

# SUMISCLEX<sup>®</sup>

A New Fungicide for *Botrytis* and *Sclerotinia* Diseases



SUMITOMO CHEMICAL CO.,LTD.  
JAPAN



*Botrytis* and *Sclerotinia* diseases often cause serious damage on various crops.

SUMISCLEX is a new fungicide having remarkable fungicidal activity against those problematic diseases.

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## Characteristics of SUMISCLEX

### 1) Contact Activity

SUMISCLEX has remarkable fungicidal activities against *Botrytis* and *Sclerotinia* diseases on various crops owing to its high contact efficacy. SUMISCLEX controls diseases primarily with its strong inhibitory activity against mycelial growth and conidial germination of fungi.

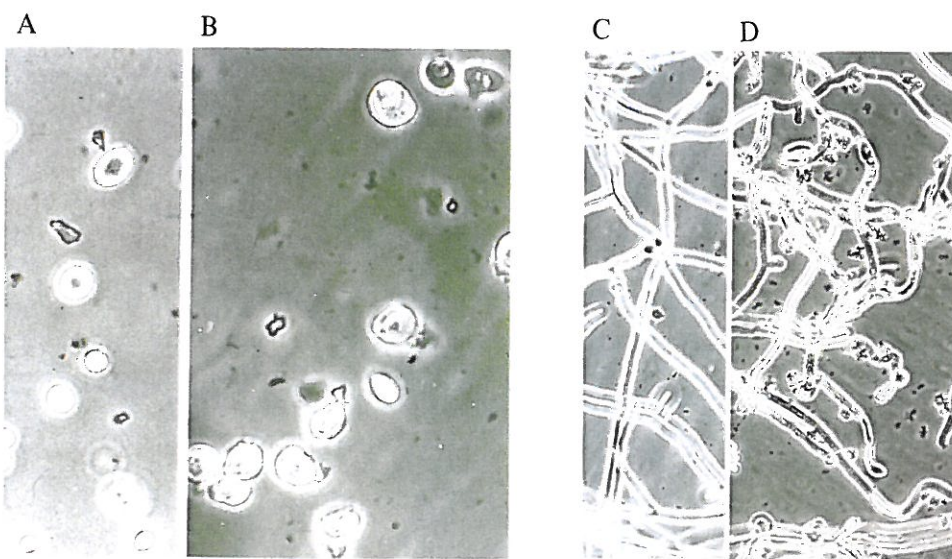
### 2) Safe to Wine Production

SUMISCLEX does not affect fermentation in the production of wine. Wine treated with SUMISCLEX was evaluated in specific gravity, dry matter, total acid, pH, degrees of alcohol, sugar content, etc., no adverse effects were found in the quality of wine. Therefore, SUMISCLEX is widely used in France for *Botrytis* control of grape vine.

### 3) Stable to Rain Wash-off

SUMISCLEX has moderate penetrating activity, therefore, it is stable to rain wash-off.

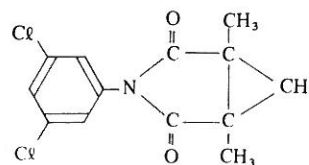
There are no significant differences in its biological efficacy whether rain falls or not after spray solution is dried up.



- A. Normal conidia. x 600.
- B. The conidia incubated with 7  $\mu$ M (Ca. 2ppm) of SUMISCLEX for 24 hr. x 600.
- C. Normal hyphae. x 200.
- D. The hyphae incubated with 20  $\mu$ M (Ca. 6ppm) of SUMISCLEX for 6hr. x 200.

