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 supplier

Supplier                 Bayer Environmental Science
                         2 T.W. Alexander Drive
                         Research Triangle PK, NC 27709
                         USA

Responsible Department   Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

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

Product Information     1-800-331-2867
Telephone Number

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Concentration % by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imidacloprid</td>
<td>138261-41-3</td>
<td>0.50</td>
</tr>
</tbody>
</table>
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
High volume water jet

Special hazards arising from the substance or mixture

Hazardous decomposition products due to incomplete combustion

Advice for firefighters

Special protective equipment for firefighters
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.
SAFETY DATA SHEET

MERIT® 0.5 G INSECTICIDE
Version 3.0 / USA
102000018463
3/9

Revision Date: 06/21/2019
Print Date: 06/21/2019

Flash point Not applicable
Auto-ignition temperature No data available
Lower explosion limit Not applicable
Upper explosion limit Not applicable
Explosivity 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 If the product is accidentally spilled, 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
Advice on safe handling Handle and open container in a manner as to prevent spillage. Avoid dust formation. Use only in area provided with appropriate 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

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imidacloprid</td>
<td>138261-41-3</td>
<td>0.7 mg/m³ (TWA)</td>
<td></td>
<td>OES BCS*</td>
</tr>
</tbody>
</table>

*OES BCS: Internal Bayer AG, Crop Science Division "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/ft³
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting / Freezing Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Minimum Ignition Energy</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosivity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**SECTION 10: STABILITY AND REACTIVITY**

<table>
<thead>
<tr>
<th>Reactivity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under recommended storage conditions.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>No hazardous reactions when stored and handled according to prescribed instructions.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Elevated temperatures</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Aluminium, Diazomethane</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Thermal decomposition can lead to release of: Sulphur oxides Calcium oxides</td>
</tr>
</tbody>
</table>

**SECTION 11: TOXICOLOGICAL INFORMATION**

<table>
<thead>
<tr>
<th>Exposure routes</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate Effects</td>
<td>Eye: Mild eye irritation.</td>
</tr>
<tr>
<td>Eye</td>
<td>Skin: Harmful if absorbed through skin.</td>
</tr>
</tbody>
</table>
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)

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

Skin corrosion/irritation
No skin irritation (Rabbit)

Serious eye damage/eye irritation
Mild eye irritation. (Rabbit)

Respiratory or skin sensitisation
Skin: Non-sensitizing. (Guinea pig)

Assessment STOT Specific target organ toxicity – repeated exposure
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.

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 (Oncorhynchus mykiss (rainbow trout)) 211 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient imidacloprid.

Toxicity to aquatic invertebrates
EC50 (Daphnia magna (Water flea)) 85 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient imidacloprid.

LC50 (Chironomus riparius (non-biting midge)) 0.0552 mg/l
Exposure time: 24 h
The value mentioned relates to the active ingredient imidacloprid.

Chronic toxicity to aquatic invertebrates
EC10 (Chironomus riparius (non-biting midge)): 2.09 µg/l
Exposure time: 28 d
The value mentioned relates to the active ingredient imidacloprid.

Toxicity to aquatic plants
EC50 (Desmodesmus subspicatus (green algae)) > 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

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

SECTION 15: REGULATORY INFORMATION

EPA Registration No.: 432-1328
US Federal Regulations
TSCA list
Calcium lignosulfonate 8061-52-7
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D) Not applicable.
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
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
Calcium sulfate dihydrate (gypsum) 10101-41-4 MN, RI
Sodium aluminium silicate 1344-00-9 CA, MN

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.

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**SECTION 16: OTHER INFORMATION**

**Abbreviations and acronyms**

- **49CFR** Code of Federal Regulations, Title 49
- **ACGIH** US. ACGIH Threshold Limit Values
- **ATE** Acute toxicity estimate
- **CAS-Nr.** Chemical Abstracts Service number
- **CERCLA** Comprehensive Environmental Response, Compensation, and Liability Act
- **EINECS** European inventory of existing commercial substances
- **ELINCS** European list of notified chemical substances
- **IARC** International Agency for Research on Cancer
- **IATA** International Air Transport Association
- **IMDG** International Maritime Dangerous Goods
- **N.O.S.** Not otherwise specified
- **NTP** US. National Toxicology Program (NTP) Report on Carcinogens
- **OECD** Organization for Economic Co-operation and Development
- **TDG** Transportation of Dangerous Goods
- **TWA** Time weighted average
- **UN** United Nations
- **WHO** World health organisation

**NFPA 704 (National Fire Protection Association):**

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


- 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 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 8: Exposure Controls / Personal Protection. Section 14: Transport Information. Reviewed and updated for general editorial purposes.

**Revision Date:** 06/21/2019

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