

Date: Nov.13th, 2024

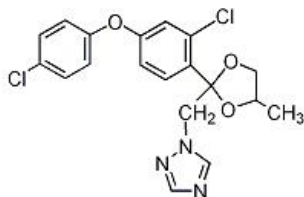
MATERIAL SAFETY DATA SHEET

Difenoconazole

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product name: Difenoconazole 95% TECH
IUPAC name: cis,trans-3-chloro-4-[4-methyl-2-(1H-1,2,4-triazol-1-ylmethyl)-1,3-dioxolan-2-yl]phenyl 4-chlorophenyl ether
Chemical abstracts name: 1-[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole
CAS-No.: 119446-68-3
Molecular formula: $C_{19}H_{17}Cl_2N_3O_3$
Molecular weight: 406.3
structural formula:



1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Fungicide

1.3 Details of the supplier of the safety data sheet

Company/Undertaking : HEBEI JRain TECHNOLOGY CO.,LTD.
Address : No. 66 XIANGTAI ROAD, YUHUA DISTRICT, SHIJIAZHUANG CITY, HEBEI PROVINCE,CHINA
Tel : 0086-311-80680379
Fax: 0086-311-80680380

1.4 Emergency telephone number

Opening hours: 24 hours
Emergency phone number: 0086-311-80680379

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 4)
Serious eye damage (Category 2)
Acute aquatic toxicity (Category 3)

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]



Pictogram:

Signal word: Warning

Hazard statement(s)

H302 Harmful if swallowed.
H320 Causes eye damage.
H332 Harmful if inhaled.
H402 Harmful to aquatic life.

Precautionary statement(s)

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.
P284 Wear respiratory protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.

Supplemental Hazard Statements none

2.3 Other hazards – none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

| Component | CAS No. | Concentration |
|----------------|-------------|---------------|
| Difenoconazole | 119446-68-3 | 95% |

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NO_x), Hydrogen chloride gas

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

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Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end uses

No data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper

glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | | |
|-------------------------------|---|---|
| Appearance | : | Light yellow to white powder |
| Odor | : | Slightly odor |
| Melting point | : | 78.6°C |
| Flammability | : | Non-flammable |
| Oxidizing properties | : | None |
| Explosive properties | : | None |
| Vapor pressure | : | 3.3×10^{-5} mPa (25 °C) |
| Solubility in water | : | 15 mg/l (25 °C) |
| Solubility(in organic solvent | : | In ethanol 330, acetone 610, toluene 490, n-hexane 3.4, n-octanol 95 (all in g/l, 25 °C). |

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal use and storage conditions.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Avoid reaction with oxidizing agents

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Can decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

| | |
|----------------------------------|--|
| Acute oral toxicity | : LD ₅₀ (rat) 2710mg/kg for male, 2330 mg/kg for female |
| Acute inhalation toxicity | : LC ₅₀ (rat) > 2500mg/m ³ . |
| Acute dermal toxicity | : LD ₅₀ for rabbits >2010 mg/kg |
| Skin irritation | : Non- irritant (rabbit) |
| Eye irritation | : Non- irritant (rabbit) |
| Sensitization | : No - sensitizing (guinea pig) |
| NOEL | : (2 y) for rats 1.0 mg/kg b.w. daily; (1.5 y) for mice 4.7 mg/kg b.w. daily; (1 y) for dogs 3.4 mg/kg b.w. daily. |
| ADI | : 0.01 mg/kg b.w. |
| Other | : Not teratogenic or mutagenic |
| Toxicity class | : WHO (a.i.) III |

12. ECOLOGICAL INFORMATION

12.1 Toxicity

| | |
|----------------|--|
| Birds | : LD ₅₀ (9-11 d) for mallard ducks >2150 mg/kg, LD ₅₀ for bobwhite quail >4760 mg/kg, LD ₅₀ mallard ducks >5000 mg/kg. |
| Fish | : LC ₅₀ (96 h) for rainbow trout 0.8mg/l, LC ₅₀ (96 h) for bluegill sunfish 1.2 mg/l, LC ₅₀ (96 h) for sheepshead minnow 0.82 mg/l. |
| Daphnia | : LC ₅₀ (48 h) 0.77 mg/l |
| Algae | : EC ₅₀ (72 h) for <i>Scenedesmus subspicatus</i> 1.2 mg/l. |

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Other aquatic spp. : EC₅₀ (96 h) for Eastern oysters 0.45 mg/l;
EC₅₀ (14 d) for *Lemna gibba* 18.5 mg/l.
Bees : Non-toxic to honeybees; LD₅₀ (oral) >187 mg/bee; LC₅₀ (contact) >100 mg/bee.

12.2 Persistence and degradability

Moderately persistent in field, DT₅₀ is 85days.

12.3 Bioaccumulative potential

Bio-concentration factor BCF is 330 l kg⁻¹

12.4 Mobility in soil

Slightly mobile in soil, K_{loc} is 3780.

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Very toxic to aquatic life.

13.DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14.TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 3077

IMDG: 3077

IATA: 3077

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Difenoconazole)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Difenoconazole)

IATA: Environmentally hazardous substance, solid, n.o.s. (Difenoconazole)

14.3 Transport hazard class(es)

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ADR/RID: 9

IMDG: 9

IATA: 9

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: yes

14.6 Special precautions for user

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packaging and combination packaging containing inner packaging with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available

15.2 Chemical Safety Assessment

No data available

16. OTHER INFORMATION

Further information

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the product in terms of its safety requirements. The data does not signify and warranty with regard to the product's properties.

HEBEI JRAIN TECHNOLOGY CO.,LTD.