



Material Safety Data Sheet

BAYER ADVANCED BRUSH KILLER PLUS READY-TO-SPRAY

MSDS Number: 102000012315

MSDS Version 2.0

Revision Date: 01/22/2007

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name BAYER ADVANCED BRUSH KILLER PLUS READY-TO-SPRAY
MSDS Number 102000012315
EPA Registration No. 72155-19

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>
Triclopyr, triethylamine salt	57213-69-1	8.80
Ethanol	64-17-5	9.97

SECTION 3. HAZARDS IDENTIFICATION

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

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

Physical State liquid, clear

Appearance light yellow

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

Immediate Effects

Eye Do not get in eyes. Moderate eye irritation.

Skin Harmful if absorbed through skin. Avoid contact with skin and clothing.

Ingestion Harmful if swallowed. Do not take internally.

Inhalation Harmful if inhaled. Avoid contact or inhalation of spray mist.



Material Safety Data Sheet

MSDS Number: 102000012315
MSDS Version 2.0

BAYER ADVANCED BRUSH KILLER PLUS READY-TO-SPRAY

Chronic or Delayed Long-Term This product or its components may have target organ effects.

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	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	93 °C / 199 °F
Fire and Explosion Hazards	Heating or fire can release toxic gas.
Suitable Extinguishing Media	Water, Foam, Carbon dioxide (CO2)
Fire Fighting Instructions	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Dike area to prevent runoff and contamination of water sources. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.



Material Safety Data Sheet

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MSDS Number: 102000012315
MSDS Version 2.0

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** Take up with absorbent material (e.g. sand, diatomaceous earth or a proprietary absorbent material). 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.

- Storing Procedures** Keep tightly closed in a dry and cool place. Store in original container and out of the reach of children, preferably in a locked storage area.

Do not freeze.

- Min/Max Storage Temperatures** Do not transport or store below 0 °C / 32 °F
Do not transport or store above 38 °C / 100 °F
The 30-day storage temperature average must not exceed the recommended maximum.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- General Protection** There are no known hazards associated with this product when used according to the label directions. The following guidelines should be followed.

Avoid inhalation of vapour or mist. Avoid contact with skin and eyes.

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

Do not allow children or pets to enter the treated area until it has dried.

- Hand Protection** Chemical resistant nitrile rubber gloves

- Body Protection** Wear long-sleeved shirt and long pants and shoes plus socks.

Exposure Limits

Ethanol	64-17-5	ACGIH NIOSH	TWA REL	1,000 ppm 1,000 ppm	1,000 ppm 1,900 mg/m3
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Material Safety Data Sheet

BAYER ADVANCED BRUSH KILLER PLUS READY-TO-SPRAY

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MSDS Version 2.0

OSHA Z1	PEL	1,000 ppm	1,900 mg/m3
OSHA Z1A	TWA	1,000 ppm	1,900 mg/m3
US CA OEL	TWA PEL	1,000 ppm	1,900 mg/m3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	light yellow
Physical State	liquid, clear
pH	8.7 - 9.7
Density	approx. 1.02 g/cm ³ at 20 °C

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	freezing Heat, flames and sparks.
Incompatibility	Oxidizing agents
Hazardous Decomposition Products	Thermal decomposition can lead to release of: nitrogen oxides (NO _x) hydrogen chloride (HCl)

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on this product as formulated. The non-acute information pertains to the technical-grade active ingredient, triclopyr.

Acute Oral Toxicity	male rat: LD50: 3,743 mg/kg female rat: LD50: 4,444 mg/kg
Acute Dermal Toxicity	rabbit: LD50: > 2,000 mg/kg



Material Safety Data Sheet

MSDS Number: 102000012315
MSDS Version 2.0

BAYER ADVANCED BRUSH KILLER PLUS READY-TO-SPRAY

Acute Inhalation Toxicity rat: LC50: > 5.2 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
(actual)

rat: LC50: > 20.8 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol.
Extrapolated from the 4 hr LC50.
(actual)

Skin Irritation No skin irritation.

Eye Irritation Moderate eye irritation.

Sensitization guinea pig: Non-sensitizing.

Chronic Toxicity Long-term dietary exposure to triclopyr caused liver, kidney, adrenal and mammary gland effects when tested in rats, mice and/or dogs.

Assessment Carcinogenicity

EPA classified triclopyr as a Group D chemical (not classifiable as to human carcinogenicity) based on what was considered only marginal responses in the mammary and adrenal glands of rodents, and the absence of additional support from structural analogs or genotoxicity.

ACGIH

Ethanol	64-17-5	Group A4
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NTP

Ethanol	64-17-5
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IARC

OSHA

None.

Reproductive & Developmental Toxicity REPRODUCTION: Triclopyr was not a reproductive toxicant at non-maternally toxic dose levels in a two-generation study in rats.

DEVELOPMENTAL TOXICITY: Triclopyr is not a primary developmental toxicant in rats and rabbits. Developmental effects were observed at doses that caused maternal toxicity.

Mutagenicity Triclopyr was non-mutagenic in a battery of in vitro and in vivo mutagenicity studies.

SECTION 12. ECOLOGICAL INFORMATION



Material Safety Data Sheet

MSDS Number: 102000012315
MSDS Version 2.0

BAYER ADVANCED BRUSH KILLER PLUS READY-TO-SPRAY

Environmental Precautions Do not apply directly to water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not apply when weather conditions favor runoff or drift. Drift or runoff may adversely affect non-target plants. Apply this product as specified on the label. Do not allow to get into surface water, drains and ground water.

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.

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

64-17-5 Ethanol
US. EPA Resource Conservation and Recovery Act: (RCRA) D List of Characteristic Hazardous Wastes (40 CFR 261.21-24): D001

SECTION 14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION:
Not Regulated for transport by any mode of shipment

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

EPA Registration No. 72155-19

US Federal Regulations

TSCA list
Ethanol 64-17-5

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
Triclopyr, triethylamine salt 57213-69-1 1.0%



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US States Regulatory Reporting

CA Prop65

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

Ethanol 64-17-5

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

US State Right-To-Know Ingredients

Triclopyr, triethylamine salt 57213-69-1 NJ
Ethanol 64-17-5 CA, CT, IL, MA, MN, RI

Canadian Regulations

Canadian Domestic Substance List

Ethanol 64-17-5

Environmental

CERCLA

Ethanol 64-17-5 100 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)

Triclopyr, triethylamine salt 57213-69-1
Ethanol 64-17-5

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. Updated due to new system and numbering scheme.

Revision Date: 01/22/2007

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