



Safety Data Sheet

BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER

SDS Number: 102000002072

SDS Version 3.0

Revision Date: 03/20/2013

Print Date: 03/20/2013

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name	BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER
SDS Number	102000002072
Product code (UVP)	05929490
PCP Registration No.	18022
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 Warning! Causes eye irritation. Causes skin irritation. Avoid contact with skin, eyes and clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling.

Physical State	Liquid
Odor	aromatic
Appearance	brown
Exposure routes	Eye contact, Skin contact, Inhalation, Ingestion
Immediate Effects	
Eye	Moderate eye irritation. Do not get in eyes.
Skin	Moderate skin irritation. Harmful if absorbed through skin. Avoid contact with skin and clothing.
Ingestion	Do not take internally.
Inhalation	Harmful if inhaled. Avoid breathing spray mist.



Safety Data Sheet

BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER

SDS Number: 102000002072
SDS Version 3.0

Chronic or Delayed Long-Term	This product contains ingredients that are considered to be probable or suspected human carcinogens (see Section 11 - Chronic). This product or its components may have long term (chronic) health effects. This product or its components may have target organ effects.
Medical Conditions Aggravated by Exposure	Skin contact may aggravate existing skin disease.
Potential Environmental Effect	Toxic to aquatic organisms. This product may cause adverse effects on non-target plants.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Bromoxynil octanoate, heptanoate mixed ester		24.20
MCPA 2-ethylhexyl ester	29450-45-1	24.20
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	16.80
Naphthalene	91-20-3	0.95
1,2,4-Trimethylbenzene	95-63-6	0.16
2-Methylpropan-1-ol	78-83-1	1.60
Dodecyl benzene sulphonate, calcium salt	26264-06-2	2.30

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	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Risk of product entering the lungs on vomiting after ingestion. Rinse mouth.
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	Local: The product causes irritation of eyes, skin and mucous membranes.



Safety Data Sheet

BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER

SDS Number: 102000002072
SDS Version 3.0

Sensitisation

- Systemic:
Tiredness
Thirst
Sweating
Anxiety
Hyperventilation
Tachycardia
Muscle rigidity
Hyperthermia
Vomiting
Abdominal pain
Ataxia
Anorexia
Liver damage
Acidosis
Hypotension
Circulatory collapse
Cough
Shortness of breath
Nausea
Diarrhoea
Rhabdomyolysis
Somnolence
Coma
Convulsions

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

SECTION 5. FIRE FIGHTING MEASURES

Flash point	66.1 °C / 151.0 °F
Autoignition temperature	443 °C / 829 °F
Lower Flammability Limit	0.8 %(V) The data refer to solvent naphtha petroleum.
Upper Flammability Limit	7.00 %(V) The data refer to solvent naphtha petroleum.
Explosiveness	no data available
Fire and Explosion Hazards	Dangerous gases are evolved in the event of a fire. The product is combustible.



Safety Data Sheet

BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER

SDS Number: 102000002072
SDS Version 3.0

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	High volume water jet
Fire Fighting Instructions	<p>Evacuate personnel to safe areas. Keep out of smoke. Fight fire from upwind position. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Do not allow run-off from fire fighting to enter drains or water courses.</p> <p>Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.</p>

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep unauthorized people away. Isolate hazard area. Remove all sources of ignition. Avoid contact with spilled product or contaminated surfaces.
Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Clean floors and contaminated objects with plenty of water.
Additional advice	Check also for any local site procedures.

SECTION 7. HANDLING AND STORAGE

Handling procedures	<p>Handle and open container in a manner as to prevent spillage. For personal protection see section 8. Use only in area provided with appropriate exhaust ventilation.</p> <p>Keep away from heat and sources of ignition. Vapours may form explosive mixture with air. Take measures to prevent the build up of electrostatic charge. Use only explosion-proof equipment.</p>
Storing Procedures	<p>Store in original container. 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. Keep containers tightly closed in a dry, cool and well-ventilated place.</p> <p>Keep away from direct sunlight. Protect from freezing.</p>
Work/Hygienic Procedures	<p>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. Smoking, eating and drinking should be prohibited in the application area.</p> <p>Remove Personal Protective Equipment (PPE) immediately after handling this</p>



Safety Data Sheet

BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER

SDS Number: 102000002072
SDS Version 3.0

product. 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	Follow all label instructions. Train employees in safe use of the product. 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	Chemical resistant goggles must be worn.
Hand protection	Chemical resistant nitrile rubber gloves
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

