



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO.,LTD

ADD: NO.52 PUCHANG ROAD, PUZHOU INDUSTRIAL PARK, LONGWAN DISTRICT,
WENZHOU ZHEJIANG P.R. CHINA

Tel: +86-577-88905587

Fax: +86-577-88905567

Email: info@rayfull.com

sales@rayfull.com

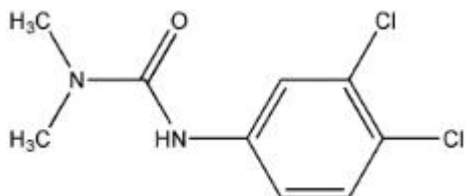
1. Chemical Product Identification

Common Name: Diuron 95% TC

Molecular Formula: $C_9H_{10}Cl_2N_2O$

Molecular Weight: 233.09

Structural Formula:



Chemical Name: 3-(3,4-dichlorophenyl)-1,1-dimethylurea (IUPAC)

Form: Powder

Colour: White

Odour: Odorless

CAS No.: 330-54-1

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Diuron	330-54-1	95.0 min
Other ingredients	---	5.0 max

3. Hazards Identification



Symptoms of acute exposure: Causes moderate irritation to skin. May cause eye irritation.

More important danger for the man: It can cause irritation if inhaled.

Dangers for the environment: It shows low toxicity to birds and fish. It is practically non-toxic to bees.

Physical-chemical dangers: None

4. First Aid Measures

Inhalation: Remove source of contamination, or move victim to fresh air. Treat symptomatically and supportively. If breathing is difficult, a qualified person should administer oxygen. Get medical attention immediately if effects persist.

Skin contact: Remove all contaminated clothing, shoes and leather goods. Flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

Eye contact: Flush contaminated eye with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, wash mouth with water and contact a Poisons Information Centre, or call a doctor. Do not induce vomiting unless told to do so by the poison control centre or doctor.

5. Fire-Fighting Measures

Extinguishing media

To be used: Extinguish small fires with carbon dioxide, dry powder, or alcohol-resistant foam.

Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product.

Don't use: not applicable

Particular risk

In a fire, carbon oxides (CO, CO₂), nitrogen oxides (NO_x) and corrosive fumes of chlorides may be formed.

Measures of personal protection

Full protective clothing and self-contained breathing apparatus.

6. Accidental Release Measures



Personal cautions: Use personal protective equipment. Avoid contact with skin and eyes. Do not inhale spray particles.

Environmental precautions: Prevent the product from entering the sewers, waterways and low areas. When the product contaminates public waters, inform appropriate authorities immediately in accordance with local regulations.

7. Handling And Storage

Handling: Avoid inhalation of spray and fumes and contact with skin and eyes. Use with adequate ventilation. Wash hands before eating, chewing gum, smoking or using the toilet. Remove clothing immediately if the herbicide gets inside. Then wash skin using nonabrasive soap. Do not apply directly to areas to surfaces where water is present, or to intertidal areas below the mean high water mark.

Storage: Store in its original labelled containers in shaded, well ventilated areas, away from heat, sparks or other sources of ignition. Not to be stored next to food stuffs and water supplies. Keep out of reach of children and animals.

8. Exposure Controls/Personal Protection

Exposure limits: NIOSH REL TO DIURON-air: 10 mg/m³ (TWA, OSHA/ACGIH).

Personal protective equipment

Respiratory protection: Where exposure through inhalation and eye contact may occur when handling and when preparing the spray mixture, wear a face mask. If the product is used in dusty or confined conditions or spillage and fire conditions a respirator is suitable and approved for protection from dusts and mists of pesticides is adequate.

Clothing: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance

Eye protection: Chemical splash goggles and face shield or approved equivalent.

Industrial hygiene: not applicable

9. Physical and Chemical Properties

Appearance: White powder

Melting point: 157°C

Boiling point: 180-190°C

K_{ow} log P = 2.1 (20°C)



Vapour pressure: 40 mPa (50°C)

Specific gravity: 1.50g/ml (20°C)

Solubility in water: 35.6 mg/l (20°C)

In organic solvents: 53.6 in acetone, 21.2 in ethyl acetate, 1.33 in xylene (all in g/L, at 20°C)

10. Stability and Reactivity

Chemical stability: Stable under normal temperatures and storage conditions. Stable in neutral media. Hydrolyzed by acids and alkalis and at elevated temperatures.

Conditions to avoid: Avoid strong alkalis and acids.

Incompatibility with other materials: A compatibility test should be carried out with the water and the products to be used prior to mixing. Do not physically mix concentrate directly with other herbicides or pesticide concentrates; always dilute first.

Hazardous decomposition products: Thermal decomposition products may include toxic oxides of nitrogen and carbon and toxic and corrosive fumes of chlorides.

Hazardous polymerization: Will not occur under normal conditions.

11. Toxicological Information

Acute oral toxicity: LD50 for rats 437 a.i.mg/kg

Acute percutaneous toxicity: LD50 for rats >5000 a.i.mg/kg.

Acute inhalation toxicity: LC50 (rat) >0.26 a.i.mg/L (aerosol)

Skin irritation: Non-irritating to skin of rabbits.

Eye irritation: Non-irritating to eyes of rabbits.

Skin sensitization: Not a sensitizer to Guinea Pig.

12. Ecological And Ecotoxicological Information

Effect on birds: moderate toxicity to birds, acute oral LD50 for Bobwhite quail is >250 a.i.mg/kg.

Effect on fish: moderate toxicity to fish, acute 96 hour LC50 for Cyprinodon variegatus is 6.7 a.i.mg/L.

Effect on aquatic invertebrates: moderate toxicity to aquatic invertebrates, acute 48 hour EC50 for Daphnia magna is 5.7 a.i.mg/L.

Effect on algae: high toxicity to algae, acute 72 hour EC50 for Scenedemus subspicatus is 0.0027 a.i.mg/L.



ZHEJIANG RAYFULL CHEMICALS CO., LTD

Tel: +86-577-88905587,88908857

Fax: +86-577-88905567

EMAIL: info@rayfull.com sales@rayfull.com

Effect on honeybees: low toxicity to honeybees, contact acute 48 hour LD50 is >100 a.i.µg/bee; oral acute 48 hour LD50 is >100 a.i.µg/bee.

Effect on earthworms: moderate toxicity to earthworms, acute 14 day LC50 for Eisenia foetida is >798 a.i.mg/kg.

13. Disposal Considerations

Pesticide disposal: Contaminated absorbents, used containers, surplus product, etc., should be buried in approved landfill. Hydrolysis under alkaline conditions is a suitable method to dispose of small quantities of the product. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Comply with local legislation applying to waste disposal.

Container disposal: Emptied containers retain vapour and product residues and should be triple rinsed with water. Observe all labelled safeguards until container is cleaned, reconditioned or destroyed. Combustible containers should be disposed of in incinerators. Containers that are not to be reused should be punctured and transported to a scrap metal facility for recycling or disposal.

14. Transport Information

Not applicable.

15. Regulatory Information

Not applicable.

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



ZHEJIANG RAYFULL CHEMICALS CO., LTD

Tel: +86-577-88905587,88908857

Fax: +86-577-88905567

EMAIL: info@rayfull.com sales@rayfull.com

own MSDS.