



Material Safety Data Sheet
BUCTRIL® 4EC HERBICIDE

MSDS Number: 102000002168
 MSDS Version 2.2
 Revision Date: 01/22/2008

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name BUCTRIL® 4EC HERBICIDE
MSDS Number 102000002168
EPA Registration No. 264-540

Bayer CropScience
 2 T.W. Alexander Drive
 Research Triangle PK, NC 27709
 USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
 For Product Information call: 1-866-99BAYER (1-866-992-2937)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Bromoxynil heptanoate	56634-95-8	27.00
Bromoxynil octanoate	1689-99-2	28.00
Naphthalene	91-20-3	2.00
Trade Secret Ingredient(s)		1.20

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview Warning! May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Moderate eye irritation. Avoid contact with skin, eyes and clothing. Avoid breathing spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Physical State liquid

Odor hydrocarbon-like

Appearance light tan to brown

Immediate Effects

Eye Causes redness, tearing. Vapors and mists can cause irritation.

Skin Harmful if absorbed through skin. May cause slight irritation.



Material Safety Data Sheet

MSDS Number: 102000002168
MSDS Version 2.2

BUCTRIL® 4EC HERBICIDE

Ingestion	May be fatal if swallowed. May cause nausea, vomiting, abdominal pain, weakness of arms and/or legs, dizziness, loss of coordination. Aspiration of the swallowed or vomited product can cause severe pulmonary complications.
Inhalation	May cause upper respiratory tract irritation, coughing, wheezing, nausea, headache, depression.
Medical Conditions Aggravated by Exposure	Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.
Potential Environmental Effect	Toxic to fish and wildlife.

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. Do NOT induce vomiting. Rinse out mouth and give water in small sips to drink.
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 Hazards	Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Risk of solvent pneumopathy. Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.
Treatment	Treat symptomatically. All treatment should be based on observed symptoms of distress in the patient.

SECTION 5. FIRE FIGHTING MEASURES

Flash point	89 °C / 192 °F
--------------------	----------------



Material Safety Data Sheet
BUCTRIL® 4EC HERBICIDE

MSDS Number: 102000002168
 MSDS Version 2.2

Autoignition Temperature 49 °C / 120 °F

Fire and Explosion Hazards In the event of fire the following can be released:
 Carbon monoxide (CO)
 Nitrogen oxides (NOx)
 Hydrogen bromide (HBr)

Vapours are heavier than air and may spread along floors.
 Heating can lead to increased pressure with risk of explosion.

Suitable Extinguishing Media Water spray, Carbon dioxide (CO2), Foam, Dry powder

Fire Fighting Instructions Cool closed containers/ tanks exposed to fire with water spray. Evacuate personnel to safe areas. Do not allow run-off from fire fighting to enter drains or water courses.

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Remove all sources of ignition.

Methods for Cleaning Up Recover the product by pumping, suction or absorption using a dry and inert absorbent clay. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Collect and transfer the product into a properly labelled and tightly closed container. When picked up, treat product as prescribed in Ch. 13. "Disposal considerations".

Additional Advice Use personal protective equipment. Do not allow product to contact vegetation. Information regarding personal protective equipment, see section 8.

SECTION 7. HANDLING AND STORAGE

Handling Procedures Avoid contact with skin, eyes and clothing. Use only in area provided with appropriate exhaust ventilation.

Keep away from heat and sources of ignition.

Storing Procedures Store in a place accessible by authorized persons only.
 Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed.

Keep away from food, drink and animal feedingstuffs.

Work/Hygienic Smoking, eating and drinking should be prohibited in the application area.



Material Safety Data Sheet
BUCTRIL® 4EC HERBICIDE

MSDS Number: 102000002168
 MSDS Version 2.2

Procedures

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

Wash thoroughly and put on clean clothing. 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.

Min/Max Storage Temperatures

Recommended minimum transport/storage temperature: -16 °C / 3 °F

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection	Train employees in safe use of the product. Eye wash facility and safety shower should be available. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.
Eye/Face Protection	Safety glasses with side-shields
Hand Protection	Wear suitable gloves.
Body Protection	Wear long-sleeved shirt and long pants and shoes plus socks. Chemical resistant apron when cleaning equipment, mixing or loading.
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. Under conditions immediately dangerous to life or health, or emergency conditions with unknown concentrations, use a full-face positive pressure air-supplied respirator equipped with an emergency escape air supply unit or use a self-contained breathing apparatus unit.

