



Material Safety Data Sheet

BAYER ADVANCED SEASON LONG WEED CONTROL FOR LAWNS READY-TO-SPRAY

MSDS Number: 102000021162

MSDS Version 1.0

Revision Date: 06/10/2009

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name BAYER ADVANCED SEASON LONG WEED CONTROL FOR LAWNS READY-TO-SPRAY
MSDS Number 102000021162
EPA Registration No. 72155-87

Bayer Environmental Science
 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: 1-800-331-2867

SECTION 2. HAZARDS IDENTIFICATION

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

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

Physical State liquid

Appearance white

Routes of Exposure Ingestion, Skin Absorption, Eye contact, Inhalation

Immediate Effects

Eye Moderate eye irritation. Avoid contact with eyes.

Skin Harmful if absorbed through skin. May cause slight irritation. Avoid contact with skin and clothing.

Ingestion Harmful if swallowed. Do not take internally.

Inhalation Avoid breathing spray mist.

Chronic or Delayed Long-Term

This product or its components may have target organ effects. This product or its components may have long term (chronic) health effects.

Potential Environmental Effect

Toxic to fish and aquatic invertebrates.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS



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<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
2,4-D, dimethylamine salt	2008-39-1	4.73
Dicamba, potassium salt	10007-85-9	0.52
Mecoprop-P potassium salt	66423-05-0	1.10
Isoxaben	82558-50-7	2.63
Glycerine	56-81-5	8.35
Potassium hydroxide	1310-58-3	1.70

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 Treatment	Treat symptomatically. There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Water spray, Foam, Carbon dioxide (CO2), Dry chemical
Fire Fighting Instructions	<p>Fight fire from upwind position. Keep out of smoke. Cool closed containers/tanks exposed to fire with water spray. 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>



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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Keep unauthorized people away. Isolate hazard area. 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). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional Advice	Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

Handling Procedures	Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.
Storing Procedures	Store in original container and out of the reach of children, preferably in a locked storage area. Protect from freezing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection	<p>There are no known hazards associated with this product when used according to the label directions. The following guidelines should be followed.</p> <p>Avoid inhalation of vapour or mist. Avoid contact with skin and eyes.</p> <p>Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.</p> <p>Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Do not allow children or pets to enter the treated area until it has dried.</p>
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white
Physical State	liquid



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pH	5.5 - 7.0 (100 %)
Density	approx. 1.03 g/cm ³ at 20 °C
Viscosity	200 - 500 cps

SECTION 10. STABILITY AND REACTIVITY

Hazardous Reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Chemical Stability	Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the technical-grade active ingredients, 2,4-D, MCPP-p, Dicamba and Isoxaben.

Acute Oral Toxicity	rat: LD50: > 2,000 mg/kg
Acute Dermal Toxicity	rabbit: LD50: > 2,000 mg/kg
Acute Inhalation Toxicity	rat: LC50: > 2.06 mg/l Exposure time: 4 h Determined in the form of liquid aerosol.
	rat: LC50: > 8.24 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: Mild eye irritation.
Sensitization	guinea pig: Non-sensitizing.
Chronic Toxicity	2,4-D caused effects in the thyroid, eyes, kidneys, adrenals, and ovaries/testes at dose levels above the saturation of renal clearance in chronic studies in laboratory animals. MCPP-p caused kidney effects in chronic toxicity studies in rats and mice. MCPP-p did not target any organs in a chronic study in dogs. Dicamba did not target any organs in chronic toxicity studies in rats and dogs. Isoxaben caused liver effects in chronic dietary studies in rats, mice and dogs.



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Assessment Carcinogenicity

2,4-D was not carcinogenic in lifetime feeding studies in rats and mice. EPA has classified 2,4-D as a Group D chemical [not classifiable as to human carcinogenicity].

MCPP-p was not carcinogenic in a chronic feeding study in rats. In an oncogenicity study in mice, there was an increased incidence of liver tumors in female mice at high doses. EPA classified MCPP-p as "suggestive of carcinogenicity, but not sufficient to assess human carcinogenic potential."

Dicamba was not carcinogenic in lifetime feeding studies in rats and mice. EPA has classified dicamba "not likely to be carcinogenic to humans."

Isoxaben is currently listed as a possible human carcinogen based on evidence of benign liver adenomas at the high dose only in the carcinogenic study in mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Reproductive toxicity

REPRODUCTION:

2,4-D caused reproductive toxicity at dose levels above the saturation of renal clearance in multi-generation studies in rats.

MCPP-p was not a reproductive toxicant in a two-generation study in rats.

Dicamba was not a primary reproductive toxicant in a two-generation reproduction study in rats. Reproductive effects were observed only at doses that caused parental systemic toxicity. Offspring toxicity was manifested at a dose lower than parental systemic toxicity.

Isoxaben was not a reproductive toxicant in a multi-generation study in rats.

DEVELOPMENTAL TOXICITY:

2,4-D is not a primary developmental toxicant in rats and rabbits. Developmental effects were observed at doses that caused maternal toxicity.

MCPP-p was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed in rats but were considered secondary to maternal toxicity.

Dicamba was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed in rabbits but were considered secondary to maternal toxicity.



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Isoxaben is not considered a primary developmental toxicant in rats and rabbits. Developmental effects were observed at doses that caused maternal toxicity.

Neurotoxicity

2,4-D has demonstrated neurotoxicity in rats following acute and chronic exposure at dose levels above saturation of renal clearance.

MCPP-p has been tested in acute and subchronic neurotoxicity screening studies in rats. Neurobehavioral effects (e.g., decreased motor activity) were observed in the acute study. Neuropathological changes were not observed in either study.

Dicamba has demonstrated the potential to cause neurotoxicity at high doses in laboratory animals.

Isoxaben showed no evidence of neurotoxicity in available animal studies.

Mutagenicity

2,4-D has been tested in both in vitro and in vivo genotoxicity tests and was not mutagenic, although some cytogenetic effects were observed.

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

Dicamba did not demonstrate evidence of mutagenic potential, although, some positive results have been reported in the published literature.

Isoxaben 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

**Environmental
Precautions**

Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not apply when weather conditions favor runoff or drift. Apply this product as specified on the label.



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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. Place empty container in trash. Follow advice on product label and/or leaflet.

SECTION 14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION:
Not regulated for any mode of transportation

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

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 72155-87

US Federal Regulations

TSCA list

Glycerine 56-81-5
Potassium hydroxide 1310-58-3

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

None.

US States Regulatory Reporting

CA Prop65

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

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

US State Right-To-Know Ingredients

Glycerine 56-81-5 IL, MN, RI
Potassium hydroxide 1310-58-3 CA, CT, IL, MN, PA, RI

Canadian Regulations



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Canadian Domestic Substance List

Glycerine 56-81-5
Potassium hydroxide 1310-58-3

Environmental

CERCLA

Potassium hydroxide 1310-58-3 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)

Dicamba, potassium salt 10007-85-9

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 1 Reactivity - 0 Others - none

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

Reason to Revise: New Material Safety Data Sheet.

Revision Date: 06/10/2009

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