## Basic Data of SUMISCLEX Technical Grade

Chemical name: N-(3',5'-dichlorophenyl)-1,2-dimethylcyclopropane-1,2-dicarboximide  
 Common name: procymidone  
 Structural formula:



Empirical formula:  $C_{13}H_{11}Cl_2NO_2$

## Chemical and Physical Properties:

Molecular weight: 284.1  
 Appearance: White crystalline solid  
 Density:  $d_{25}^{25}$  1.42–1.46  
 Melting point: 160–166.5°C  
 Vapor pressure:  $7.9 \times 10^{-5}$  mmHg at 20°C (estimate)  
 $1.32 \times 10^{-4}$  mmHg at 25°C (estimate)  
 8.00 mmHg at 200°C  
 49.54 mmHg at 250°C  
 210.59 mmHg at 300°C  
 Solubility: at 25°C in acetone .....18.0% (w/w)  
 cyclohexanon .....14.8  
 methanol ..... 1.6  
 isopropylalcohol ..... 0.5  
 xylene ..... 4.3  
 chloroform .....21.6  
 ethylen glycol ..... 0.05  
 acetonitrile .....10.1  
 dimethyl formamide .....22.8  
 ethyl acetate .....11.5  
 water ..... 4.5 ppm  
 Stability: No significant breakdown after 20 weeks duration at 60°C.  
 No significant breakdown in organic solvent after 16 weeks duration at 60°C.  
 Hydrolytic stability at 30°C:  
 pH (initial : as 100%)  
 3.3 99% at 72 hours  
 5.1 99% at 72 hours  
 7.3 55% at 72 hours  
 9.5 4.3% at 6 hours  
 11.0 27.5% at 15 minutes  
 Explosiveness: not explosive  
 Corrosion: not corrosive



# 3 SUMISCLEX

## Toxicity of SUMISCLEX

### Acute Toxicity

Animal	Sex	LD <sub>50</sub> (mg/kg)	
		Oral	Dermal
Rat	Male	6,800	> 2,500
	Female	7,700	> 2,500
Mouse	Male	7,800	> 2,500
	Female	9,100	> 2,500

### Fish Toxicity

Fish	TLm (ppm)
Carp	TLm48 : 10 ppm
Bluegill	TLm96 : 10.25ppm

### Toxicity to Honeybees

Route	LD <sub>50</sub> (μg/bes)
Oral	> 100
Contact	> 100

### Irritation & Sensitization

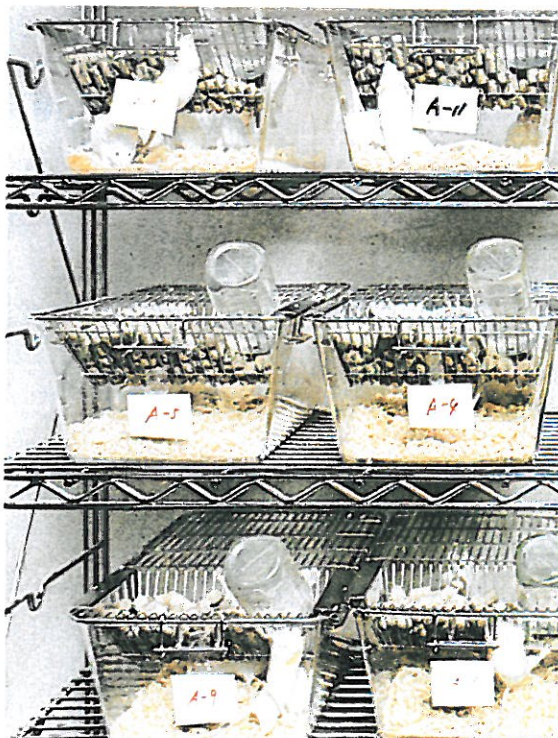
No eye and skin irritation in rabbit.

No skin sensitization in guinea pigs.

### Chronic toxicity

No adverse symptoms were observed in the 2 years feeding study in rats.

No effect level: 300 ppm.



## Application and Use Suggestion of SUMISCLEX

### 1. Application of SUMISCLEX

#### i. Equipment

SUMISCLEX can be applied with conventional aerial or ground equipment.

#### ii. Preventive Application

Required amount of SUMISCLEX should be mixed in sufficient water to ensure full coverage of the plant foliage and be sprayed in a preventive way at appropriate intervals.

#### iii. Compatibility and Phytotoxicity

SUMISCLEX is compatible with many pesticides except for alkaline compounds, and spraying with other pesticides is hence possible for simultaneous control of other fungus or insect pests.

No phytotoxicity was observed on various crops when used at the recommended dosages.

