

POND CARE DIMILIN

Chemwatch GHS Safety Data Sheet
For Domestic Use Only.
Dec-23-2009
NC614TDP

CHEMWATCH 4658-47
Version No:4
CD 2010/1 Page 1 of 11

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

POND CARE DIMILIN

OTHER NAMES

"Solution ID# 3356"

PRODUCT USE

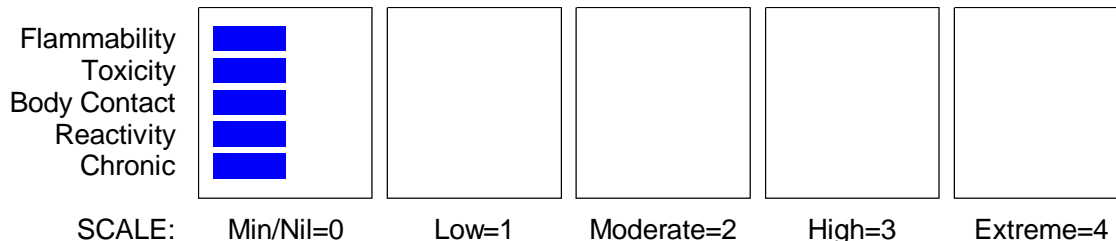
Used according to manufacturer's directions.
For product 177.

SUPPLIER

Company: Mars Fishcare Inc
Address:
50 East Hamilton Street
Chalfont
PA, 18914
USA
Telephone: +1 215 822 8181
Fax: +1 215 822 1906

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS



GHS Classification

Acute Aquatic Hazard Category 2

EMERGENCY OVERVIEW

HAZARD

Determined by Chemwatch using GHS criteria:
H401
Toxic to aquatic life

PRECAUTIONARY STATEMENTS

continued...

POND CARE DIMILIN

Chemwatch GHS Safety Data Sheet
For Domestic Use Only.
Dec-23-2009
NC614TDP

CHEMWATCH 4658-47
Version No:4
CD 2010/1 Page 2 of 11
Section 2 - HAZARDS IDENTIFICATION

Prevention

Avoid release to the environment.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
diflubenzuron	35367-38-5	0.1

Section 4 - FIRST AID MEASURES

SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE

If this product comes in contact with eyes:

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

FIRE/EXPLOSION HAZARD

- Non combustible.
- Not considered a significant fire risk, however containers may burn.

FIRE INCOMPATIBILITY

None known.

PERSONAL PROTECTION

Glasses:
Chemical goggles.

Gloves:
When handling larger quantities:

continued...

POND CARE DIMILIN

Chemwatch GHS Safety Data Sheet
For Domestic Use Only.
Dec-23-2009
NC614TDP

CHEMWATCH 4658-47
Version No:4
CD 2010/1 Page 3 of 11

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable, labelled container for waste disposal.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

SUITABLE CONTAINER

- Polyethylene or polypropylene container.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+: May be stored together

continued...

POND CARE DIMILIN

Chemwatch GHS Safety Data Sheet
For Domestic Use Only.
Dec-23-2009
NC614TDP

CHEMWATCH 4658-47
Version No:4
CD 2010/1 Page 4 of 11
Section 7 - HANDLING AND STORAGE

O: May be stored together with specific preventions
X: Must not be stored together

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

US OSHA Permissible Exposure Levels (PELs)

Z	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³	Max excursion ppm	Max excursion mg/m ³	Max excursion duration (mins)	TWA F/CC
Z3	Inert or Nuisance Dust: (d) Respirable fraction		5								
Z3	Inert or Nuisance Dust: (d) Total dust		15								

Source	Material	TWA mg/m ³	Notes
US - Oregon Permissible Exposure Limits (Z3)	diflubenzuron (Inert or Nuisance Dust: (d) Total dust)	10	*
US OSHA Permissible Exposure Levels (PELs) - Table Z3	diflubenzuron (Inert or Nuisance Dust: (d) Respirable fraction)	5	
US OSHA Permissible Exposure Levels (PELs) - Table Z3	diflubenzuron (Inert or Nuisance Dust: (d) Total dust)	15	
US - Hawaii Air Contaminant Limits	diflubenzuron (Particulates not otherwise regulated - Total dust)	10	
US - Hawaii Air Contaminant Limits	diflubenzuron (Particulates not otherwise regulated - Respirable fraction)	5	
US - Oregon Permissible Exposure Limits (Z3)	diflubenzuron (Inert or Nuisance Dust: (d) Respirable fraction)	5	*
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	diflubenzuron (Particulates not otherwise regulated Respirable fraction)	5	
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	diflubenzuron (Particulates not otherwise regulated (PNOR)(f)- Respirable fraction)	5	
US - Michigan Exposure Limits for Air Contaminants	diflubenzuron (Particulates not otherwise regulated, Respirable dust)	5	

MATERIAL DATA

POND CARE DIMILIN:
Not available

DIFLUBENZURON:

It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the

continued...

