



# SAFETY DATA SHEET

STARKLE 200 SG INSECTICIDE

Date of Issue: November 2016

## 1. IDENTIFICATION

**Product Identifier:** **Starkle 200 SG Insecticide**

**Other Means of Identification:** Dinotefuran 20% SG

**Recommended Use of the Chemical and Restrictions on Use:** **Insecticide**

**Details of Manufacturer or Importer:** AgNova Technologies Pty Ltd  
Suite 3/935 Station Street  
Box Hill North Vic 3129 Australia  
(03) 9899 8100  
www.agnova.com.au

**Emergency Telephone Number:** 1800 033 111 (24 hrs)  
Poison Information Centre 13 11 26

## 2. HAZARD(S) IDENTIFICATION

**GHS Classification:** Category 3 Skin Irritant  
Warning – causes mild skin irritation

Note- category 3 is not currently adopted by Safe Work Australia as part of its skin irritation classification framework.

**ADG Classification:** Classified as “Dangerous Goods” for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail see section 14.

**SUSMP Classification:** Schedule 5  
(Standard for the Uniform Scheduling of Medicines and Poisons)

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration
Dinotefuran* <sup>1</sup>	165252-70-0	20 %
Inert Ingredients* <sup>2</sup>	-	80 %

\*<sup>1</sup> (RS)-1-methyl-2-nitro-3-(tetrahydro-3-furylmethyl) guanidine

\*<sup>2</sup> Contains Amorphous silica (<3%)



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### 4. FIRST AID MEASURES

**If poisoning occurs, immediately contact a doctor or Poisons Information Centre (Phone 13 11 26), and follow the advice given. Show this Safety Data Sheet to a doctor.**

#### Description of Necessary First Aid Measures:

**Ingestion:** Rinse mouth with water and give 1 or 2 glasses of water or milk. Get medical attention immediately. Induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious or convulsing person.

**Inhalation:** If you feel unwell, remove to fresh air immediately. Get medical attention if cough or other symptoms develop.

**Skin contact:** Immediately remove contaminated clothing and shoes. Flush skin with large amounts of water, clean off with soap and water. Get medical attention if symptoms develop.

**Eye contact:** Immediately flush with plenty of water. Check for and remove contact lenses if easily possible. Get medical attention if irritation persists.

**First Aid Facilities:** Provide washing facilities in the workplace.

**Symptoms Caused by Exposure, Both Acute and Delayed:** Not available

**Medical Attention and Special Treatment:** Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:** Water jet, water fog, foam, dry chemical, CO<sub>2</sub>.

**Specific Hazards Arising from the** Emits toxic fumes in fire condition. This product is not expected to burn or explode in normal conditions, but will burn violently if involved in fire. Dinotefuran is self-reactive substance under high



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**Chemical:** temperatures. Exposure to heat may promote violent decomposition. Hazardous combustion products: nitrogen oxides.

**Special Protective Equipment and Precautions for Fire Fighters:** Keep unnecessary and unprotected personnel away. Shut off supply if possible. Remove containers to safe place if possible. Keep containers cool by spraying with water. Fight fire from an upwind position. Respiratory and eye protection required for fire-fighting personnel. Full protective equipment and self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures:** Keep unnecessary and unprotected personnel away. Wear appropriate personal protective equipment as specified in Section 8. Remove all sources of ignition. Stop leak if possible without personal risk.

**Environmental Precautions:** Do not let this product enter the environment.

**Methods and Materials for Containment and Cleaning Up:** Vacuum or sweep up the spilled solid and place in a disposal container.

### 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** *Technical Measures:*  
Use only with adequate ventilation.  
Where there may be potential of fire or explosion hazard, use explosion-proof electrical equipment and take precautions against build-up of electrostatic charges.  
Wear appropriate personal protective equipment.  
Provide hand and eye wash station near work area.

*Handling Precautions*

Use only under local exhaust or general ventilation.  
Do not breathe dust.  
Avoid contact with eyes, skin, and clothing.  
Wash hands thoroughly after use.  
Do not eat, drink or smoke when using this product.



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Keep away from heat, sparks, open flames and hot surfaces.

*Other Precautions:*

Use explosion-proof equipment.

Take precautions against build-up of electrostatic charges.

**Conditions for Safe Storage, including any Incompatibilities:**

Store in a cool, dark and well-ventilated area.

Keep container tightly closed and sealed until ready for use.

Avoid all possible sources of ignition (spark or flame).

Packaging Material: Polyethylene lined bags or HDPE containers.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Control Measures:**

Exposure limits of this product are not established.

**Measures:**

[Amorphous silica]

Australia, OELs: 10 mg/m<sup>3</sup>

ACGIH-TLV: 10 mg/m<sup>3</sup> (as dust)

OSHA-PEL: 80/(%SiO<sub>2</sub>) mg/m<sup>3</sup> (TWA)

**Biological Monitoring:**

No data available

**Control Banding:**

No data available

**Engineering Controls:**

Provide general ventilation. The use of closed system or local exhaust ventilation is recommended. Provide safety shower and eye wash station near work area.

**Individual Protection Measures, for example, Personal Protective Equipment (PPE):**

Respiratory Protection: Dust respirator.