At higher dosages, phytotoxicity may occur on the edge of opened leaves.

**ALWAYS READ THE SUMISCLEX LABEL BEFORE USE AND FOLLOW ALL THE DIRECTIONS CAREFULLY.**

### 2. Available Formulations of SUMISCLEX

SUMISCLEX 50% Wettable Powder

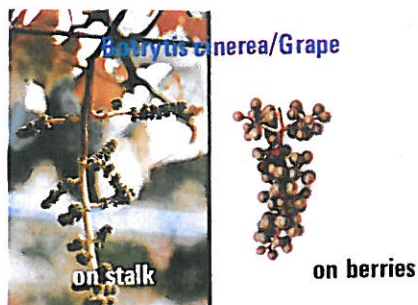
SUMISCLEX Granular Fumigant

SUMISCLEX Dust





## 2. Use Suggestion

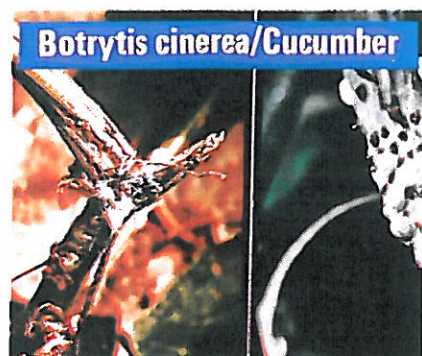
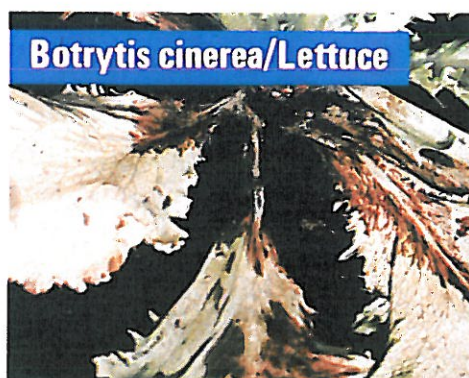


Disease	Dosage	
	as A.I.	as 50% WP/100l water
<i>Botrytis</i> disease <i>Sclerotinia</i> disease	250–500 ppm	50–100g
<i>Monilia</i> disease <i>Helminthosporium</i> disease ( <i>Cochiobolus</i> disease)	500 ppm	100g

A.I.: Active Ingredient

### Note. Applicable Crop

- \*Foliar Spray
  - Berries & Small fruits . . . . . Grape, Strawberry, Raspberry
  - Stone fruits . . . . . Peach, Cherry, Plum, Apricot
  - Vegetables . . . . . Tomato, Cucumbers Eggplant, Paprika, Melon, Lettuce, Endive, Chicory, Onion
  - Ornamentals . . . . . Rose, Carnation, Tulip, Gladiolus
  - Others . . . . . Sunflower, Rape, Beans, Peas
- \*Seed treatment . . . . . Ornamental Bulbs, Cereals
- \*Post harvest disease control . . . . . Vegetables, Fruits



*Monilia laxa*/ Cherry

*Sclerotinia sclerotiorum*/Oilseed rape

## 5. Precautions

### Protective Clothing

All workers should wear the following protective clothing:

A hat, face-shield, cotton overalls and shoes.

Clothing should be changed and laundered after every use, and as soon as possible after any obvious contamination.

### Handling the Concentrate

Wear protective clothing including impermeable gloves, boots and a face-shield.

### Hand Application

Avoid spraying into wind.

Ensure that equipments are properly maintained with no leaking. Keep the product and contaminated clothing away from children, food and living quarters.

Wash hands and exposed skin before eating, drinking, smoking after work.

Store in the tightly closed original containers and keep away from food or feeding stuff.

Empty containers are to be burnt or buried away from water courses.

### First Aid

Remove contaminated clothing immediately and wash contaminated skin thoroughly with soap and water.

If eye contamination has occurred, the eyes should be washed continuously for at least fifteen minutes with plenty of water. If swallowed, go to the doctor's or nearest hospital.

### Medical Treatment

In case of ingestion, carry out gastric lavage with care to prevent aspiration. Go to the doctor's or nearest hospital.



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