POND CARE DIMILIN

Chemwatch GHS Safety Data Sheet
For Domestic Use Only.
Dec-23-2009
NC614TDP

CHEMWATCH 4658-47
Version No:4
CD 2010/1 Page 5 of 11

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

PERSONAL PROTECTION



EYE

- Safety glasses with side shields
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

Wear general protective gloves, eg. light weight rubber gloves.

OTHER

No special equipment needed when handling small quantities.

OTHERWISE:

- Overalls.
- Barrier cream.
- Eyewash unit.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

continued...

POND CARE DIMILIN

Chemwatch GHS Safety Data Sheet
For Domestic Use Only.
Dec-23-2009
NC614TDP

CHEMWATCH 4658-47
Version No:4
CD 2010/1 Page 6 of 11

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank (in still air) aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	Air Speed: 0.25- 0.5 m/s (50- 100 f/min) 0.5- 1 m/s (100- 200 f/min.) 1- 2.5 m/s (200- 500 f/min) 2.5- 10 m/s (500- 2000 f/min.)
--	--

Within each range the appropriate value depends on:

Lower end of the range

- 1: Room air currents minimal or favourable to capture
- 2: Contaminants of low toxicity or of nuisance value only
- 3: Intermittent, low production.
- 4: Large hood or large air mass in motion

Upper end of the range

- 1: Disturbing room air currents
- 2: Contaminants of high toxicity
- 3: High production, heavy use
- 4: Small hood - local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Cloudy viscous liquid with a mild odour; mixes with water.

PHYSICAL PROPERTIES

Liquid.
Mixes with water.

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°F)	Not Available	Viscosity	Not Available
Boiling Range (°F)	Not Available	Solubility in water (g/L)	Miscible
Flash Point (°F)	Not Applicable	pH (1% solution)	Not Available

continued...

POND CARE DIMILIN

Chemwatch GHS Safety Data Sheet
For Domestic Use Only.
Dec-23-2009
NC614TDP

CHEMWATCH 4658-47
Version No:4
CD 2010/1 Page 7 of 11

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Decomposition Temp (°F)	Not Available	pH (as supplied)	5.5- 6.5
Autoignition Temp (°F)	Not Applicable	Vapour Pressure (mmHG)	Not Available
Upper Explosive Limit (%)	Not Applicable	Specific Gravity (water=1)	1.01
Lower Explosive Limit (%)	Not Applicable	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available

Material Value
DIFLUBENZURON:
log Kow 3.89

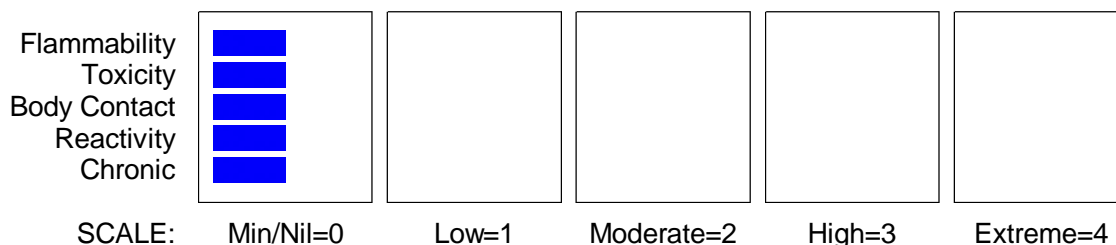
Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
 - Product is considered stable.
 - Hazardous polymerisation will not occur.
- For incompatible materials - refer to Section 7 - Handling and Storage.*

Section 11 - TOXICOLOGICAL INFORMATION

CHEMWATCH HAZARD RATINGS



POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (eg. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

EYE

Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

SKIN

The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure

continued...

POND CARE DIMILIN

Chemwatch GHS Safety Data Sheet
For Domestic Use Only.
Dec-23-2009
NC614TDP

CHEMWATCH 4658-47
Version No:4
CD 2010/1 Page 8 of 11

Section 11 - TOXICOLOGICAL INFORMATION

be kept to a minimum and that suitable gloves be used in an occupational setting.

INHALED

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

CHRONIC HEALTH EFFECTS

Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

TOXICITY AND IRRITATION

Not available. Refer to individual constituents.

DIFLUBENZURON:

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (rat) LD50: >4640 mg/kg *
Dermal (rat) LD50: >10000 mg/kg
Inhalation (rat) LD50: >35000 mg/m³/6h
Oral (mouse) LD50: >4640 mg/kg *
Intraperitoneal (mouse) LD50: >2150 mg/kg *
Dermal (rabbit) LD50: >2000 mg/kg *

IRRITATION

Nil Reported

[* The Pesticides Manual, Incorporating The Agrochemicals Handbook, 10th Edition, Editor Clive Tomlin, 1994, British Crop Protection Council].

