

SAFETY DATA SHEET

Date: 20 December 2019
Serial No.: AGG10001C3b_02

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME **Dinotefuran 20SG**

SYNONYM Starkle SG

USE OF PRODUCT Insecticide

COMPANY IDENTIFICATION

Mitsui Chemicals Agro, Inc.

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EMERGENCY TELEPHONE NUMBER

Mitsui Chemicals Agro, Inc. +81-3-5290-2810 (Office hours only; Japan standard time: JST)

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Aquatic hazard

Chronic

Category 1

GHS LABEL ELEMENTS

Hazard Pictograms



Signal Word

Warning

Hazard Statements

H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention

P273: Avoid release to the environment.

Response

P391: Collect spillage.

Disposal

P501: Dispose of contents or container in accordance with local, regional, national and international regulations.

OTHER HAZARDS

Toxic to bees and silkworms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	%	CAS No.
Dinotefuran (*)	20	165252-70-0
Others	80	-

* *N*-methyl-*N*'-nitro-*N*'-((tetrahydro-3-furyl)methyl)guanidine
(*RS*)-1-methyl-2-nitro-3-(tetrahydro-3-furylmethyl)guanidine

Occupational exposure limits are, if available, listed in Section 8.

4. FIRST AID MEASURES

INGESTION

Rinse mouth with water. 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, move to fresh air immediately. Get medical attention if cough or other symptoms develop. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

SKIN CONTACT

Immediately remove contaminated clothing and shoes. Flush skin and clean off with large amounts of water. Get medical attention if symptoms develop.

EYE CONTACT

Immediately flush with plenty of water. Part eyelids with fingers to assure complete flushing. Check for and remove contact lenses if easily possible. Get medical attention if irritation persists.

5. FIREFIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA

Foam, dry chemical, CO₂, water, sand.

GENERAL HAZARD

Emits toxic fumes in fire condition. This product is not expected to burn or explode in normal conditions, but may burn violently if involved in fire. Dinotefuran is self-reactive under high temperature. Exposure to heat may promote violent decomposition.

HAZARDOUS COMBUSTION PRODUCTS

Nitrogen oxides.

FIREFIGHTING INSTRUCTIONS

Keep unnecessary and unprotected personnel away. Shut off supply if possible. Remove containers to safe place if possible. Keep containers and surroundings cool by spraying with water. Fight fire from an upwind position.

FIREFIGHTING EQUIPMENT

Respiratory and eye protection is required for firefighting 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 AND EMERGENCY PROCEDURES

Warn and evacuate in the neighborhood as necessary. 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 MATERIAL FOR CONTAINMENT AND CLEANING UP

Scoop or sweep up the spilled product and place it in a disposal container. Use appropriate tools. Avoid dispersal of dust in the air.

7. HANDLING AND STORAGE

HANDLING

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

Precautions

Handle with care. Do not breathe dust. Avoid contact with eyes, skin and clothing.

Take precautionary measures against static discharge.

Advice on general occupational hygiene

Provide hand and eye wash station near work area. Wash hands thoroughly after use. Take off contaminated protective equipment before entering rest areas. Do not eat, drink or smoke when using this product.

STORAGE

Storage Conditions

Keep away from heat, flame and all sources of ignition. Store in a cool, dark and well-ventilated area. Keep container tightly closed and sealed until ready for use.

Do not contaminate other pesticides, fertilizers, water, foodstuffs or feed by storage and disposal.

Packaging Materials

Fiber drums.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT VALUES

[Particulates (Not otherwise specified) (no more than 1% crystalline silica)]

ACGIH-TLV (US): 10 mg/m³, 8 Hr. TWA as inhalable dust
3 mg/m³, 8 Hr. TWA as respirable dust

ENGINEERING CONTROLS

Provide general ventilation. Using closed system or local exhaust ventilation is recommended.

Provide safety shower and eye wash station near work area.

PERSONAL PROTECTION

Eye/face protection: Safety glasses, goggles, face shield.

Skin Protection:

Hand protection: Chemical resistant gloves.

Body Protection: Safety helmet, protective clothing, safety boots.

Respiratory protection: Dust respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White granule.

Odor: Faint characteristic odor.

pH: Not available

Melting point: Not available

Flash point: Not available

Explosive properties: Not explosive

Bulk density: 0.50-0.70 g/mL

Solubilities: Not available

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY

Stable under normal conditions.

HAZARDOUS REACTIONS

No hazardous reaction when handled and stored according to provisions.

CONDITIONS TO AVOID

Exposure to heat, ignition sources.

INCOMPATIBLE MATERIALS

Not available.

HAZARDOUS DECOMPOSITION PRODUCTS

Nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Oral:	Rat (female)	LD ₅₀ >5000 mg/kg	[Not classified]
Dermal:	Rat	LD ₅₀ >5000 mg/kg	[Not classified]
Inhalation:	Rat	LC ₅₀ >5.2 mg/L/4hr	[Not classified]

Skin Corrosion/Irritation

Rabbit	Slight irritant	[Not classified]
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Serious Eye Damage/Irritation

Rabbit	Mild irritant	[Not classified]
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Respiratory Sensitization	Not available	[Classification not possible]
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Skin Sensitization

Guinea pig	Not a skin sensitizer.	[Not classified]
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Germ Cell Mutagenicity	Not available	[Classification not possible]
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Carcinogenicity	Not available	[Classification not possible]
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Reproductive Toxicity	Not available	[Classification not possible]
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Specific Target Organ Toxicity

Single Exposure:	Not available	[Classification not possible]
Repeated Exposure:	Not available	[Classification not possible]

Aspiration Hazard	Not available	[Classification not possible]
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12. ECOLOGICAL INFORMATION**HAZARDOUS TO THE AQUATIC ENVIRONMENT**

Acute: Ecotoxicity data do not meet the criteria for classification.	[Not classified]
Chronic: Contains Dinotefuran. (Category 1, M=10)	[Category 1]

ECOTOXICITY:

Carp	LC ₅₀ (96hr)	399 mg/L
<i>Daphnia magna</i>	EC ₅₀ (48hr)	196 mg/L
Algae (<i>Pseudokirchneriella subcapitata</i>)	ErC ₅₀ (0-72hr)	456 mg/L
	NOErC (0-72hr)	20 mg/L

[Dinotefuran]

Chironomid (<i>Chironomus riparius</i> , water spiked study)	NOEC (27d)	0.00288 mg/L
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HAZARDOUS TO THE OZONE LAYER

This product does not contain $\geq 0.1\%$ of at least one ingredient listed in the Annexes to the Montreal Protocol. [Classification not possible]

OTHER HAZARD

Toxic to silkworm. Very toxic to bees.

13. DISPOSAL CONSIDERATIONS**WASTE FROM RESIDUES**

Waste must be disposed of in accordance with federal, state, local, national and international regulations.

CONTAMINATED PACKAGING

Empty the container completely before disposal.

14. TRANSPORT INFORMATION**UN**

Hazard Class:	9
UN Number:	UN3077
Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Dinotefuran mixture)
Packing Group:	III
Marine Pollutant:	Yes

SPECIAL PRECAUTIONS FOR TRANSPORT

Make sure that the containers have no puncture or leakage. Avoid rough handling and dropping. Prevent collapse of cargo piles.

15. REGULATORY INFORMATION

This product is an insecticide.

Responsibility for compliance with applicable laws and regulations is with the user.

16. OTHER INFORMATION

References: In-house data

To the best of our knowledge, the information contained herein is accurate.

However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.