SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier
Trade name
SENCOR® 480 F FLOWABLE HERBICIDE

Product code (UVP)
04886011

SDS Number
102000013572

PCP Registration No.
26280

Relevant identified uses of the substance or mixture and uses advised against
Use
Herbicide

Restrictions on use
See product label for restrictions.

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

Responsible Department
Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.
Emergency Telephone Number (24hr/7 days)
1-800-334-7577

Product Information Telephone Number
1-888-283-6847

SECTION 2: HAZARDS IDENTIFICATION

Classified in accordance with Part 2 of the Hazardous Products Regulations
This material is not hazardous under the criteria of Part 2 of the Hazardous Products Regulation.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Concentration % by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metribuzin</td>
<td>21087-64-9</td>
<td>41.0</td>
</tr>
<tr>
<td>Fatty acid methyl tauride sodium salt</td>
<td>137-20-2</td>
<td>1.2</td>
</tr>
</tbody>
</table>
SECTION 4: FIRST AID MEASURES

Description of first aid measures

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

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.

Skin contact
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.

Eye contact
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.

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.

Most important symptoms and effects, both acute and delayed

Symptoms
No symptoms known or expected.

Indication of any immediate medical attention and special treatment needed

Treatment
Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable
High volume water jet

Special hazards arising from the substance or mixture
In the event of fire the following may be released: Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NOx), Sulphur oxides

Advice for firefighters
Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Special protective equipment for firefighters

Further information
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.
Flash point > 100 °C  
No flash point - Determination conducted up to the boiling point.

Auto-ignition temperature No data available
Lower explosion limit No data available
Upper explosion limit No data available
Explosivity No data available
Dust explosion class Not applicable.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Precautions Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

Methods and materials for containment and cleaning up
Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Contaminated soil may have to be removed and disposed.
Clean contaminated floors and objects thoroughly, observing environmental regulations. Decontaminate tools and equipment following cleanup.

Additional advice If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.

Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling 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.

Hygiene measures 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 soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

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.

Keep away from direct sunlight.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
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</thead>
<tbody>
<tr>
<td>Metribuzin</td>
<td>21087-64-9</td>
<td>5 mg/m³ (TWA)</td>
<td>07 2009</td>
<td>CAD AB OEL</td>
</tr>
<tr>
<td>Metribuzin</td>
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<td>5 mg/m³ (TWA)</td>
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<td>CAD BC OEL</td>
</tr>
<tr>
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<td>5 mg/m³ (TWA)</td>
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<tr>
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<td>CAD ON OEL</td>
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<tr>
<td>Metribuzin</td>
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<td>CAD SK OEL</td>
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<td>CAD SK OEL</td>
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<td>09 2017</td>
<td>OEL (QUE)</td>
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<tr>
<td>Metribuzin</td>
<td>21087-64-9</td>
<td>0.36 mg/m³ (SK-SEN)</td>
<td></td>
<td>OES BCS*</td>
</tr>
</tbody>
</table>

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

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.
Hand protection: Chemical resistant nitrile rubber gloves
Eye protection: Tightly fitting safety goggles
Skin and body protection: Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures: 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**: white to grey-beige
- **Physical State**: suspension
- **Odor**: weak characteristic
- **Odour Threshold**: No data available
- **pH**: 5.0 - 8.0 (100 %) (23 °C)
- **Vapor Pressure**: No data available
- **Vapor Density (Air = 1)**: No data available
- **Specific Gravity**: Not applicable
- **Density**: ca. 1.16 g/cm³ (20 °C)
- **Evaporation rate**: No data available
- **Boiling Point**: No data available
- **Melting / Freezing Point**: -10 °C / 14 °F
- **Water solubility**: miscible
- **Minimum Ignition Energy**: Not applicable
- **Partition coefficient: n-octanol/water**: No data available
- **Viscosity**: 600 - 1,600 mPa.s (25 °C)
- **Flash point**: > 100 °C
  No flash point - Determination conducted up to the boiling point.
- **Auto-ignition temperature**: No data available
- **Lower explosion limit**: No data available
- **Upper explosion limit**: No data available
- **Explosivity**: No data available
Dust explosion class  Not applicable.
Other information  Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity
Thermal decomposition  No data available
Chemical stability  Stable under normal conditions.
Possibility of hazardous reactions  No hazardous reactions known.