Toxicity Class WHO Table 5; EPA III

NOEL (2 y) for rats 40 mg/kg diet. *

No teratogenic, mutagenic or oncogenic effects observed *

ADI: 0.02 mg/kg/day

Section 12 - ECOLOGICAL INFORMATION

Refer to data for ingredients, which follows:

DIFLUBENZURON:

Fish LC50 (96hr.) (mg/l):	150- 660
Daphnia magna EC50 (48hr.) (mg/l):	0.0021
log Kow (Sangster 1997):	3.88

Very toxic to aquatic organisms.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

The benzoylurea insecticides are generally very toxic to water flea (*Daphnia magna*) and other aquatic organisms.

The phenylurea herbicides may be divided into three categories based on water solubility. The most soluble, fenuron (water solubility 2900 to 3850 ppm) moves substantially in a lateral direction over the soil surface and in a vertical direction in the subsoil. Its movement is also related to soil texture and organic matter content. Movement is greater in coarse-textured soils and decreases at higher organic contents. The middle

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POND CARE DIMILIN

Chemwatch GHS Safety Data Sheet
For Domestic Use Only.
Dec-23-2009
NC614TDP

CHEMWATCH 4658-47
Version No:4
CD 2010/1 Page 9 of 11

Section 12 - ECOLOGICAL INFORMATION

group (water-solubilities 18 to 580 ppm) are moderately mobile in soil; their relative movement decreases as water solubility decreases. Movement of members of this group also decreases as the organic content matter of the soil increases. The least soluble group (water solubility 2 to 4.8 ppm) are immobile in the soil. Most phenylurea compounds have low vapour pressure and are not volatile from soil. Soil pH does not significantly affect adsorption, mobility or herbicidal activity. The field persistence of these compounds is moderate with residues remaining for several months following application, at most. These herbicides are readily metabolised by most biological systems. A combination of their low mammalian toxicity and biodegradability indicate that they are not significant factors in the contamination of soil and water systems: their significance as environmental pollutants is minimal.

DO NOT discharge into sewer or waterways.

The material is classified as an ecotoxin* because the Fish LC50 (96 hours) is less than or equal to 0.1 mg/l

* Classification of Substances as Ecotoxic (Dangerous to the Environment)

Appendix 8, Table 1

Compiler's Guide for the Preparation of International Chemical Safety Cards: 1993 Commission of the European Communities.

log Kow 3.89

Ecotoxicology:

Fish LC50 (96 h) for rainbow trout and bluegill sunfish 135 mg/l

Birds: Eight day dietary LC50 for bobwhite quail and mallard ducks >4640 mg/kg

Bees: LD50 (honey bees) > 0.03 mg/ bee by contact or ingestion.

Daphnia EC50 (48 h) 7.1 ug/l

Non toxic to Earthworms at 780 mg/kg of soil.

Environmental fate:

Soil and water:

Half life in soil is a few days, depending on particle size.

Diflubenzuron is strongly absorbed by soil/ humic acid complex and is virtually immobile in soil. Rapidly degraded in soil (half-life <7 days).

Breaks down to 2,6-difluorobenzoic acid, 4-chlorophenylurea, traces of parachloraniline. All are irreversibly bound to soil.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
diflubenzuron	HIGH		MED	MED

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle where possible
Otherwise ensure that:
- licenced contractors dispose of the product and its container.
- disposal occurs at a licenced facility.

Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

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POND CARE DIMILIN

Chemwatch GHS Safety Data Sheet
For Domestic Use Only.
Dec-23-2009
NC614TDP

CHEMWATCH 4658-47
Version No:4
CD 2010/1 Page 10 of 11

Section 15 - REGULATORY INFORMATION

REGULATIONS

Regulations for ingredients

diflubenzuron (CAS: 35367-38-5) is found on the following regulatory lists;

"Canada Non-Domestic Substances List (NDSL)", "US - Massachusetts Oil & Hazardous Material List", "US EPCRA Section 313 Chemical List", "US List of Lists - Consolidated List of Chemicals Subject to the Emergency Planning and Community Right-to-Know Act (EPCRA) and Section 112(r) of the Clean Air Act", "US Toxic Substances Control Act (TSCA) - Inventory"

No data for Pond Care Dimilin (CW: 4658-47)

Section 16 - OTHER INFORMATION

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
diflubenzuron	35367- 38- 5	N R50/53

CONTACT

Mars Fishcare

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following U.S. Regulations and Standards:

OSHA Standards - 29 CFR:

1910.132 - Personal Protective Equipment - General requirements

1910.133 - Eye and face protection

1910.134 - Respiratory Protection

1910.136 - Occupational foot protection

1910.138 - Hand Protection

Eye and face protection - ANSI Z87.1

Foot protection - ANSI Z41

Respirators must be NIOSH approved.

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continued...

POND CARE DIMILIN

Chemwatch GHS Safety Data Sheet
For Domestic Use Only.
Dec-23-2009
NC614TDP

CHEMWATCH 4658-47
Version No:4
CD 2010/1 Page 11 of 11
Section 16 - OTHER INFORMATION

Print Date: May-20-2010