



**BAYER ADVANCED 24 HOUR GRUB KILLER PLUS  
READY-TO-SPREAD GRANULES**

Version 3 / USA  
102000012263

1/11  
Revision Date: 09/12/2013  
Print Date: 05/08/2014

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

**Product identifier**

Trade name	BAYER ADVANCED 24 HOUR GRUB KILLER PLUS READY-TO-SPREAD GRANULES
Product code (UVP)	04399137
SDS Number	102000012263
EPA Registration No.	72155-33

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

Use	Insecticide
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.**

All Emergencies, 24hr/ 7 days 1-800-334-7577 (24 hours/day)

**Product Information  
Telephone No.**

1-800-331-2867

**SDS Information or Request** [SDSINFO.BCS-NA@bayer.com](mailto:SDSINFO.BCS-NA@bayer.com)

**SECTION 2: HAZARDS IDENTIFICATION**

**Classification in accordance with regulation HCS 29CFR §1910.1200**

Acute toxicity (Inhalation): Category 4

Eye irritation : Category 2B



**Signal word:** Warning

**Hazard statements**

Harmful if inhaled.

Causes eye irritation.

**Precautionary statements**

Avoid breathing dust.

Use only outdoors or in a well-ventilated area.

Wash face, hands and any exposed skin thoroughly after handling.

IF INHALED:



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Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Call a POISON CENTER or doctor/ physician if you feel unwell.  
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**

This product contains an cholinesterase inhibitor.

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Hazardous Component Name</b>	<b>CAS-No.</b>	<b>Average % by Weight</b>
Trichlorfon	52-68-6	6.20

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**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, dermal absorption or ingestion of this product may result in systemic intoxication due to inhibition of the enzyme cholinesterase. Symptoms of poisoning may only appear several hours later.

**Inhalation**

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. Move to fresh air. Keep patient warm and at rest.

**Skin contact**

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.

**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**

Never give anything by mouth to an unconscious person. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Rinse out mouth and give water in small sips to drink. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**

This product causes reversible cholinesterase inhibition without long term effects., Repeated overexposure may cause more severe cholinesterase inhibition with more pronounced symptoms.



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The symptoms of cholinesterase inhibition include:

Nausea, Salivation, Lachrymation, Blurred vision, Constriction of pupils

**Indication of any immediate medical attention and special treatment needed**

**Risks** This product contains an anticholinesterase compound. Do not use if under medical advice not to work with such compounds.

**Treatment** The following antidotes are generally accepted: atropin and oximes.

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**SECTION 5: FIREFIGHTING MEASURES**

**Extinguishing media**

**Suitable** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable** None known.

**Special hazards arising from the substance or mixture** Dangerous gases are evolved in the event of a fire., In the event of fire the following may be released:, Chloral

**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** not applicable

**Autoignition temperature** no data available

**Lower explosion limit** not applicable

**Upper explosion limit** not applicable

**Explosivity** no data available

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Precautions** Avoid contact with spilled product or contaminated surfaces. Isolate hazard area. Avoid dust formation.

**Methods and materials for containment and cleaning up**

**Methods for cleaning up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Scrub contaminated area with detergent and bleach solution. Flush with water. Contaminated soil may have to be removed and disposed.

**Additional advice** Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

**SECTION 7: HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling** Handle and open container in a manner as to prevent spillage. Use only in area provided with appropriate exhaust ventilation. Avoid contact with skin, eyes and clothing.

**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 soiled clothing immediately and clean thoroughly before using again.

**Conditions for safe storage, including any incompatibilities**

**Requirements for storage areas and containers** Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Trichlorfon	52-68-6	0.28 mg/m <sup>3</sup> (TWA)		OES BCS*
Trichlorfon (Inhalable fraction.)	52-68-6	1 mg/m <sup>3</sup> (TWA)	02 2012	ACGIH
Trichlorfon	52-68-6	1 ug/m <sup>3</sup> (AN ESL)	07 2011	TX ESL
Trichlorfon	52-68-6	10 ug/m <sup>3</sup> (ST ESL)	07 2011	TX ESL



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

**Exposure controls**

**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.

<b>Hand protection</b>	Chemical resistant nitrile rubber gloves
<b>Eye protection</b>	Safety glasses with side-shields or Goggles
<b>Skin and body protection</b>	Long-sleeved shirt and long pants Shoes plus socks
<b>General protective measures</b>	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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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	tan
<b>Physical State</b>	granular
<b>Odor</b>	sweet
<b>Odour Threshold</b>	no data available
<b>pH</b>	ca. 4.6 (1 %)
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Bulk density</b>	30 - 35 lb/ft <sup>3</sup>
<b>Evaporation rate</b>	not applicable
<b>Boiling Point</b>	not applicable
<b>Melting / Freezing Point</b>	not applicable



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<b>Water solubility</b>	no data available
<b>Minimum Ignition Energy</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Viscosity</b>	not applicable
<b>Flash point</b>	not applicable
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Explosivity</b>	no data available

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**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity**

**Thermal decomposition** no data available

**Chemical stability** Stable under normal conditions.

**Possibility of hazardous reactions** No hazardous reactions when stored and handled according to prescribed instructions.