Naphthalene	91-20-3	OES BCS*	TWA	10 ppm
		CAD AB OEL	TWA	10 ppm
		CAD AB OEL	STEL	15 ppm
		CAD BC OEL	TWA	10 ppm
		CAD BC OEL	STEL	15 ppm
		CAD MB OEL	STEL	15 ppm
		CAD MB OEL	TWA	10 ppm
		CAD ON OEL	STEV	15 ppm
		CAD ON OEL	TWAEV	10 ppm
		CAD SK OEL	15 MIN ACL	15 ppm
		CAD SK OEL	8 HR ACL	10 ppm
		OEL (QUE)	STEL	15 ppm
		OEL (QUE)	TWA	10 ppm
Bromoxynil octanoate	1689-99-2	OES BCS*	TWA	0.21 mg/m3
2-Methylpropan-1-ol	78-83-1	CAD AB OEL	TWA	50 ppm
		CAD BC OEL	TWA	50 ppm

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	brown
Physical State	Liquid



Safety Data Sheet

BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER

SDS Number: 102000002072
SDS Version 3.0

Odor	aromatic
pH	3 - 5 (10 g/l)
Vapor Pressure	3.99 hPa / 3 mm Hg at 37 °C
Vapor Density (Air = 1)	1.00 The data refer to solvent naphtha petroleum.
Density	1.14 g/cm ³ at 20 °C
Evaporation rate	no data available
Boiling Point	149 °C / 300 °F
Melting / Freezing Point	no data available
Water solubility	miscible
Minimum Ignition Energy	not applicable
Decomposition temperature	Stable under normal conditions.
Viscosity	no data available
Other information	Further safety related physical-chemical data are not known.

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatibility	Store only in the original container.
Hazardous Decomposition Products	No decomposition products expected under normal conditions of use.
Hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Chemical Stability	Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies have not been performed on this product as formulated. The acute data provided is from a similar formulated product containing similar percentages of the active ingredients. The non-acute information pertains to the technical-grade active ingredients.



Safety Data Sheet

BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER

SDS Number: 102000002072
SDS Version 3.0

Acute oral toxicity male/female combined rat: LD50: 1,261 mg/kg

Acute dermal toxicity rabbit: LD50: > 5,050 mg/kg

Acute inhalation toxicity rat: LC50: > 2.2 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.

rat: LC50: > 8.8 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol.
Extrapolated from the 4 hr LC50.

Skin irritation rabbit: Slight irritation

Eye irritation rabbit: Minimally irritating.

Sensitisation guinea pig: Non-sensitizing.

Chronic toxicity Bromoxynil octanoate, heptanoate mixed ester caused specific target organ toxicity in experimental animal studies in the following organ(s): liver. The observed effects do not appear to be relevant for humans.

MCPA-2-ethylhexyl ester did not cause specific target organ toxicity in experimental animal studies.

Assessment Carcinogenicity

Bromoxynil octanoate, heptanoate mixed ester caused at high dose levels an increased incidence of tumours in mice in the following organ(s): liver. The mechanism of tumour formation is not considered to be relevant to man.

MCPA-2-ethylhexyl ester was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Reproductive toxicity Bromoxynil octanoate, heptanoate mixed ester did not cause reproductive toxicity in a two-generation study in rats.

MCPA-2-ethylhexyl ester did not cause reproductive toxicity in a two-generation study in rats.

Developmental Toxicity Bromoxynil octanoate, heptanoate mixed ester caused a delayed foetal growth,



Safety Data Sheet

BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER

SDS Number: 102000002072
SDS Version 3.0

an increased incidence of non-specific malformations. Bromoxynil octanoate, heptanoate mixed ester caused developmental toxicity only at dose levels toxic to the dams.

MCPA-2-ethylhexyl ester caused developmental toxicity only at dose levels toxic to the dams. MCPA-2-ethylhexyl ester caused a delayed foetal growth.

Mutagenicity

Bromoxynil octanoate, heptanoate mixed ester was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

MCPA-2-ethylhexyl ester was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish

Rainbow trout (*Oncorhynchus mykiss*)
LC50: 3.2 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient MCPA 2-ethylhexyl ester.

Rainbow trout (*Oncorhynchus mykiss*)
LC50: 0.041 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient bromoxynil octanoate.

Lepomis macrochirus (Bluegill sunfish)
LC50: 0.029 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient bromoxynil heptanoate.

Toxicity to aquatic plants

Selenastrum capricornutum
EC50: 0.25 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient MCPA 2-ethylhexyl ester.

