

SAFETY DATA SHEET

DOW AGROSCIENCES AUSTRALIA LIMITED

Product name: SENTRICON™ IG Termiticide Rod

Issue Date: 16.08.2016

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DOW AGROSCIENCES AUSTRALIA LIMITED encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

SECTION 1: IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product name: SENTRICON™ IG Termiticide Rod

Recommended use of the chemical and restrictions on use

Identified uses: End use insecticide product

COMPANY IDENTIFICATION

DOW AGROSCIENCES AUSTRALIA LIMITED
LVL 5 20 RODBOROUGH RD
FRENCHS FOREST NSW 2086
AUSTRALIA

Customer Information Number:

1800-700-096

auscustomerservice@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 613-9663-2130

Local Emergency Contact: 1800-033-882

For advice, contact a doctor (at once) or the Australian Poisons Information Centre: 131 126

Transport Emergency Only Dial 000

SECTION 2: HAZARD(S) IDENTIFICATION

GHS Classification

Acute aquatic toxicity - Category 1

Chronic aquatic toxicity - Category 1

GHS label elements

Hazard pictograms



Signal word: **WARNING!**

Hazard statements

Very toxic to aquatic life with long lasting effects.

Precautionary statements**Prevention**

Avoid release to the environment.

Response

Collect spillage.

Disposal

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

No data available

SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS, IN ACCORDANCE WITH SCHEDULE 8

This product is a mixture.

Component	CASRN	Concentration
Hexaflumuron	86479-06-3	0.5%
Cellulose	9004-34-6	> 60.0 - < 70.0 %
Octadecanoic acid, calcium salt	1592-23-0	< 5.0 %
Balance	Not available	<= 29.9 %

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice: If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

Skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Eye contact: Flush eyes with plenty of water; remove contact lenses after the first 1-2 minutes then continue flushing for several minutes. Only mechanical effects expected. If effects occur, consult a physician, preferably an ophthalmologist. Get medical attention immediately.

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5: FIREFIGHTING MEASURES

Hazchem Code

2X

Suitable extinguishing media: This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire.

Unsuitable extinguishing media: No data available

Special hazards arising from the substance or mixture

Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen fluoride. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: None known.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. This material does not burn. Fight fire for other material that is burning.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

SECTION 7: HANDLING AND STORAGE, INCLUDING HOW THE CHEMICAL MAY BE SAFELY USED

Precautions for safe handling: Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing dust or mist. Wash thoroughly after handling. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in a dry place. Store in original container. Do not store near food, foodstuffs, drugs or potable water supplies.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Hexaflumuron	Dow IHG	TWA	0.05 mg/m ³
Cellulose	ACGIH	TWA	10 mg/m ³
	AU OEL	TWA	10 mg/m ³
Octadecanoic acid, calcium salt	ACGIH	TWA	10 mg/m ³
	AU OEL	TWA	10 mg/m ³

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under standard AS/NZS 2161.10: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Polyvinyl chloride ("PVC" or "vinyl"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). When

prolonged or frequently repeated contact may occur, a glove is recommended to prevent contact with the solid material. **NOTICE:** The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Wear clean, body-covering clothing.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, in dusty atmospheres, use an approved particulate respirator.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Other Information: Selection and use of personal protective equipment should be in accordance with the recommendations in one or more of the relevant Australian/New Zealand Standards, including:

AS/NZS 1336: Eye and face protection – Guidelines.

AS/NZS 1337: Personal eye protection - Eye and face protectors for occupational applications.

AS/NZS 1715: Selection, use and maintenance of respiratory protective equipment.

AS/NZS 2161: Occupational protective gloves.

AS/NZS 2210: Occupational protective footwear.

