



Material Safety Data Sheet

SENCOR® DF SOYBEAN 75% WATER DISPERSIBLE GRANULAR HERBICIDE

MSDS Number: 102000007121

MSDS Version 1.4

Revision Date: 06/07/2010

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name SENCOR® DF SOYBEAN 75% WATER DISPERSIBLE GRANULAR HERBICIDE
MSDS Number 102000007121
PCP Registration No. 27362

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 granular solid

Appearance grey-beige

Exposure routes Skin contact, Skin Absorption, Eye contact

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.

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.



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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

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Metribuzin	21087-64-9	75.00
Sodium aluminium silicate	1344-00-9	1.00
Quartz (Silica, Crystalline)	14808-60-7	0.40
Crystalline quartz (respirable)		

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

Signs and Symptoms breathing difficulties
sedation

Treatment Treat symptomatically. There is no specific antidote.



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SECTION 5. FIRE FIGHTING MEASURES

Flash point	not applicable
Suitable extinguishing media	Water, Dry chemical
Fire Fighting Instructions	<p>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.</p> <p>In the event of fire, wear self-contained breathing apparatus.</p>

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. Use personal protective equipment.
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	Do not allow to enter soil, waterways or waste water canal. Do not allow product to contact vegetation. Information regarding personal protective equipment, see section 8.

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.
Storing Procedures	<p>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.</p> <p>The 30-day storage temperature average must not exceed the recommended maximum.</p>
Work/Hygienic Procedures	Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.



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Remove contaminated clothing immediately and dispose of safely. Wash thoroughly and put on clean clothing.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Wash thoroughly and put on clean clothing.

Min/Max Storage Temperatures

Recommended maximum transport/storage temperature: 38 °C / 100 °F

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

Metribuzin	21087-64-9	OES BCS*	TWA	0.56 mg/m3
		OEL (QUE)	TWA	5 mg/m3
		CAD AB OEL	TWA	5 mg/m3
		CAD BC OEL	TWA	5 mg/m3
		CAD ON OEL	TWAEV	5 mg/m3
Quartz (Silica, Crystalline)	14808-60-7	OEL (QUE)	TWA	0.1 mg/m3
		CAD AB OEL	TWA	0.1 mg/m3
		CAD BC OEL	TWA	0.025 mg/m3
		CAD ON OEL	TWAEV	0.10 mg/m3
		OEL (QUE)	TWA	0.1 mg/m3
		CAD BC OEL	TWA	0.025 mg/m3

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"



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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	grey-beige
Physical State	granular solid
Vapor Density (Air = 1)	no data available
Evaporation rate	no data available
Water solubility	dispersible
Minimum Ignition Energy	no data available
Decomposition temperature	no data available

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 Amines Carbon dioxide (CO ₂) Mercaptans Sulphur oxides
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 active ingredient, metribuzin.

Acute oral toxicity	male rat: LD50: 2,365 mg/kg
	female rat: LD50: 1,449 mg/kg



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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: > 19.36 mg/l
Exposure time: 1 h
Determined in the form of dust.
Extrapolated from the 4 hr LC50.

male/female combined rat: LC50: > 4.84 mg/l
Exposure time: 4 h
Determined in the form of dust.

Skin irritation rabbit: Mild skin irritation.

Eye irritation rabbit: Moderate eye irritation.

Sensitisation guinea pig: Non-sensitizing.

Chronic toxicity Metribuzin caused liver, kidney, thyroid and/or testicular effects in chronic dietary studies in rats and dogs. In addition, anemia was observed in dogs.

Assessment Carcinogenicity

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

ACGIH

Metribuzin	21087-64-9	Group A4
Quartz (Silica, Crystalline)	14808-60-7	Group A2

NTP

Crystalline quartz (respirable)

IARC

Quartz (Silica, Crystalline)	14808-60-7	Overall evaluation: 1
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OSHA

None.

Reproductive toxicity REPRODUCTION: Metribuzin was not a reproductive toxicant in a 2-generation reproductive study in rats.

DEVELOPMENTAL TOXICITY: Metribuzin was not a primary developmental toxicant in laboratory animals. Developmental effects were observed only at doses that caused maternal toxicity.

Neurotoxicity Metribuzin has been tested in acute and subchronic neurotoxicity screening studies in rats. Transient neurobehavioral effects (e.g., decreased motor activity) were observed in the acute study. Neuropathological changes were not observed in either study.

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



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SECTION 12. ECOLOGICAL INFORMATION

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

CFR Not dangerous goods / not hazardous material

IMDG

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

IATA

UN-Number **3077**
 Class 9
 Packaging group III
 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.



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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. 27362

US Federal Regulations

TSCA list

Sodium aluminium silicate 1344-00-9
Quartz (Silica, Crystalline) 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)

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 IL, MN, NJ, RI
Quartz (Silica, Crystalline) 14808-60-7 IL, MA

Canadian Regulations

Canadian Domestic Substance List

Sodium aluminium silicate 1344-00-9
Quartz (Silica, Crystalline) 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)

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SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 3 Reactivity - 1 Others - none

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

Reason to Revise: Updated for general editorial purposes. The following sections have been revised: Section 14: Transport Information.

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

Revision Date: 06/07/2010

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