Conditions to avoid  Sustained temperatures above 37.8 °C (100 °F).
Incompatible materials  Aldehydes, Bases, Ketones
Hazardous decomposition products  Amines
Carbon dioxide (CO2)
Mercaptans
Sulphur oxides

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes  Eye contact, Skin Absorption, Inhalation, Ingestion
Immediate Effects
Eye  May cause mild irritation to eyes.
Skin  May cause skin irritation.
Ingestion  May be harmful if swallowed.
Inhalation  May be harmful if inhaled.

Information on toxicological effects
Acute oral toxicity  LD50 (Rat) > 5,000 mg/kg
Acute inhalation toxicity  LC50 (Rat)  1.831 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
Highest attainable concentration.
Acute dermal toxicity  LD50 (Rat) > 4,000 mg/kg
Skin corrosion/irritation  No skin irritation (Rabbit)
Serious eye damage/eye irritation  No eye irritation (Rabbit)
Respiratory or skin sensitisation  Non-sensitizing. (Guinea pig)
OECD Test Guideline 406, Buehler test
Assessment STOT Specific target organ toxicity – repeated exposure
Metribuzin caused specific target organ toxicity in experimental animal studies in the following organ(s): Liver, Kidney.

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

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

ACGIH
Metribuzin 21087-64-9 Group A4

NTP
None.

IARC
None.

OSHA
None.

Assessment toxicity to reproduction
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.

Assessment 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.

Further information
No further toxicological information is available.

SECTION 12: ECOLOGICAL INFORMATION

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

Toxicity to aquatic invertebrates
EC50 (Daphnia magna (Water flea)) 49.6 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient.

Toxicity to aquatic plants
IC50 (Desmodesmus subspicatus (green algae)) 0.022 mg/l
Growth rate; Exposure time: 72 h
The value mentioned relates to the active ingredient.
Biodegradability

Metribuzin: Not rapidly biodegradable

Koc

Metribuzin: Koc: 24 - 106

Bioaccumulation

Metribuzin: Does not bioaccumulate.

Mobility in soil

Metribuzin: Mobile in soils

Additional ecological information

No further ecological information is available.

Environmental precautions

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 contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not allow to get into surface water, drains and ground water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

Contaminated packaging

Triple rinse containers. Punctured container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke.

SECTION 14: TRANSPORT INFORMATION

TDG

UN number 3082
Labels 9
Packaging group III
Marine pollutant Marine pollutant
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (METRIBUZIN)

49CFR

Not dangerous goods / not hazardous material

IMDG

UN number 3082
Class 9
Packaging group III
Marine pollutant YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (METRIBUZIN SOLUTION)

IATA
UN number: 3082
Class: 9
Packaging group: III
Environm. Hazardous Mark: YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (METRIBUZIN SOLUTION)

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.

Further Information: Exempt from regulation when transported by road or rail, in accordance with TDG Regulations 1.45.1. This exemption provides that this product does not require dangerous goods shipping documentation or safety marks when transported on land by road or rail.

SECTION 15: REGULATORY INFORMATION
PCP Registration No.: 26280

SECTION 16: OTHER INFORMATION
Abbreviations and acronyms:
- 49CFR: Code of Federal Regulations, Title 49
- ACGIH: US. ACGIH Threshold Limit Values
- ATE: Acute toxicity estimate
- CAS-Nr.: Chemical Abstracts Service number
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
- EINECS: European inventory of existing commercial substances
- ELINCS: European list of notified chemical substances
- IARC: International Agency for Research on Cancer
- IATA: International Air Transport Association
- IMDG: International Maritime Dangerous Goods
- N.O.S.: Not otherwise specified
- NTP: US. National Toxicology Program (NTP) Report on Carcinogens
- OECD: Organization for Economic Co-operation and Development
- TDG: Transportation of Dangerous Goods
- TWA: Time weighted average
- UN: United Nations
WHO  World health organisation

**NFPA 704 (National Fire Protection Association):**
- Health - 1
- Flammability - 1
- Instability - 1
- Others - none

- Health - 1
- Flammability - 1
- Physical Hazard - 1
- PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

**Reason for Revision:** Revised according to the current Canadian WHMIS standard (WHMIS 2015).

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

**Revision Date:** 09/24/2018

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