

Decomposition products:
Hazardous decomposition products: nitrogen oxides, sulfur oxides, aldehydes

Thermal decomposition:
Possible thermal decomposition products:
carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide, Sulphur dioxide, Hydrogen chloride, halogenated hydrocarbons, Hydrocarbons
Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released.

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

Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing. (Directive 2004/73/EC, A.21)

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:  > 5.6 mg/l (OECD Guideline 403)
Exposure time: 4 h

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

Irritation / corrosion

Skin:
Species: rabbit
Result: Irritant.
Method: OECD Guideline 404

Eye:
Species: rabbit
Result: Irritant.
Method: OECD Guideline 405
Sensitization:
modified Buehler test
Species: guinea pig
Result: Caused skin sensitization in animal studies.
Method: OECD Guideline 406

Genetic toxicity

Information on: dimethenamid-P
Results from a number of mutagenicity studies with microorganisms and mammalian cell culture are available.
Taking into account all of the information, there is no indication that the substance is mutagenic.

Carcinogenicity

Information on: Naphthalene
Indication of possible carcinogenic effect in animal tests.

Reproductive toxicity

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

Development:

Information on: dimethenamid-P
Causes developmental effects in animals at high, maternally toxic doses.

12. Ecological Information

Fish

Information on: S-dimethenamid
Acute:
Lepomis macrochirus/LC50 (96 h): 10 mg/l
Oncorhynchus mykiss/LC50 (96 h): 6.3 mg/l

Aquatic invertebrates

Acute:
OECD Guideline 202, part 1 Daphnia magna/EC50 (48 h): 8.85 mg/l

Aquatic plants

Toxicity to aquatic plants:
OECD Guideline 201 green algae/EC50 (72 h): 0.63 mg/l

Bioaccumulation

Information on: S-dimethenamid

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Environmental mobility:
Information on: S-dimethenamid
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:
The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

13. Disposal considerations

Waste disposal of substance:
Must be disposed of or incinerated in accordance with 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

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

Sea transport
IMDG
Hazard class: 9
Packing group: III
ID number: UN 3082
Hazard label: 9, EHS
Marine pollutant: YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains DIMETHENAMID-P)

Air transport
IATA/ICAO
Hazard class: 9
Packing group: III
ID number: UN 3082
Hazard label: 9, EHS
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains DIMETHENAMID-P)

15. Regulatory Information

Federal Regulations
Registration status:
Chemical DSL, CA released; restriction on quantity / not listed
16. Other Information

Recommended use: herbicide

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.

MSDS Prepared by:
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BASF HOTLINE (800) 454 – COPE (2673)
MSDS Prepared on: 2012/04/27

END OF DATA SHEET