SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name: SENCOR® 75 DF SPRAYULE™ 75% WATER DISPERSIBLE GRANULAR HERBICIDE
SDS Number: 102000007121
Product code (UVP): 04399641, 04886046
PCP Registration No.: 17242
Product Use: Herbicide

Bayer CropScience Inc
#200, 160 Quarry Park Blvd, SE
Calgary, Alberta T2C 3G3
Canada

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-888-283-6847

SECTION 2. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview: Caution! Harmful if swallowed, inhaled or absorbed through the skin. Moderate eye irritation. Avoid contact with skin, eyes and clothing.

Physical State: water-dispersible granules
Odor: musty
Appearance: grey-beige
Exposure routes: Skin contact, Skin Absorption, Eye contact, Inhalation

Immediate Effects:
Eye: Moderate eye irritation. Avoid contact with eyes.
Skin: Harmful if absorbed through skin. Avoid contact with skin and clothing.
Ingestion: Harmful if swallowed. Do not take internally.
Inhalation: Harmful if inhaled. Avoid breathing dust.
Chronic or Delayed Long-Term

This product is not listed as a carcinogen by ACGIH, NTP, IARC or OSHA. However, it may contain crystalline silica (quartz), a substance which has been listed as a carcinogen by ACGIH, NTP and IARC. Crystalline silica is a naturally-occurring mineral component of many sands and clays. Although the carcinogenic potential of crystalline silica in humans is controversial, it must be considered if it is inhaled under excessive exposure conditions. The respirable portion of the silica that may be contained in this product, however, is small, such that inhalation exposure during anticipated conditions of use is minimal.

Medical Conditions Aggravated by Exposure

No specific medical conditions are known which may be aggravated by exposure to this product. As with all materials which can cause upper respiratory tract irritation, persons with a history of asthma, emphysema, or hyperreactive airways disease may be more susceptible to overexposure. Pulmonary and respiratory diseases may be aggravated by exposure to respirable crystalline silica.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Average % by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metribuzin</td>
<td>21087-64-9</td>
<td>75.00</td>
</tr>
<tr>
<td>Sodium aluminium silicate</td>
<td>1344-00-9</td>
<td>1.00</td>
</tr>
<tr>
<td>Kaolin</td>
<td>1332-58-7</td>
<td>17.50</td>
</tr>
<tr>
<td>Crystalline quartz (respirable)</td>
<td>14808-60-7</td>
<td>0.18</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Skin

Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Inhalation

Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
Notes to physician

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathing difficulties</td>
<td>Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.</td>
</tr>
<tr>
<td>Sedation</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 5. FIRE FIGHTING MEASURES

- **Flash point**: not applicable
- **Autoignition temperature**: no data available
- **Lower Flammability Limit**: no data available
- **Upper Flammability Limit**: no data available
- **Explosiveness**: Dust may form explosive mixture in air.
- **Fire and Explosion Hazards**: In the event of fire the following may be released:
  - Carbon monoxide (CO)
  - Carbon dioxide (CO₂)
  - Nitrogen oxides (NOₓ)
  - Sulphur oxides
  - Mercaptans
  - Hydrogen cyanide (hydrocyanic acid)
  - Amines
- **Suitable extinguishing media**: Water, Dry chemical
- **Unsuitable extinguishing media**: High volume water jet
- **Fire Fighting Instructions**: Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

In the event of fire, wear self-contained breathing apparatus. In the event of fire and/or explosion do not breathe fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- **Personal precautions**: Avoid dust formation. Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
Methods for cleaning up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations. Contaminated soil may have to be removed and disposed.

Additional advice
Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.

SECTION 7. HANDLING AND STORAGE

Handling procedures
Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

Keep away from heat and sources of ignition. Care should be taken to avoid formation of dust from abraded granules. Dust may form explosive mixture in air.

Storing Procedures
Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Work/Hygienic Procedures
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove contaminated clothing immediately and dispose of safely. Garments that cannot be cleaned must be destroyed (burnt). Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection
Train employees in safe use of the product. Follow all label instructions. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

Eye/Face Protection
Safety glasses with side-shields

Hand protection
Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)

Body Protection
Wear long-sleeved shirt and long pants and shoes plus socks.