**Conditions to avoid** Exposure to moisture.

**Incompatible materials** Strong oxidizing agents, Bases

**Hazardous decomposition products** Chloral  
Dimethyl hydrogen phosphite  
Carbon monoxide  
Oxides of phosphorus

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**SECTION 11: TOXICOLOGICAL INFORMATION**



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**Exposure routes** Eye contact, Skin Absorption, Skin contact, Inhalation

**Immediate Effects**

**Eye** Moderate eye irritation.

**Ingestion** Harmful if swallowed.

**Inhalation** Harmful if inhaled.

**Information on toxicological effects**

**Acute oral toxicity** LD50 (male rat) > 5,100 mg/kg

LD50 (female rat) > 5,000 mg/kg

**Acute inhalation toxicity** LC50 (male/female combined rat) > 2 mg/l  
Exposure time: 4 h  
Determined in the form of dust.

LC50 (male/female combined rat) > 8 mg/l  
Exposure time: 1 h  
Determined in the form of dust.  
Extrapolated from the 4 hr LC50.

**Acute dermal toxicity** LD50 (male/female combined rat) > 5,000 mg/kg

**Skin irritation** No skin irritation (rabbit)

**Eye irritation** Mild eye irritation. (rabbit)

**Sensitisation** Non-sensitizing. (guinea pig)

**Assessment repeated dose toxicity**

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

**Assessment Mutagenicity**

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

**Assessment Carcinogenicity**

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

**ACGIH**

None.

**NTP**

None.

**IARC**

None.



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**OSHA**  
None.

**Assessment toxicity to reproduction**

Trichlorfon is not considered a reproductive toxicant at non-maternally toxic dose levels.

**Assessment developmental toxicity**

Trichlorfon did not cause developmental toxicity in rats and rabbits.

**Further information**

Only acute toxicity studies have been performed on the formulated product.

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**SECTION 12: ECOLOGICAL INFORMATION**

<b>Toxicity to fish</b>	LC50 (Leuciscus idus (Golden orfe)) 0.52 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient trichlorfon.  LC50 (Rainbow trout (Oncorhynchus mykiss)) 0.7 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient trichlorfon.
<b>Toxicity to aquatic invertebrates</b>	LC50 (Water flea (Daphnia magna)) 0.00096 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient trichlorfon.
<b>Toxicity to aquatic plants</b>	EC50 (Desmodemus subspicatus) 347 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient trichlorfon.
<b>Environmental precautions</b>	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. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Apply this product as specified on the label.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Product** 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.





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<b>Contaminated packaging</b>	Empty remaining contents. 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.
<b>RCRA Information</b>	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.

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**SECTION 14: TRANSPORT INFORMATION**

**49CFR**

UN number	<b>3077</b>
Class	9
Packaging group	III
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (TRICHLORFON)
RQ	Reportable Quantity is reached with 1,612 lb of product.

**IMDG**

UN number	<b>3077</b>
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (TRICHLORFON MIXTURE)

**IATA**

UN number	<b>3077</b>
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (TRICHLORFON MIXTURE )

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

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**SECTION 15: REGULATORY INFORMATION**

**EPA Registration No.** 72155-33

**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**

Trichlorfon 52-68-6 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**

Trichlorfon 52-68-6 CA, CT, NJ

**Canadian Regulations**

**Canadian Domestic Substance List**

Trichlorfon 52-68-6

**Environmental**

**CERCLA**

Trichlorfon 52-68-6 100 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)**

Trichlorfon 52-68-6

**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:** Causes eye irritation.  
Cholinesterase inhibitor  
Avoid contact with skin, eyes and clothing.  
Avoid breathing dust or spray mist.  
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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**SECTION 16: OTHER INFORMATION**

NFPA 704 (National Fire Protection Association):

Health - 2      Flammability - 1      Instability - 1      Others - none

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

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

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

Reason for Revision: The following sections have been revised: Section 5: Fire Fighting Measures.  
Section 9: Physical and Chemical Properties.

Revision Date: 09/12/2013

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