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MATERIAL SAFETY DATA SHEET

MANUFACTURER INFORMATION

Manufacturer: ZHEJIANG HEBEN PESTICIDE & CHEMICALS CO., LTD
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Product: Fludioxonil 25g/l FS

1. CHEMICAL PRODUCT IDENTIFICATION

(1) Active ingredients: Fludioxonil

Chemical Name: 4-(2,2-difluoro-1,3-benzodioxol-4-yl)pyrrole-3-carbonitrile
Empirical formula: C12H6F2N2O2
Empirical weight: 248.19
CAS No.: 131341-86-1

2. COMPOSITION / INFORMATION ON INGREDIENTS

Table with 3 columns: Composition, CAS No., Content g/l. Rows include Fludioxonil and Other ingredients.

3. HAZARDS IDENTIFICATION

More important danger for the man: This product may absorbed by skin, inhalation and ingestion.
Dangers for the environment: This product is toxic to aquatic organisms.
Physical-chemical dangers: When the product involved in the fire, may omit nitride oxides, carbon oxides, and hydrogen fluoride.



4. FIRST AID MEASURES

Skin: Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.

Eyes: First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

Inhalation: Move affect person to fresh air and keep at rest until recovered. If not breathing, give artificial respiration and get to a doctor.

Ingestion: Do not induce vomiting if the person is conscious. Give glass of water. Get to a doctor.

Notes to physician: No specific antidote if ingested. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Powder, water spray, foam, carbon dioxide.

Fire Fighting Instructions:

Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Burning chemicals may produce by-products more toxic than the original material. Wear full protective clothing including self-contained breathing apparatus. Runoff from fire control may be a pollution hazard.

If area is exposed to fire and conditions permit, let fire burn itself out. If product is on fire, wear self-contained breathing apparatus and full protective equipment.

Use water spray. Control runoff, avoid releasing into environment and drain.

6. ACCIDENTAL RELEASE MEASURES

Spillage disposal: Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible



disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Handling: Do not apply to humans, their clothing, or bedding. Do not contaminate food or use on household tanks. Wash your hands with soap and plenty of water completely after handling.

Storage: Store at normal temperatures, away from children, domestic animals, food and feed products, seed and fertilizer. Do not contaminate other stored products or the storage area by handling or storage of this product. Keep in a well-ventilated room. Separated from acids, strong oxidants, food and feedstuffs. Keep in a dry, well-ventilated room.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protective equipment:

Respiratory protection: Approved respirator;
Protective gloves: Rubber gloves;
Eye protection: Safety goggles or face shield;
Industrial hygiene: adequate ventilation;

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light red to dark red liquid;

Melting point: N/A;

Density: 1.02-1.06;

Water solubility: Suspension;



Other solubility: Soluble;

pH value: 5.0~9.0;

Flash point: > 80°C;

Ignition temperature: Not applicable;

10. STABILITY AND REACTIVITY

Conditions to avoid: High temperature, fire and flame;

Products to avoid: Alkaline media, and strong oxidants;

Thermal decomposition: None;

Hazardous decomposition products: when the product involved in the fire, may omit nitride oxides, carbon oxides, and hydrogen fluoride;

Hazardous reaction: No reaction;

11. TOXICOLOGICAL INFORMATION

The following information is from technical product:

Oral: Acute oral LD₅₀ for rats and mice >5000 mg/kg;

Dermal: Acute dermal LD₅₀ for rabbits >2000 mg/kg;

Inhalation: LC₅₀ (4 h) for rats >2.6 mg/m³ air;

Non-irritating to eyes and skin (rabbits); Not a skin sensitiser (guinea pigs);

Not carcinogenic, mutagenic and teratogenic;

12. ECO-TOXICOLOGICAL INFORMATION

The following information is from technical product:

Aquatic organisms:

Fish: LC₅₀ (96 h) for rainbow trout 0.5, bluegill sunfish 0.31, catfish 0.63, common carp 1.5 mg/l.

Daphnia: LC₅₀ (48 h) 1.1 mg/l.



Algae: EC₅₀ (72 h) for *Scenedesmus subspicatus* 0.93 mg/l.

Other organisms:

Birds: Acute oral LD₅₀ for mallard ducks and bobwhite quail >2000 mg/kg.

Dietary LC₅₀ for mallard ducks and bobwhite quail >5200 ppm.

Bee: Not toxic to bees; LD₅₀ (48 h, oral) >329µg/bee; (48 h, contact) >101 µg/bee.

Worms: LC₅₀ (14 d) for *Eisenia foetida* >1000 mg/kg soil.

13. DISPOSAL CONSIDERATIONS

Material which can not be used at the site should be disposed of in an approved waste disposal facility following all applicable Federal, State and Local regulations. If burned, stay out of smoke. Do not contaminate water supplies by disposal of wastes or containers.

14. TRANSPORT INFORMATION

Don't transport with food and feedstuff. Marine pollutant

15. REGULATORY INFORMATION

Symbol: Xn (Harmful); N (Dangerous in environment)

R phrases:

R20/22: Harmful by prolonged exposure through inhalation and if swallowed.

R50: Very toxic to aquatic organisms.

S phrases:

S1/2: Keep locked up and out of the reach of children.

S7/9: Keep the containers tightly, in a cool, well-ventilated place.

S20/21: When using do not eat, drink or smoke.

S24/25: Avoid contact with skin and eyes.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.



S60: This material and its container must be disposed of as hazardous waste.

16. OTHER INFORMATION

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

浙江禾本科技有限公司
ZHEJIANG HEBEN PESTICIDE & CHEMICALS CO.,LTD
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