Respiratory protection
When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.
Exposure Limits

| Material                          | OES BCS* | TWA                | CAD AB OEL | TWA         | CAD BC OEL | TWA         | CAD MB OEL | TWA         | CAD ON OEL | TWAEV | CAD SK OEL | 15 MIN ACL | CAD SK OEL | 8 HR ACL | OEL (QUE) | TWA        | CAD BC OEL | TWA         |
|----------------------------------|----------|--------------------|------------|--------------|------------|--------------|------------|--------------|------------|--------|-----------|-------------|------------|------------|----------|-----------|------------|------------|--------------|
| Metribuzin 21087-64-9             |          | 0.56 mg/m³         |            |              |            |              |            |              |            |        |           |             |            |            |          |           |            |            |
| Sodium aluminium silicate 1344-00-9 |          |                    | CAD MB OEL | TWA         |            |              |            |              |            |        |           |             |            |            |          |           |            |            |
| Kaolin 1332-58-7                   |          |                    | CAD ON OEL | TWAEV       |            |              |            |              |            |        |           |             |            |            |          |           |            |            |
| Crystalline quartz (respirable) 14808-60-7 |          |                    | CAD AB OEL | TWA         |            |              |            |              |            |        |           |             |            |            |          |           |            |            |
| *OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>grey-beige</td>
</tr>
<tr>
<td>Physical State</td>
<td>water-dispersible granules</td>
</tr>
<tr>
<td>Odor</td>
<td>musty</td>
</tr>
<tr>
<td>pH</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>no data available</td>
</tr>
<tr>
<td>Bulk density</td>
<td>33 - 37 lb/ft³ (loose)</td>
</tr>
</tbody>
</table>
Evaporation rate  no data available
Boiling Point  not applicable
Melting / Freezing Point  not applicable
Water solubility  dispersible
Minimum Ignition Energy  no data available
Decomposition temperature  no data available
Partition coefficient: n-octanol/water  no data available
Viscosity  not applicable

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid  Sustained temperatures above 37.8 °C (100 °F).
Incompatibility  Strong bases
Ketones
Aldehydes

Hazardous Decomposition Products  Thermal decomposition can lead to release of:
Carbon oxides
Nitrogen oxides (NOx)
Sulphur oxides
Mercaptans
Hydrogen cyanide (hydrocyanic acid)
Amines

Hazardous reactions  Hydrolyses in alkaline medium.
Chemical Stability  Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on this product as formulated. The non-acute information pertains to the technical-grade active ingredient, metribuzin.
Acute oral toxicity

- male rat: LD50: 2,365 mg/kg
- female rat: LD50: 1,449 mg/kg

Acute dermal toxicity

- male/female combined rat: LD50: > 2,000 mg/kg
- male/female combined rabbit: LD50: > 5,000 mg/kg

Acute inhalation toxicity

- male/female combined rat: LC50: > 4.84 mg/l
  Exposure time: 4 h
  Determined in the form of dust.
- male/female combined rat: LC50: > 19.36 mg/l
  Exposure time: 1 h
  Determined in the form of dust.
  Extrapolated from the 4 hr LC50.

Skin irritation

- rabbit: Mild skin irritation.

Eye irritation

- rabbit: Moderate eye irritation.

Sensitisation

- guinea pig: Non-sensitizing.

Chronic toxicity

Metribuzin caused specific target organ toxicity in experimental animal studies in dogs in the following organ(s): blood. Metribuzin caused haemolytic anaemia in animal studies. The observed effects do not appear to be relevant for humans.

Assessment Carcinogenicity

Metribuzin was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

- Metribuzin: 21087-64-9, Group A4
- Sodium aluminium silicate: 1344-00-9, Group A4
- Kaolin: 1332-58-7, Group A4
- Crystalline quartz (respirable): 14808-60-7, Group A2

NTP

- Crystalline quartz (respirable): 14808-60-7

IARC

- Crystalline quartz (respirable): 14808-60-7, Overall evaluation: 1

OSHA

None.

