

# SAFETY DATA SHEET

Revision date: 20 February, 2019

Serial No.: AGG10001C2\_04

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME **Dinotefuran 20SG**

Synonyms Dinotefuran 20%SG, DINOTEFURAN 20SG, DINOTEFURAN 20%SG STARKLE 20SG, STARKLE 20%SG, Starkle 20SG, Starkle 20%SG TENCHU, Tenchu, TENCHU 20SG, TENCHU 20%SG, Tenchu 20SG, Tenchu 20%SG, OSHIN, Oshin, OSHIN 20SG, OSHIN 20%SG Oshin 20SG, Oshin 20%SG, Starkle Soluble Granule, STARKLE SOLUBLE GRANULE

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

Skin corrosion/irritation	Category 3
Serious eye damage/eye irritation	Not classified
Skin sensitization	Not classified

Aquatic hazard	
Acute	Not classified
Chronic	Category 1

### GHS LABEL ELEMENTS

Hazard Pictograms



Signal Word

Warning

### Hazard Statements

H316: Causes mild skin irritation  
H410: Very toxic to aquatic life with long lasting effects.

### Precautionary Statements

Prevention  
P273: Avoid release to the environment.

### Response

P332+P313:  
If skin irritation occurs: Get medical advice or attention  
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 eyes 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, CO<sub>2</sub>, 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/m<sup>3</sup>, 8 Hr. TWA as inhalable dust  
3 mg/m<sup>3</sup>, 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
Explosibility (22°C):	
Minimum explosive concentration;	130 mg/L (humidity 58%)
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	LD <sub>50</sub> >2,000 mg/kg	[Not classified]
Dermal:	Rat	LD <sub>50</sub> >2,000 mg/kg	[Not classified]
Inhalation:	Rat	LC <sub>50</sub> >2.943 mg/L/4hr	[Classification not possible]

**Skin Corrosion/Irritation**

Rabbit	Slight Irritant	[Category 3]
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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 <sub>50</sub> (96hr)	>100 mg/L
Rainbow trout	LC <sub>50</sub> (96hr)	108 mg/L
<i>Daphnia magna</i>	EC <sub>50</sub> (48hr)	199 mg/L
Algae ( <i>Pseudokirchneriella subcapitata</i> )	EC <sub>50</sub>	>100 mg/L
[Dinotefuran]		
Chironomid ( <i>Chironomus riparius</i> , water spiked study)	NOEC (27d)	0.00288 mg/L

**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.