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MATERIAL SAFETY DATA SHEET

MSDS No: MSDS/DIU/FG-004

Section 1: Product Identification & Company

Common Name : Diuron

Synonyms : 3-(3,4-dichlorophenyl)-1,1-dimethyl urea.

Manufacturer / Supplier : Bharat Rasayan Limited
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Section: 2. Composition / Information on Ingredients

Composition	CAS No.	Content%
Diuron	330-54-1	98%
Other ingredients		2%

Section: 3. Hazards Identification

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

Section 4. First Aid Measures

Skin: Wash off in flowing water or shower..

Eyes: Flush eyes with plenty of water. Seek medical attention

Inhalation: Remove to fresh air if effects occur, Consult a physician

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless

directed to do so by medical personnel.Note to physician: No specific antidote.

Supportive care. Treatment based on judgment of the physician in response to the physician in response to reactions of the patient.

Section 5. Fire-Fighting Measures

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

Measures of personal protection: safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants and hats.Environmental cautionsEX: prevent the contamination of the floor and of beds of water.

Section 6. Accidental Release Measures

Personal cautions: safety glasses or goggles, rubber gloves, shoes plus socks, Long-sleeved shirt, and long pants and hats.Cleaning methodsEX: clear the material in time. Transfer to a properly labeled deposit that will be closed and sealed until the recovery of elimination of the product.Environmental cautionsEX: prevent the contamination of the floor and of beds of water.

Section 7. Handling and Storage:

Storage: Store in the closed, original container in a dry, cool, well-ventilated area, out of direct sunlight. Store in locked room or place away from children, animals, food, animal feed, seed and fertilizers.Technical protective measures:

Fire and explosion protection: the area must be far from fire and flammable materials, high temperature and strong oxidizers.

Section 8. Exposure Controls / Personal Protection

Personal protective equipment

Respiratory protection: Such equipment should only be used if the employer has a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing and medical exams.

Protective gloves: safety gloves. Eye protection: Wear impact resistant eye protection with side shields or goggles. Wear a face shield along with goggles when working with corrosive, highly irritating or toxic substances. Industrial hygiene: Industrial hygienists are available to answer your questions regarding the control of chemical exposures using exhaust ventilation, special work practices, good housekeeping, good hygiene practices, and personal protective equipment including respirators. In addition, they can help to interpret the results of industrial hygiene survey data.

Section 9. Physical and Chemical Properties

Appearance	white color powder
Melting Point:	158-159°C.
V.P.:	1.1×10^{-3} mPa at 25°C
S.G./Density:	1.48.
Water solubility:	37.4mg/L @ 25 degrees C.
Other solubility:	easy dissolve in hot alcohol; solubility in acetone is 5.3%, a bit dissolves in ethanol, hot benzene and ethyl Acetate.
pH value:	6.5-7.5
Flash point:	>200 degree F (nonflammable)
Ignition temperature:	not applicable

Section 10. Stability and Reactivity

Conditions to avoid: fire or flame, heat and high temperature.

Products to avoid: not applicable

Thermal decomposition: not applicable

Hazardous reaction: none

Section 11. Toxicological Information

Acute oral: LD50 3400mg/kg (rat)

It is no effect to raise rats using 250ppm dosage for two years
It is no effect to raise dogs using 500ppm dosage for one year
Irritation: No skin irritation and slight eye irritation.
Ingestion: Abdominal pain, Diarrhoea, Nausea.

Section 12. Ecological and Ecotoxicological Information

Effects on birds: slightly toxic to birds. In bobwhite quail, the dietary LC50 is 1730 ppm. In Japanese quail and ring-necked pheasant, it is greater than 5000 ppm. The LC50 is approximately 5000 ppm in mallard ducks. Effects on aquatic organisms: The LC50 (48 hour) values for diuron range from 4.3mg/L to 42 mg/L in fish, and range from 1 mg/L to 2.5 mg/L for aquatic invertebrates. The LC50 (96-hour) is 3.5 mg/L for rainbow trout. Thus, diuron is moderately toxic to fish and highly toxic to aquatic invertebrates. Effects on other organisms: non-toxic to bees.

Section 13. Disposal Considerations

Spillage disposal: Do not wash away into sewer. Sweep spilled substance into Containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, and then remove to safe place.

Section 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. (Diuron (ISO)) IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diuron (ISO)) IATA: Environmentally hazardous substance, solid, n.o.s. (Diuron (ISO))

14.3 Transport hazard class(es) 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: no 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 packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

Section 15. Regulatory Information

Hazard symbols:

T toxic

Risk phrases:

R23/25 Toxic by inhalation and if swallowed.

R57 Toxic to bees.

Safety phrase:

S45 In case of accident or if you feel unwell seek medical advice immediaty (show the label where

Section 16: Other Information

The information provided in this MSDS is of general nature not specific for a particular purpose or situation, and believed to be correct and faithful. Bharat Rasayan Limited does not make any warranty or guarantee of any kind regarding fitness or completeness of information. Bharat Rasayan Limited disclaims any liability to the result(s) obtained or arising out of any use of the product or reliance or data/information contained in this MSDS.

Prepared by: Bharat Rasayan Limited: EHS Department

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