Reproductive toxicity

Metribuzin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Metribuzin is related to parental toxicity.

Developmental Toxicity

Metribuzin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Metribuzin are related to maternal toxicity.
Mutagenicity

Mutribuzin was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish

Leuciscus idus (Golden orfe)
LC50: 141.6 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient metribuzin.

Oncorhynchus mykiss (rainbow trout)
LC50: 74.6 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient metribuzin.

Toxicity to aquatic plants

Scenedesmus quadricauda (Green algae)
EC50: 0.021 mg/l
The value mentioned relates to the active ingredient metribuzin.

Acute Toxicity to Aquatic Invertebrates

Water flea (Daphnia magna)
LC50: 49.6 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient metribuzin.

Toxicity to other organisms

Colinus virginianus (Bobwhite quail)
LC50: 164 mg/kg
The value mentioned relates to the active ingredient metribuzin.

Anas platyrhynchos (Mallard duck)
LD50: 460 mg/kg
The value mentioned relates to the active ingredient metribuzin.

Environmental precautions

Apply this product as specified on the label. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor runoff or drift. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.
SECTION 13. DISPOSAL CONSIDERATIONS

**General Disposal Guidance**
Follow container label instructions for disposal of wastes generated during use in compliance with the product label. Dispose in accordance with all local, state/provincial and federal regulations.

**Container Disposal**
Follow advice on product label and/or leaflet. Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Consult state and local regulations regarding the proper disposal of container.

SECTION 14. TRANSPORT INFORMATION

**TDG**
Not dangerous goods / not hazardous material

**49CFR**
Not dangerous goods / not hazardous material

**IMDG**
- **UN number**: 3077
- **Class**: 9
- **Packaging group**: III
- **Marine pollutant**: YES
- **Description of the goods**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (METRIBUZIN MIXTURE)

**IATA**
- **UN number**: 3077
- **Class**: 9
- **Packaging group**: III
- **Environm. Hazardous Mark**: YES
- **Description of the goods**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (METRIBUZIN MIXTURE)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

**Freight Classification**: COMPOUNDS, TREE OR WEEDKILLING, N.O.I., other than poison; HAVING A DENSITY OF GREATER THAN 20 LBS. PER CUBIC FOOT

SECTION 15. REGULATORY INFORMATION

**PCP Registration No.**: 17242
US Federal Regulations

TSCA list
- Sodium aluminium silicate 1344-00-9
- Kaolin 1332-58-7
- Crystalline quartz (respirable) 14808-60-7

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
None.

SARA Title III - Section 302 - Notification and Information
None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting
Metribuzin 21087-64-9 1.0%

US States Regulatory Reporting

CA Prop65
This product contains a chemical known to the State of California to cause cancer.
Crystalline quartz (respirable) 14808-60-7

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients
- Metribuzin 21087-64-9 MN, NJ
- Kaolin 1332-58-7 MN
- Crystalline quartz (respirable) 14808-60-7 MN

Canadian Regulations

Canadian Domestic Substance List
- Sodium aluminium silicate 1344-00-9
- Kaolin 1332-58-7
- Crystalline quartz (respirable) 14808-60-7

Environmental

CERCLA
None.

Clean Water Section 307 Priority Pollutants
None.

Safe Drinking Water Act Maximum Contaminant Levels
None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)
- Metribuzin 21087-64-9
- Sodium aluminium silicate 1344-00-9
- Kaolin 1332-58-7
- Crystalline quartz (respirable) 14808-60-7
NFPA 704 (National Fire Protection Association):
  Health - 1   Flammability - 3   Instability - 1   Others - none

  Health - 1   Flammability - 3   Physical Hazard - 0   PPE -
  0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: Reviewed and updated for general editorial purposes.

Prepared by the HSE Department of Bayer CropScience Inc. (306)-721-0310.

Revision Date: 05/30/2013

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