Material Safety Data Sheet

Uniroyal Chemical
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NOTE TO END-USERS: This MSDS is being provided to all interested persons in accordance with federal and state right-to-know laws. Precautionary Statements, First Aid Statements and Directions for Use of this product by end-users are contained on the product label and must be followed at all times.

IDENTIFICATION

Trade Name: DIMILIN® 4L **CAS Number: 35367-38-5 (active)**

Chemical Name: **Chemical Family: Amide**

N-[[(4-chlorophenyl) amino] carbonyl]-2-6-difluorobenzamide 40.4%
Inerts: 59.6%
Common Name: Diflubenzuron

SPECIAL REGULATORY HAZARDS

Ingredient	CAS No.	Exposure Limit	OSHA (1910.1200)	EEC*
Diflubenzuron	35387-38-5	ND	Target organ effects	Possible risk of irreversible effects
Petroleum Oil	64742-46-7	5 mg/m^3 (OSHA, ACGIH)	Oil Mist	NA

Hazard assessment based on available data.

Transportation: IMO Hazard Class: 9, Miscellaneous, ID. No.; UN3082 Marine Pollutant
DOT/IATA/ICAO: Not Regulated

PHYSICAL DATA

Appearance and Odor: Tan liquid; slight odor

Solubility: ND

Melting Point: NA

Boiling Point: ND

Other Data: pH: 8-10

Specific Gravity (H2O=1): 1.19

Vapor Pressure @ 20°C: NA

Vapor Density (Air = 1): NA

Volatility @ 70°F: Low

FIRE AND EXPLOSION HAZARD DATA

Flash Point: ND

Autoignition Temperature: ND

Extinquishing Media: Water fog, dry chemical, CO2, Do not use direct stream of water. Product will float and may reignite.

Flammable Limits: ND

Special Fire Fighting Procedures: Protect against inhalation of combustion products.

Unusual Hazards: May form explosive dust-air mixtures.

REACTIVITY DATA

Stability: Stable at ambient temperatures and pressures.

Incompatibility: None identified.

Decomposition Products: Oxides of carbon and nitrogen, HCl and HF under burning conditions.

NA = Not Applicable **ND** = Not Determined * European Economic Community

SPECIAL PROTECTION INFORMATION

Engineering Controls: Sufficient ventilation to minimize vapor exposure.

Personal Protection Equipment: Avoid all personal contact. Observe good personal hygiene. Chemical resistant gloves, protective clothing and eye protection should be worn when handling. Launder clothing before reuse. In the absence of adequate ventilation, use NIOSH-certified respiratory protection.

NOTE TO END-USERS: The employee protection recommendations on this MSDS may differ from those on the product label. For normal use of this product, always refer to the personal protective equipment requirements on the product label.

STORAGE, SPILLS AND DISPOSAL INFORMATION

Storage: Store in a dry location.

Spills: Absorb on intert material. Shovel into secure containers for proper disposal. Use personal protective equipment as outlined above.

Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Environmental Information: This pesticide is extremely toxic to crab, shrimp and other aquatic invertebrates. Do not apply directly to water or wetlands, (swamps, bogs, marses, and potholes), except under the forest canopy when used to control forest pests. Drift or runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

DIFLUBENZURON TECHNICAL

96 hr LC_{50} values range from 38-165 ppm in a number of aquatic species.
Redwing Blackbird: Oral LD_{50} -3.76 g/kg

These data indicate that DIFLUBENZURON is not toxic to fish and birds.
Diflubenzuron is extremely toxic to aquatic invertebrates.

HEALTH RELATED DATA

SPECIFIC HAZARDS: Contact with eyes or skin may cause irritation. Prolonged excessive exposure may cause methemoglobinemia. The very low acute toxicity suggests that this is not a significant adverse effect. There are no known medical conditions that are aggravated by exposure to this material.

Primary Route(s) of Entry: Inhalation, skin absorption.

First Aid Procedures:

Eye contact: Flush with water for 15 minutes. Get medical attention.

Skin contact: Wash with soap and water.

Inhalation: Remove to fresh air. Give artificial respiration if needed. Get medical attention.

Ingestion: Induce vomiting only at the instruction of a physician. Never give anything by mouth to an unconscious person. See physician immediately.

TOXICOLOGY INFORMATION:

Oral toxicity: LD_{50} (rats) - >5 g/kg
Dermal toxicity: LD_{50} (rabbits) - >2.0 g/kg
Inhalation toxicity: LC_{50} (rats) - >1.91 mg/L
Irritation: eye (rabbits) - slight
skin (rabbits) - minimal
Sensitization: skin (guinea pigs) - negative

These data below are for diflubenzuron technical:

21 day rabbit dermal study: Doses of 20, 500 and 1000 mg/kg/day. Effects seen on RBC and methemoglobin levels. NOEL = 20 mg/kg/day.

1 year dog feeding study: Doses of 2, 10, 50 and 250 mg/kg/day. Effects seen on body weight, RBC, methemoglobin and sulfhemoglobin levels and liver and spleen weights. NOEL = 2 mg/kg/day.

2 year rat feeding study: Doses of 8, 31, 125 and 500 mg/kg/day. Effects seen on body weight, RBC, methemoglobin and sulfhemoglobin levels, liver and spleen weights and histopathology. NOEL <8 mg/kg/day. A chronic feeding study at doses up to 8 mg/kg/day demonstrated a NOEL = 2 mg/kg/day.

Mouse oncogenicity study: Doses of 2, 11, 57, 286 and 1429 mg/kg/day. No increase in tumor incidence.

Rat reproduction study: Doses of 0.5, 1, 2 and 8 mg/kg/day. No adult or fetal effects. NOEL = 8 mg/kg/day. An additional study demonstrated a reproductive NOEL >2.5 g/kg/day.

Rabbit teratology study: Doses of 1, 2 and 4 mg/kg/day. No effects. An additional study demonstrated a maternal and developmental NOEL >1 g/kg/day.

Rat teratology study: Doses of 1, 2 and 4 mg/kg/day. No effects. An additional study demonstrated a maternal and developmental NOEL >1 g/kg/day.

Mutagenicity: Negative in the following assays: Ames reverse mutation, S. cerevisiae point mutation, Mouse lymphoma, Mouse dominant lethal, Balb/3T3 Transformation, Human WI-38 UDS, B. subtilis recombination, CHO Chromosome aberration, Mouse micronucleus.