

# MATERIAL SAFETY DATA SHEET

## SINERGY 300 EC FUNGICIDE

### 1. PRODUCT AND COMPANY IDENTIFICATION

- Product name** : Sinergy 300 EC
- Common Name of A.I** : Difenoconazole 150 g/l + Propiconazole 150 g/l
- Chemical Name** : Difenoconazole  
*Cis,trans*-3-chloro-4-[4-methyl-2-(1*H*-1,2,4-triazol-1-ylmethyl)-1,3-dioxolan-2-yl]phenyl-4-chlorophenyl ether (IUPAC)
- Propiconazole  
1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1*H*-1,2,4-triazole
- Chemical Formula** : Difenoconazole C<sub>19</sub>H<sub>17</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>3</sub>  
Propiconazole C<sub>15</sub>H<sub>17</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>2</sub>
- Chemical Family** : triazole
- Use** : fungicide

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

#### Composition

COMPONENT	CAS No	CONCENTRATION (W/V)
Difenoconazole	119446-68-3	150 g/l
Propiconazole	60207-90-1	150 g/l
Other inert ingredients		Fill to 1 L

### 3. HAZARDS IDENTIFICATION

Irritating to eyes and respiratory system.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Risk Phrases** : R 22 Harmful if swallowed  
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety Phrases** : S 2 Keep out of the reach of children.  
S 13 Keep away from food, drink and animal feedingstuffs.  
S 20/21 When using do not eat, drink or smoke.  
S 35 This material its container must be disposed of in a safe way.  
S 57 Use appropriate container to avoid environment contamination.

### 4. FIRST AID MEASURES

**Eye contact** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Remove contact lenses.  
Immediate medical attention is required.

**Inhalation** : Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest.

**Ingestion** : If swallowed, seek medical advice immediately and show this container or label.  
Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.  
Call a physician or Poison Control Centre immediately.

**Skin contact** : Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call physician. Wash contaminated clothing before re-use.

**Medical advice** : There is no specific antidote available. Treat symptomatically.  
Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

## 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media** : Extinguishing media - small fires : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
Extinguishing media - large fires : alcohol-resistant foam, water spray
- Extinguishing media which must not be used for safety reasons** : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire fighting** : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion. Exposure to decomposition products may be a hazard to health.
- Special protective equipment for fire fighters** : In the event of fire, wear self-contained breathing apparatus.
- Further information** : Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

## 6. ACCIDENTAL RELEASE MEASURES

- Emergency Procedures** : In case of spillage it is important to take all steps necessary to:  
Avoid eye and skin contact avoid contamination of waterways.
- Environmental precautions** : Prevent further leakage or spillage if safe to do so.  
Do not flush into surface water or sanitary sewer system.
- Procedure for spill** :
  - Keep all bystanders away.
  - Wear goggles, half face-piece respirator with combined dust and vapour cartridge, full length and PVC gloves.
  - Reposition any leaking containers so as to minimise further leakage.
  - Dam and absorb spill with an absorbent material (e.g. sand or soil).
  - Shovel the absorbed spill into drums.

- Disposal of the absorbed material will depend upon the extent of the spill.
- Decontaminate the spill area with detergent and water and rinse with water

## 7. HANDLING AND STORAGE

**HANDLING** : No special technical protective measures required. No special handling advice required. Avoid contact with skin and eyes. When using, do not eat, drink or smoke.

**STORAGE** : No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Standard

Components	Exposure limits (for reference)	Value type
Difenoconazole	8 mg/m <sup>3</sup>	8 h TWA
Propiconazole	10 mg/m <sup>3</sup>	8 h TWA

### PERSONAL PROTECTIVE EQUIPMENT

**Protective measures** : The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

**Personal protection** : avoid contact with eyes. If product in eyes wash it out immediately with water. When opening the container and preparing spray wear :

- Cotton overalls buttoned to the neck and wrist (or equivalent Clothing)
- elbow-length PVC gloves
- goggles

After each day's use, washgloves, goggles and contaminated clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form</b>	: liquid
<b>Colour</b>	: yellow to dark brown
<b>Odor</b>	: With aromatic odor
<b>pH</b>	: 4 - 8 at 1 % w/v
<b>Melting point/range</b>	: < -10 °C
<b>Boiling point/range</b>	: > 220 °C
<b>Flash point</b>	: 71 °C at 757 mmHg Pensky-Martens c.c.
<b>Oxidizing properties</b>	: not oxidizing
<b>Explosive properties</b>	: Not explosive
<b>Density</b>	: 1.08 g/cm <sup>3</sup> at 20 °C
<b>Water solubility</b>	: Miscible
<b>Viscosity, dynamic</b>	: 37.1 mPa.s at 20 °C : 14.7 mPa.s at 40 °C
<b>Surface tension</b>	: 37.0 mN/m at 25 °C

## 10. STABILITY AND REACTIVITY

**Hazardous decomposition products** : Combustion or thermal decomposition will evolve toxic and irritant vapors.

**Hazardous reactions** : None known.  
Hazardous polymerization does not occur.  
Stable under normal conditions.

## 11. TOXICOLOGICAL INFORMATION

**Acute oral toxicity** : LD50 Rat, > 2,000 mg/kg

**Skin irritation** : Rabbit Non-Irritating

**Eye irritation** : Rabbit Irritant

**Sensitization** : Maximisation Test guinea pig  
not sensitizing

**Long term toxicity** : Did not show carcinogenic, teratogenic or mutagenic effects in  
animal experiments.

## 12. ECOLOGICAL INFORMATION

### ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)

**Bioaccumulation** : Difenoconazole has high potential to bioaccumulate.  
Propiconazole has low to medium potential to bioaccumulate.

