



Material Safety Data Sheet

BAYER ADVANCED SOUTHERN WEED KILLER FOR LAWNS READY-TO-SPRAY

MSDS Number: 102000012501

MSDS Version 1.1

Revision Date: 04/16/2009

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name BAYER ADVANCED SOUTHERN WEED KILLER FOR LAWNS READY-TO-SPRAY
MSDS Number 102000012501
EPA Registration No. 72155-4

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. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
2,4-D, dimethylamine salt	2008-39-1	7.59
Mecoprop-P-dimethylamine salt	66423-09-4	1.83
Dicamba, dimethylamine salt	2300-66-5	0.84

SECTION 3. HAZARDS IDENTIFICATION

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

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

Physical State liquid, clear

Appearance brownish

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

Immediate Effects

Eye Moderate eye irritation. Do not get in eyes.

Skin May cause skin irritation. Avoid contact with skin and clothing.

Ingestion May cause irritation. Do not take internally. Harmful if swallowed.

Inhalation Mists may cause respiratory tract irritation, coughing, a burning sensation. Avoid breathing spray mist.



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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 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

Flash point	> 93.3 °C / 199.9 °F
Fire and Explosion Hazards	Dangerous gases are evolved in the event of a fire. Nitrogen oxides (NOx) Carbon dioxide (CO2) Carbon monoxide (CO) Hydrogen chloride (HCl)
Suitable Extinguishing Media	Foam, Dry chemical, Water spray, Carbon dioxide (CO2)



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Fire Fighting Instructions Keep out of smoke. Fight fire from upwind position. Cool closed containers/ tanks exposed to fire with water spray. 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 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 product to contact vegetation.

SECTION 7. HANDLING AND STORAGE

Handling Procedures Handle and open container in a manner as to prevent spillage. Use only in area provided with appropriate exhaust ventilation.

Storing Procedures Store in original container and out of the reach of children, preferably in a locked storage area. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from freezing.

Work/Hygienic Procedures 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.

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.



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Eye/Face Protection	Tightly fitting safety goggles
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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	brownish
Physical State	liquid, clear
pH	7.5 - 8.5 (100 %)
Density	approx. 1.04 g/cm ³ at 20 °C

SECTION 10. STABILITY AND REACTIVITY

Incompatibility	Acids
Hazardous Reactions	Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies have not been performed on this product as formulated. The data provided has been conservatively extrapolated from data on the individual technical-grade active ingredients. The non-acute information pertains to the technical-grade active ingredients.

Acute Oral Toxicity	rat: LD50: > 2,000 mg/kg
Acute Dermal Toxicity	rat: LD50: > 2,000 mg/kg
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. MCP-p caused kidney effects in chronic toxicity studies in rats and mice. MCP-p did not target any organs in a chronic study in dogs.



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Dicamba did not target any organs in chronic toxicity studies in rats and dogs.

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."

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

**Reproductive &
Developmental 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.

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.

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



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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.

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.

MCP-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.

SECTION 12. ECOLOGICAL INFORMATION

**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. 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.

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:
Material is not regulated for transportation

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



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SECTION 15. REGULATORY INFORMATION

EPA Registration No. 72155-4

US Federal Regulations

TSCA list

None.

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

Dicamba, dimethylamine salt 2300-66-5 1.0%

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

Dicamba, dimethylamine salt 2300-66-5 NJ

Canadian Regulations

Canadian Domestic Substance List

None.

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

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: Updated for general editorial purposes.



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