AS/NZS 4501: Occupational protective clothing Set

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Solid.
Color	White
Odor	Mild
Odor Threshold	No data available
pH	6.27 <i>pH Electrode</i>
Melting point/range	No test data available
Freezing point	Not applicable
Boiling point (760 mmHg)	Not applicable
Flash point	closed cup Not applicable
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	No data available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	No test data available
Relative Vapor Density (air = 1)	No test data available
Relative Density (water = 1)	Not applicable

Water solubility	No test data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	Not applicable
Decomposition temperature	No test data available
Kinematic Viscosity	Not applicable to solids
Explosive properties	No data available
Oxidizing properties	No significant increase (>5C) in temperature.
Bulk density	0.67 g/cm ³ <i>Loose Volumetric</i> 0.73 g/cm ³ <i>Tapped Volumetric</i>
Molecular weight	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Thermally stable at recommended temperatures and pressures.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Exposure to elevated temperatures can cause product to decompose.

Incompatible materials: Avoid contact with oxidizing materials. Avoid contact with: Strong bases.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Hazardous decomposition products formed under fire conditions. Carbon dioxide. Carbon monoxide. Hydrogen chloride. Hydrogen fluoride.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined. Based on information for component(s):

LD50, Rat, > 5,000 mg/kg Estimated.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined. Based on information for component(s):

LD50, Rat, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

No adverse effects are anticipated from single exposure to dust. Based on the available data, narcotic effects were not observed. Based on the available data, respiratory irritation was not observed.

As product: The LC50 has not been determined.

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

Solid or dust may cause irritation or corneal injury due to mechanical action.

Sensitization

Based on information for component(s):

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

For the active ingredient(s):

In animals, effects have been reported on the following organs:

Blood.

Liver.

Spleen.

May cause methemoglobinemia, thereby impairing the blood's ability to transport oxygen.

Carcinogenicity

Contains component(s) which did not cause cancer in laboratory animals.

Teratogenicity

Contains component(s) which did not cause birth defects or any other fetal effects in lab animals.

Reproductive toxicity

For the active ingredient(s): In animal studies, did not interfere with reproduction.

For the major component(s): In animal studies, cellulose has been shown to interfere with fertility and reproduction as a result of nutritional deficiencies associated with extremely high dietary concentrations of cellulose.

Mutagenicity

For the active ingredient(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:**Hexaflumuron****Acute inhalation toxicity**

No adverse effects are anticipated from single exposure to dust. Based on the available data, narcotic effects were not observed. Based on the available data, respiratory irritation was not observed.

LC50, Rat, male and female, 4 Hour, dust/mist, > 7.0 mg/l

Cellulose**Acute inhalation toxicity**

The LC50 has not been determined.

Octadecanoic acid, calcium salt**Acute inhalation toxicity**

Dust may cause irritation to upper respiratory tract (nose and throat).

The LC50 has not been determined.

Balance**Acute inhalation toxicity**

The LC50 has not been determined.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Ecotoxicity**Hexaflumuron****Acute toxicity to fish**

Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 Hour, > 0.5 mg/l

LC50, *Lepomis macrochirus* (Bluegill sunfish), 96 Hour, > 100 mg/l

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), 48 Hour, 0.000111 mg/l

Acute toxicity to algae/aquatic plants

ErC50, *Pseudokirchneriella subcapitata* (green algae), 96 Hour, > 3.2 mg/l

Toxicity to bacteria

EC50, activated sludge, 3 Hour, > 100 mg/l, OECD 209 Test

Chronic toxicity to aquatic invertebrates

NOEC, *Daphnia magna* (Water flea), 21 d, 0.000001 mg/l

Toxicity to Above Ground Organisms

Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

Material is slightly toxic to birds on a dietary basis (LC50 between 1001 and 5000 ppm).
oral LD50, *Colinus virginianus* (Bobwhite quail), > 2000mg/kg bodyweight.
dietary LC50, *Colinus virginianus* (Bobwhite quail), 5 d, 4786mg/kg diet.
contact LD50, *Apis mellifera* (bees), 48 Hour, > 100micrograms/bee
oral LD50, *Apis mellifera* (bees), 48 Hour, > 100micrograms/bee

Toxicity to soil-dwelling organisms

LC50, *Eisenia fetida* (earthworms), 14 d, 880 mg/kg

Cellulose**Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis
(LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Fish, 96 Hour, > 100 mg/l