**Stability in water** : Difenoconazole is persistent in water  
Propiconazole is stable in water

**Stability in soil** : Difenoconazole is not persistent in soil.  
Propiconazole is not persistent in soil.

**Mobility** : Difenoconazole has low mobility in soil.  
Propiconazole has low to medium mobility in soil.

### ECOTOXICITY EFFECTS

**Toxicity to fish** : LC<sub>50</sub> Oncorhynchus mykiss (rainbow trout), 4.7 mg/l , 96 h  
Based on test results obtained with similar product.

**Toxicity to aquatic invertebrates** : EC<sub>50</sub> Daphnia magna Straus, 2.7 mg/l , 48 h  
Based on test results obtained with similar product.

**Toxicity to algae** : EBC<sub>50</sub> scenedesmus subspicatus, 0.23 mg/l , 72 h  
Based on test results obtained with similar product.

**Ecological Informatio** For Difenoconazol technical

**Birds** : Practically non-toxic to bird  
Acute oral LD<sub>50</sub> for bobwhite quail > 2000 mg/kg

**Fish** : Moderately toxic to fish  
LC<sub>50</sub> (96 h) for common carp 6.6 rainbow trout 3.7 mg/l

**Daphnia** : Moderately toxic to daphnia  
LC<sub>50</sub> (48h) 1.65 mg/l

**Algae** : Moderately toxic to algae  
EC<sub>50</sub> (96h) for selemastrum caprocornutum 1.84 mg/l.

**Bees** : Practically non-toxic to bees  
LD<sub>50</sub> (contact) > 100 µg/bee.

**Worms** : Slightly toxic to earthworm  
LC<sub>50</sub> (14d) for Eisenia fetida > 973 mg/kg soil.

**Ecological Informatio** For Propiconazol technical

**Birds** : Practically non-toxic to bird  
Acute oral LD<sub>50</sub> for bobwhite quail > 2000 mg/kg

**Fish** : Moderately toxic to fish  
LC<sub>50</sub> (96 h) for bluegill sunfish 2.2 mg/l

**Daphnia** : Moderately toxic to daphnia  
LC<sub>50</sub> (48h) 4.2 mg/l

**Algae** : Slightly toxic to algae  
EC<sub>50</sub> (96h) for selemastrum caprocornutum 14.2 mg/l.

**Bees** : Practically non-toxic to bees  
LD<sub>50</sub> (contact) > 100 µg/bee.

**Worms** : Practically non-toxic to earthworm  
Non toxic to earthworms

### 13. DISPOSAL CONSIDERATIONS

**Product** : Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

**Contaminated packaging** : Empty remaining contents. Triple rinse containers  
Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

### 14. TRANSPORT INFORMATION

#### Land transport

*ADR/ RID:*

UN-No : 3082

Class : 9

Danger Label Number : 9

Packaging group : III

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. ( PROPICONAZOLE AND DIFENOCONAZOLE )

#### Sea transport

*IMDG:*

UN-No : 3082

Class : 9

Danger Label Number : 9

Packaging group : III

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. ( PROPICONAZOLE AND DIFENOCONAZOLE )

Marine pollutant : Marine pollutant



**Air transport**

*IATA-DGR*

UN-No : 3082

Class : 9

Danger Label Number : 9

Packaging group : III

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. ( PROPICONAZOLE AND DIFENOCONAZOLE

**15. REGULATORY INFORMATION**

**Labelling according to EC Directives**

**Symbol(s)** : Xi Irritant  
N Dangerous for the environment

**R-phrases(s)** : R36/37 Irritating to eyes and respiratory system.  
R50/53 Very toxic to aquatic organisms, may cause long-term  
adverse effects in the aquatic environment.

**S-phrase(s)** : S 2 Keep out of the reach of children.  
S13 Keep away from food, drink and animal feedingstuffs.  
S20/21 When using do not eat, drink or smoke.  
S35 This material and its container must be disposed of in a safe  
way.  
S57 Use appropriate container to avoid environment contamination.

**Special labelling of certain preparations** : To avoid risks to man and the environment, comply with the  
instructions for use.  
Contains propiconazole. May produce an allergic reaction.

**16. OTHER INFORMATION**

**R10** Flammable.

**R22** Harmful if swallowed.

**R36/37/38** Irritating to eyes, respiratory system and skin.

**R37/38** Irritating to respiratory system and skin.

**R38** Irritating to skin.

**R41** Risk of serious damage to eyes.

**R43** May cause sensitization by skin contact.

**R50/53** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**R51/53** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**R65** Harmful: may cause lung damage if swallowed.

**R66** Repeated exposure may cause skin dryness or cracking.

**R67** Vapors may cause drowsiness and dizziness.