Exposure Limits

This product contains material which are Trade Secret and may have Occupational Exposure Limits. If more information is required, call the product information number listed in Section 1.

Bromoxynil octanoate	1689-99-2	OES BCS*	0.31 mg/m3
----------------------	-----------	----------	------------

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



Material Safety Data Sheet
BUCTRIL® 4EC HERBICIDE

MSDS Number: 102000002168
 MSDS Version 2.2

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	light tan to brown
Physical State	liquid
Odor	hydrocarbon-like
pH	4.1 (1 %) emulsion in water
Specific Gravity	1.26 at 22 °C
Density	1.26 g/ml
Water solubility	emulsifiable

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.
Conditions to Avoid	Heat, flames and sparks. Static electricity.
Incompatibility	Strong oxidizing agents Strong bases Strong acids
Hazardous Decomposition Products	Thermal decomposition Nitrogen oxides (NO _x) Hydrogen bromide (HBr)
Hazardous Reactions	No hazardous reactions when stored and handled according to prescribed instructions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	rat: LD50: 505 mg/kg
Acute Dermal Toxicity	rabbit: LD50: > 2,000 mg/kg
Acute Inhalation Toxicity	rat: LC50: 1.73 mg/l Exposure time: 4 h
Skin Irritation	rabbit: Slight irritation.
Eye Irritation	rabbit: Moderate eye irritation.



Material Safety Data Sheet
BUCTRIL® 4EC HERBICIDE

MSDS Number: 102000002168
 MSDS Version 2.2

Chronic Toxicity BROMOXYNILCOMPOUNDS: EPA has classified Bromoxynil as a Class C carcinogen. Based upon the results of rat and rabbit teratogenicity studies, Bromoxynil phenol is considered to be a developmental toxicant. Women of child bearing age should be particularly careful when handling this product to avoid ingestion and skin contact. Although three in vitro genetic toxicity studies were positive for Bromoxynil phenol, four additional in vitro studies and two in vivo studies were negative. Therefore, the weight of evidence indicates that Bromoxynil phenol does not produce genetic toxicity.

Assessment Carcinogenicity

ACGIH		
Naphthalene	91-20-3	Group A4
NTP		
Naphthalene	91-20-3	
IARC		
Naphthalene	91-20-3	Overall evaluation: 2B
OSHA		
None.		

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions Do not apply when weather conditions favor runoff or drift. 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

General Disposal Guidance 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.

Container Disposal Triple rinse containers. If burned, stay out of smoke. Puncture 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.

RCRA Classification The RCRA Classifications may be on the individual component(s) and not necessarily on the product as a whole.

91-20-3 Naphthalene
 US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261): U165

91-20-3 Naphthalene
 US. EPA Resource Conservation and Recovery Act (RCRA) U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA]): U165



Material Safety Data Sheet
BUCTRIL® 4EC HERBICIDE

MSDS Number: 102000002168
 MSDS Version 2.2

SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:
 NON-BULK:
 <119 Gallons: Not regulated for Domestic Surface Transportation

BULK:
 > 119 Gallons: Combustible Liquid, N.O.S. (Bromoxynil, Xylene Range Solvents) // NA1993 // PG III // RQ (Xylene) // Marine Pollutant (Bromoxynil)

FREIGHT CLASSIFICATION:
 Compounds, Tree or Weedkilling, N.O.I., other than poison, having a density of 20 LBS or greater per cubic

SECTION 15. REGULATORY INFORMATION

This product contains material(s) which are Trade Secret and are on various Regulatory Lists. These material(s) are not listed below.

EPA Registration No. 264-540

US Federal Regulations

TSCA list

Bromoxynil octanoate 1689-99-2
 Naphthalene 91-20-3

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

Naphthalene 91-20-3

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Bromoxynil octanoate 1689-99-2 1.0%
 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

Bromoxynil octanoate 1689-99-2 NJ
 Naphthalene 91-20-3 CA, CT, IL, MN, NJ, PA, RI

Canadian Regulations

Canadian Domestic Substance List

Naphthalene 91-20-3



Material Safety Data Sheet
BUCTRIL® 4EC HERBICIDE

MSDS Number: 102000002168
MSDS Version 2.2

Environmental

CERCLA

Naphthalene

91-20-3

100 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)

Bromoxynil heptanoate

56634-95-8

Naphthalene

91-20-3

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 2 Reactivity - 0 Others - none

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

Reason to Revise: Section 9 - change density unit of measurement; Section 12 - remove North America from the previous ecological information.

Revision Date: 01/22/2008

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 trademarks of Bayer.