



**BAYER ADVANCED BRUSH KILLER PLUS
CONCENTRATE**

Version 3.0 / USA
102000012315

1/10
Revision Date: 12/12/2014
Print Date: 04/01/2015

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE
COMPANY/UNDERTAKING**

Product identifier

Trade name BAYER ADVANCED BRUSH KILLER PLUS CONCENTRATE
Product code (UVP) 06078957
SDS Number 102000012315
EPA Registration No. 72155-19

Relevant identified uses of the substance or mixture and uses advised against

Use Herbicide
Restrictions on use See product label for restrictions.

Information on manufacturer

Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

Emergency telephone no.

**Emergency Telephone
Number (24hr/ 7 days)** 1-800-334-7577 (24 hours/day)

**Product Information
Telephone Number** 1-800-331-2867

SDS Information or Request SDSINFO.BCS-NA@bayer.com

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Eye irritation : Category 2B

Signal word: Warning

Hazard statements

Causes eye irritation.

Precautionary statements

Wash thoroughly after handling.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/ attention.

Other hazards

No other hazards known.



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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Hazardous Component Name | CAS-No. | Concentration % by weight |
|-------------------------------|------------|---------------------------|
| Triclopyr, triethylamine salt | 57213-69-1 | 8.80 |
| Ethanol | 64-17-5 | 9.97 |

SECTION 4: FIRST AID MEASURES

Description of first aid measures

| | |
|-----------------------|---|
| General advice | When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment. |
| 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. |
| Skin contact | 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. |
| Eye contact | 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. |
| 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. |

Most important symptoms and effects, both acute and delayed

| | |
|---|---|
| Symptoms | To date no symptoms are known. |
| Indication of any immediate medical attention and special treatment needed | |
| Treatment | Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote. |

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

| | |
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| Suitable | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Unsuitable | High volume water jet |



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| Special hazards arising from the substance or mixture | Dangerous gases are evolved in the event of a fire. |
| Advice for firefighters | |
| Special protective equipment for fire-fighters | Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. |
| Further information | Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. |
| Flash point | > 93.3 °C |
| Autoignition temperature | no data available |
| Lower explosion limit | no data available |
| Upper explosion limit | no data available |
| Explosivity | not applicable |

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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 non-target plants.

Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle and open container in a manner as to prevent spillage.

Hygiene measures 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. Remove soiled clothing



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immediately and clean thoroughly before using again. Wash thoroughly with soap and water after handling.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers 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.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| Components | CAS-No. | Control parameters | Update | Basis |
|-------------------------------|------------|------------------------------------|---------|-----------|
| Triclopyr, triethylamine salt | 57213-69-1 | 40ug/m3 (ST ESL) | 07 2011 | TX ESL |
| Triclopyr, triethylamine salt | 57213-69-1 | 4ug/m3 (AN ESL) | 07 2011 | TX ESL |
| Ethanol | 64-17-5 | 1,000 ppm (STEL) | 02 2012 | ACGIH |
| Ethanol | 64-17-5 | 1,900 mg/m3/1,000 ppm (REL) | 2010 | NIOSH |
| Ethanol | 64-17-5 | 1,900 mg/m3/1,000 ppm (PEL) | 02 2006 | OSHA Z1 |
| Ethanol | 64-17-5 | 1,900 mg/m3/1,000 ppm (TWA) | 1989 | OSHA Z1A |
| Ethanol | 64-17-5 | 1,900 mg/m3/1,000 ppm (TWA) | 06 2008 | TN OEL |
| Ethanol | 64-17-5 | 1000ppb (AN ESL) | 07 2011 | TX ESL |
| Ethanol | 64-17-5 | 1910ug/m3 (ST ESL) | 02 2013 | TX ESL |
| Ethanol | 64-17-5 | 1880ug/m3 (AN ESL) | 07 2011 | TX ESL |
| Ethanol | 64-17-5 | 1010ppb (ST ESL) | 02 2013 | TX ESL |
| Ethanol | 64-17-5 | 1,900 mg/m3/1,000 ppm (TWA PEL) | 08 2010 | US CA OEL |
| Ethanol | 64-17-5 | 500 ppm (TWA) | | OES BCS* |

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

Exposure controls



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Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