Navicula pelliculosa
EC50: 0.043 mg/l
Exposure time: 120 h
The value mentioned relates to the active ingredient bromoxynil octanoate.

Lemna gibba (duckweed)
EC50: 0.073 mg/l
The value mentioned relates to the active ingredient bromoxynil octanoate.

Selenastrum capricornutum
EC50: 0.083 mg/l
Exposure time: 72 h
The value mentioned relates to the active ingredient bromoxynil heptanoate.



Safety Data Sheet

BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER

SDS Number: 102000002072
SDS Version 3.0

Acute Toxicity to Aquatic Invertebrates	<p>Water flea (Daphnia magna) EC50: 0.28 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient MCPA 2-ethylhexyl ester.</p> <p>Water flea (Daphnia magna) EC50: 0.046 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient bromoxynil octanoate.</p> <p>Water flea (Daphnia magna) EC50: 0.031 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient bromoxynil heptanoate.</p>
Stability in soil	Not applicable for this mixture.
Bioaccumulation	Lepomis macrochirus (Bluegill sunfish) BCF: 230 The value mentioned relates to the combination of bromoxynil phenol and the active ingredient bromoxynil octanoate.
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. Do not apply when weather conditions favor runoff or drift.
Ecological Information	No other effects to be mentioned.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance	It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Never place unused product down any indoor or outdoor drain.
Container Disposal	Do not re-use empty containers. Follow advice on product label and/or leaflet.

SECTION 14. TRANSPORT INFORMATION

TDG	Not dangerous goods / not hazardous material
49CFR	
NA-Number	1993
Packaging group	III
Description of the goods	COMBUSTIBLE LIQUID, N.O.S.



Safety Data Sheet

BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER

SDS Number: 102000002072
SDS Version 3.0

RQ (BROMOXYNIL OCTANOATE, HEPTANOATE, NAPHTHALENE, DODECYLBENZENE SULPHONATE CALCIUM SALT)
Reportable Quantity is reached with 10,526 lb of product.

IMDG

UN number **3082**
Class 9
Packaging group III
Marine pollutant YES
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BROMOXYNIL OCTANOATE, HEPTANOATE SOLUTION)

IATA

UN number **3082**
Class 9
Packaging group III
Environm. Hazardous Mark YES
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BROMOXYNIL OCTANOATE, HEPTANOATE 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.

SECTION 15. REGULATORY INFORMATION

PCP Registration No. 18022

US Federal Regulations

TSCA list

Solvent Naphtha (petroleum), heavy aromatic 64742-94-5
Naphthalene 91-20-3
1,2,4-Trimethylbenzene 95-63-6
2-Methylpropan-1-ol 78-83-1
Dodecyl benzene sulphonate, calcium salt 26264-06-2

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

Naphthalene 91-20-3 0.1%

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer.

Naphthalene 91-20-3

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

US State Right-To-Know Ingredients

Naphthalene 91-20-3 CA, CT, MN, NJ



Safety Data Sheet

BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER

SDS Number: 102000002072
SDS Version 3.0

2-Methylpropan-1-ol	78-83-1	CA, CT, MN
Dodecyl benzene sulphonate, calcium salt	26264-06-2	CA, CT

Canadian Regulations

Canadian Domestic Substance List

Solvent Naphtha (petroleum), heavy aromatic	64742-94-5
Naphthalene	91-20-3
1,2,4-Trimethylbenzene	95-63-6
2-Methylpropan-1-ol	78-83-1
Dodecyl benzene sulphonate, calcium salt	26264-06-2

Environmental

CERCLA

Naphthalene	91-20-3	100 lbs
2-Methylpropan-1-ol	78-83-1	5,000 lbs
Dodecyl benzene sulphonate, calcium salt	26264-06-2	1,000 lbs

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

MCPA 2-ethylhexyl ester	29450-45-1
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5
Naphthalene	91-20-3
1,2,4-Trimethylbenzene	95-63-6
2-Methylpropan-1-ol	78-83-1
Dodecyl benzene sulphonate, calcium salt	26264-06-2

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 2 Instability - 2 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2 Flammability - 2 Physical Hazard - 2 PPE -

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

Reason for Revision: The following sections have been revised: Section 14: Transport Information.

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

Revision Date: 03/20/2013

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered

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Safety Data Sheet

BUCTRIL M EMULSIFIABLE SELECTIVE WEEDKILLER

SDS Number: 102000002072
SDS Version 3.0

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