Hand Protection: Protective gloves.

Eye Protection: Safety glasses or goggles.

Protective Clothing: Safety helmet, protective clothing, safety shoes.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** White granule

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<b>Odour:</b>	Faint characteristic odour
<b>pH:</b>	Not available
<b>Boiling Point:</b>	Not available
<b>Solubility:</b>	Not available
<b>Bulk Density:</b>	0.50-0.70 g/mL
<b>pH:</b>	Not available
<b>Flash Point:</b>	Not available
<b>Explosive limits:</b>	Minimum explosive concentration; 130 mg/L at 22°C, humidity 58%

**10. STABILITY AND REACTIVITY**

<b>Chemical Stability:</b>	Stable under ordinary conditions of use and storage.
<b>Possibility of Hazardous Reactions:</b>	Will not occur.
<b>Conditions to Avoid:</b>	Heat, sources of ignition.
<b>Incompatible Materials:</b>	Strong oxidizers.
<b>Hazardous Decomposition Products:</b>	Nitrogen oxides in fire.

**11. TOXICOLOGICAL INFORMATION**

<b>Acute Toxicity:</b>	
<b>Oral Toxicity:</b>	LD <sub>50</sub> Rat > 2000 mg/kg
<b>Dermal Toxicity:</b>	LD <sub>50</sub> Rat >2000 mg/kg
<b>Inhalation Toxicity:</b>	LC <sub>50</sub> Rat (4 h) >2.943 mg/L
<b>Skin Corrosion/Irritation:</b>	Slight irritant (rabbit).
<b>Serious Eye Damage/Irritation:</b>	Mild irritant (rabbit).
<b>Respiratory or Skin Sensitisation:</b>	Not a sensitizer (guinea pig).



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**Germ Cell Mutagenicity:** No data available

**Carcinogenicity:** No data available

**Reproductive Toxicity:** No data available

**Specific Target Organ Toxicity (STOT) – Single Exposure:** No data available

**Specific Target Organ Toxicity (STOT) – Repeated Exposure:** No data available

**Aspiration Hazard:** No data available

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** Highly toxic to bees and will kill bees foraging in a treated crop or in hives which are accidentally sprayed or contaminated by spray drift.

*Toxicity to Fish:* LC<sub>50</sub> (96 h) rainbow trout 108 mg/L  
LC<sub>50</sub> (96 h) carp >100 mg/L

*Toxicity to Aquatic Invertebrates:* EC<sub>50</sub> (48 h) *Daphnia magna* 199 mg/L

*Toxicity to Aquatic Plants:* ErC<sub>50</sub> (0-72 hr) algae (*Pseudokirchneriella subcapitata*) > 100 mg/L

**Persistence and Degradability:** No data available

**Bioaccumulative Potential:** No data available

**Mobility in Soil:** No data available

### 13. DISPOSAL CONSIDERATIONS

**Disposal Containers and** Triple rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling,



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**Methods:** replace cap and return clean containers to recycler or designated collection point.  
If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available bury the containers below 500mm in a disposal pit specifically set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

### 14. TRANSPORT INFORMATION

**Transport Classification:** **Road and Rail Transport:** Not classified as a dangerous goods under the ADG7 when being transported in IBCs or other receptacles <500 L (kg), (Special Provision AU01).  
**Marine and Air:** Classified as Dangerous Goods for transport by sea and air according to the criteria of the UN Model Regulations for Transport of Dangerous Goods 13<sup>th</sup> Edition

**UN Number:** 3077

**Proper Shipping Name or Technical Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, N.O.S. (Dinotefuran mixture)

**Transport Hazard Class:** 9

**Packing Group:** III

**Environmental Hazards for Transport Purposes:** Marine Pollutant

**Special Precautions for User:** none

**Hazchem Code:** 2X

### 15. REGULATORY INFORMATION

**APVMA** Registered according to the Agricultural and Veterinary Chemicals Act 1988.  
APVMA Product Number: 69398/60731

**SUSMP** Schedule 5



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### 16. OTHER INFORMATION

**Abbreviations and Acronyms:** ACGIH – American Conference of Governmental Industrial Hygienists, Inc.  
ADG7 – Australian Dangerous Goods Code for Road and Rail Transport, 7<sup>th</sup> Edition  
APVMA – Australian Pesticides and Veterinary Medicines Authority  
GHS - Globally Harmonized System of Classification and Labelling of Chemicals  
OEL – Occupational Exposure Limit  
OSHA – Occupational Safety & Health Administration (USA)  
PEL – Permissible Exposure Limit  
SUSMP – Standard for the Uniform Scheduling of Medicines and Poisons  
TLV – Threshold Limit Value  
TWA – Time Weighted Average

**Date of Preparation or Revision:** November 2016

**Reason for Revision:** To comply with GHS.

**Data Sources:** Manufacturer product safety data and published data

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

The opinions expressed herein are those of qualified experts with the manufacturer. Since the use of this information and of these opinions and the conditions of use of this product are not within the control of AgNova Technologies Pty Ltd, it is the user's obligation to determine the conditions of safe use of the product.

END OF SDS