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|------------------------------------|--|
| 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. |
| Hand protection | Chemical resistant nitrile rubber gloves |
| Eye protection | Safety glasses with side-shields |
| Skin and body protection | Wear long-sleeved shirt and long pants and shoes plus socks. |
| General protective measures | 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. |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|-------------------------------------|
| Appearance | colourless |
| Physical State | liquid, clear |
| Odor | characteristic |
| Odour Threshold | no data available |
| pH | 8.7 - 9.7 |
| Vapor Pressure | no data available |
| Vapor Density (Air = 1) | no data available |
| Density | ca. 1.02 g/cm ³ at 20 °C |
| Evaporation rate | no data available |
| Boiling Point | no data available |
| Melting / Freezing Point | no data available |
| Water solubility | dispersible |
| Minimum Ignition Energy | not applicable |
| Decomposition temperature | not applicable |
| Partition coefficient: n-octanol/water | no data available |
| Viscosity | no data available |
| Flash point | > 93.3 °C |



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|---------------------------------|-------------------|
| Autoignition temperature | no data available |
| Lower explosion limit | no data available |
| Upper explosion limit | no data available |
| Explosivity | not applicable |

SECTION 10: STABILITY AND REACTIVITY

Reactivity

| | |
|---|--|
| Thermal decomposition | not applicable |
| Chemical stability | Stable under recommended storage conditions. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | freezing Heat, flames and sparks. |
| Incompatible materials | Oxidizing agents |
| Hazardous decomposition products | No decomposition products expected under normal conditions of use. |

SECTION 11: TOXICOLOGICAL INFORMATION

| | |
|---|---|
| Exposure routes | Eye contact, Inhalation, Skin contact, Skin Absorption |
| Immediate Effects | |
| Eye | Moderate eye irritation. |
| Skin | Harmful if absorbed through skin. |
| Ingestion | Harmful if swallowed. |
| Inhalation | Harmful if inhaled. |
| Information on toxicological effects | |
| Acute oral toxicity | LD50 (male rat) 3,743 mg/kg LD50 (female rat) 4,444 mg/kg |
| Acute inhalation toxicity | LC50 (rat) > 5.2 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. (actual) LC50 (rat) > 20.8 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. |



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| | Extrapolated from the 4 hr LC50. (actual) |
| Acute dermal toxicity | LD50 (rabbit) > 2,000 mg/kg |
| Skin irritation | No skin irritation |
| Eye irritation | Moderate eye irritation. |
| Sensitisation | Non-sensitizing. (guinea pig) |

Assessment repeated dose toxicity

Triclopyr did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity

Triclopyr was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

Triclopyr was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

| | | |
|---------|---------|----------|
| Ethanol | 64-17-5 | Group A3 |
|---------|---------|----------|

NTP

None.

OSHA

None.

Assessment toxicity to reproduction

Triclopyr did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Triclopyr caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Triclopyr are related to maternal toxicity.

Further information

Only acute toxicity studies have been performed on the formulated product.
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

| | |
|--|---|
| Toxicity to fish | LC50 (Oncorhynchus mykiss (rainbow trout)) 400 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient triclopyr. |
| Toxicity to aquatic invertebrates | LC50 (Daphnia magna (Water flea)) > 1,000 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient triclopyr. |



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EC50 (Crassostrea virginica (Eastern Oyster)) 55 - 87 mg/l
shell deposition; Exposure time: 48 h
The value mentioned relates to the active ingredient triclopyr.

| | |
|----------------------------------|---|
| Biodegradability | Triclopyr: ; not rapidly biodegradable |
| Koc | Triclopyr: Koc: 25 - 384 |
| Bioaccumulation | Triclopyr: Bioconcentration factor (BCF) 1; Does not bioaccumulate. |
| Mobility in soil | Triclopyr: Mobile in soils |
| Environmental precautions | 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 from treated areas 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. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. |

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

| | |
|-------------------------------|--|
| Product | Dispose in accordance with all local, state/provincial and federal regulations. Follow container label instructions for disposal of wastes generated during use in compliance with the product label. Do not contaminate water, food, or feed by disposal. |
| Contaminated packaging | Do not re-use empty containers. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke. |
| RCRA Information | Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply. |

SECTION 14: TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.



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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%

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

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

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.

EPA/FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:



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Signal word: Caution!

Hazard statements: Harmful if swallowed, inhaled or absorbed through the skin.
Avoid breathing spray mist.
Avoid contact with skin, eyes and clothing.
Moderate eye irritation.

SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 1 Instability - 0 Others - none

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

Health - 1 Flammability - 1 Physical Hazard - 0 PPE -

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

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

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