Acute toxicity to algae/aquatic plants

EC50, Algae, 96 Hour, Growth rate inhibition, > 100 mg/l

Toxicity to bacteria

LC50, Bacteria, > 100 mg/l

Octadecanoic acid, calcium salt**Acute toxicity to fish**

The LC50 value is above the water solubility.
The EC50 value is above the water solubility.
LC50, *Oryzias latipes* (Japanese medaka), 96 Hour, estimated > 100 mg/l, OECD Test
Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), 48 Hour, estimated > 100 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

EyC50, *Pseudokirchneriella subcapitata* (algae), 72 Hour, Cell yield inhibition, estimated > 100
mg/l, OECD Test Guideline 201
ErC50, *Pseudokirchneriella subcapitata* (algae), 72 Hour, Growth rate, estimated > 100 mg/l,
OECD Test Guideline 201

Balance**Acute toxicity to fish**

No relevant data found.

Persistence and degradability**Hexaflumuron**

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready
biodegradability.

10-day Window: Pass

Biodegradation: 76 %

Exposure time: 28 d

Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 4.72 mg/mg

Stability in Water (1/2-life)

, half-life, 22 d, pH 7

Cellulose

Biodegradability: Biodegradation rate may increase in soil and/or water with acclimation.

Theoretical Oxygen Demand: 1.18 mg/mg

Octadecanoic acid, calcium salt

Biodegradability: Material is expected to be readily biodegradable.

Theoretical Oxygen Demand: 2.74 mg/mg

Balance

Biodegradability: No relevant data found.

Bioaccumulative potential

Hexaflumuron

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

Partition coefficient: n-octanol/water(log Pow): 5.68 Estimated.

Bioconcentration factor (BCF): 3,800 - 5,600 Fish 28 d Measured

Cellulose

Bioaccumulation: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

Octadecanoic acid, calcium salt

Bioaccumulation: No data available for this product.

Balance

Bioaccumulation: No relevant data found.

Mobility in Soil

Hexaflumuron

Potential for mobility in soil is slight (Koc between 2000 and 5000).

Partition coefficient (Koc): 3096 - 41170 Estimated.

Cellulose

No data available.

Octadecanoic acid, calcium salt

No data available.

Balance

No relevant data found.

Results of PBT and vPvB assessment

Hexaflumuron

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Cellulose

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Balance

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Other adverse effects

Hexaflumuron

No relevant data found.

Cellulose

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Octadecanoic acid, calcium salt

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Balance

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

This product when disposed of in its unused and uncontaminated state should be treated as a hazardous waste.

SECTION 14: TRANSPORT INFORMATION

ADG

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Hexaflumuron)
UN number	UN 3077
Class	9
Packing group	III
Marine pollutant	Hexaflumuron

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Hexaflumuron)
UN number	UN 3077
Class	9
Packing group	III
Marine pollutant	Hexaflumuron

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Environmentally hazardous substance, solid, n.o.s.(Hexaflumuron)
UN number	UN 3077
Class	9
Packing group	III

Hazchem Code

2X

Further information:

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the Australian Code for the Transport of Dangerous Goods (ADG). This applies when transported by road or rail in packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs per ADG Special Provision AU01.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

Poison Schedule

5

APVMA Approval Number: 80120

Australia Inventory of Chemical Substances (AICS)

The product is used in a biocide/pesticide application and is subject to the applicable regulation. It contains a component exempt from inventory listing requirements. Because an intentional component of the product is not on the inventory, the product may only be used in the exempt application.

SECTION 16: ANY OTHER RELEVANT INFORMATION

Revision

Identification Number: 101271436 / A143 / Issue Date: 16.08.2016 / Version: 1.1

DAS Code: GF-2060

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
AU OEL	Australia. Workplace Exposure Standards for Airborne Contaminants.
Dow IHG	Dow Industrial Hygiene Guideline
TWA	Exposure standard - time weighted average

DOW AGROSCIENCES AUSTRALIA LIMITED urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.