

Bayer Environmental Science
SAFETY DATA SHEET

**MERIT® 0.5 G INSECTICIDE**

Version 2 / USA
102000018463

1/11
Revision Date: 10/28/2013
Print Date: 10/29/2013

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

| | |
|----------------------|--------------------------|
| Trade name | MERIT® 0.5 G INSECTICIDE |
| Product code (UVP) | 79231857 |
| SDS Number | 102000018463 |
| EPA Registration No. | 432-1328 |

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 |
|-----------------------------------|--------------------------|

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. | Average % by Weight |
|--------------------------|-------------|---------------------|
| Imidacloprid | 138261-41-3 | 0.50 |

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

| | |
|-------------------|--|
| Suitable | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Unsuitable | None known. |



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| Special hazards arising from the substance or mixture | Hazardous decomposition products due to incomplete combustion. |
| 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. Avoid contact with spilled product or contaminated surfaces. Do not allow water to come into direct contact with the product. |
| Flash point | not applicable |
| Autoignition temperature | no data available |
| Lower explosion limit | not applicable |
| Upper explosion limit | not applicable |
| Explosivity | no data available |
| Dust explosion class | no data available |

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

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

Methods and materials for containment and cleaning up

Methods for cleaning up Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Do not allow to enter soil, waterways or waste water canal.

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



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| Advice on safe handling | Handle and open container in a manner as to prevent spillage. Avoid dust formation. Avoid contact with skin, eyes and clothing. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. |
| 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. Smoking, eating and drinking should be prohibited in the application area. 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. |
| 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 |
|---|-------------|----------------------|---------|----------|
| Imidacloprid | 138261-41-3 | 0.7 mg/m3 (TWA) | | OES BCS* |
| Imidacloprid | 138261-41-3 | 5 ug/m3 (AN ESL) | 07 2011 | TX ESL |
| Imidacloprid | 138261-41-3 | 50 ug/m3 (ST ESL) | 07 2011 | TX ESL |
| Calcium sulfate (Inhalable fraction.) | 13397-24-5 | 10 mg/m3 (TWA) | 02 2012 | ACGIH |
| Calcium sulfate (Total) | 13397-24-5 | 10 mg/m3 (REL) | 2010 | NIOSH |
| Calcium sulfate (Respirable.) | 13397-24-5 | 5 mg/m3 (REL) | 2010 | NIOSH |
| Calcium sulfate (Total dust.) | 13397-24-5 | 15 mg/m3 (PEL) | 02 2006 | OSHA Z1 |
| Calcium sulfate (Respirable fraction.) | 13397-24-5 | 5 mg/m3 (PEL) | 02 2006 | OSHA Z1 |
| Calcium sulfate (Total dust.) | 13397-24-5 | 15 mg/m3 (TWA) | 1989 | OSHA Z1A |
| Calcium sulfate (Respirable fraction.) | 13397-24-5 | 5 mg/m3 (TWA) | 1989 | OSHA Z1A |
| Calcium sulfate | 13397-24-5 | 5 ug/m3 (AN ESL) | 03 2012 | TX ESL |
| Calcium sulfate | 13397-24-5 | 50 ug/m3 (ST ESL) | 03 2012 | 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.

| | |
|------------------------------------|--|
| 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 | Tightly fitting safety goggles |
| 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 | light tan to brown |
| Physical State | granular |
| Odor | characteristic |
| Odour Threshold | no data available |
| pH | no data available |
| Vapor Pressure | no data available |
| Vapor Density (Air = 1) | no data available |
| Specific Gravity | no data available |
| Bulk density | 56 - 64 lb/ft ³ |
| Evaporation rate | not applicable |
| Boiling Point | not applicable |



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| | |
|---|-------------------|
| Melting / Freezing Point | not applicable |
| Water solubility | no data available |
| Minimum Ignition Energy | no data available |
| Decomposition temperature | no data available |
| Partition coefficient: n-octanol/water | no data available |
| Viscosity | not applicable |
| Flash point | not applicable |
| Autoignition temperature | no data available |
| Lower explosion limit | not applicable |
| Upper explosion limit | not applicable |
| Explosivity | no data available |
| Dust explosion class | no data available |

SECTION 10: STABILITY AND REACTIVITY

| | |
|---|--|
| Reactivity | |
| Thermal decomposition | no data available |
| Chemical stability | Stable under recommended storage conditions. |
| Possibility of hazardous reactions | No hazardous reactions when stored and handled according to prescribed instructions. |
| Conditions to avoid | Elevated temperatures |
| Incompatible materials | Aluminium, Diazomethane |
| Hazardous decomposition products | Thermal decomposition can lead to release of: Sulphur oxides Calcium oxides |



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SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Eye contact, Skin Absorption, Inhalation, Ingestion

Immediate Effects

Eye Causes eye irritation.

Skin Harmful if absorbed through skin.

Ingestion Harmful if swallowed.

Information on toxicological effects

Acute oral toxicity LD50 (male/female combined rat) > 4,820 mg/kg

Acute inhalation toxicity LC50 (male/female combined rat) > 5.09 mg/l
Exposure time: 4 h
Determined in the form of dust.
(actual)

LC50 (male/female combined rat) > 20 mg/l
Exposure time: 1 h
Determined in the form of dust.
Extrapolated from the 4 hr LC50.
(actual)

Acute dermal toxicity LD50 (male/female combined rabbit) > 2,000 mg/kg

Skin irritation No skin irritation (rabbit)

Eye irritation Mild eye irritation. (rabbit)

Sensitisation Non-sensitizing. (guinea pig)

Assessment repeated dose toxicity

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

Assessment Mutagenicity

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

Assessment Carcinogenicity

Imidacloprid 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

Imidacloprid caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Imidacloprid is related to parental toxicity.

Assessment developmental toxicity

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

Further information

Acute toxicity studies have been bridged from a similar formulation(s).
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

| | |
|--|---|
| Toxicity to fish | LC50 (Rainbow trout (<i>Oncorhynchus mykiss</i>)) 211 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient imidacloprid. |
| Toxicity to aquatic invertebrates | EC50 (Water flea (<i>Daphnia magna</i>)) 85 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient imidacloprid. LC50 (<i>Chironomus riparius</i> (non-biting midge)) 0.0552 mg/l Exposure time: 24 h The value mentioned relates to the active ingredient imidacloprid. |
| Toxicity to aquatic plants | EC50 (<i>Desmodium subspicatus</i>) > 10 mg/l Growth rate The value mentioned relates to the active ingredient imidacloprid. |
| Toxicity to bacteria | EC50 (Activated sludge) > 10,000 mg/l The value mentioned relates to the active ingredient imidacloprid. |
| Biodegradability | Imidacloprid: not rapidly biodegradable |
| Koc | Imidacloprid: Koc:225 |
| Bioaccumulation | Imidacloprid: Does not bioaccumulate. |
| Mobility in soil | Imidacloprid: Moderately mobile in soils |



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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.
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.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product Do not contaminate water, food, or feed by disposal.
Dispose in accordance with all local, state/provincial and federal regulations.
Follow advice on product label and/or leaflet.

Contaminated packaging Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities.
If burned, stay out of smoke.
Follow advice on product label and/or leaflet.

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.

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-1328

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

None.

US States Regulatory Reporting

CA Prop65

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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

None.

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:

Signal word:

Caution!

Hazard statements:

Harmful if swallowed or absorbed through skin.
Causes eye irritation.
Avoid contact with skin, eyes and clothing.
Wash thoroughly with soap and water after handling.

SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 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: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

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