



SAFETY DATA SHEET

DYNA-SHIELD® FLUDIOXONIL

SDS NUMBER: 001074-16-LPI

SDS REVISIONS: FORMAT

DATE OF ISSUE: 03/21/16

SUPERSEDES: 04/23/14

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 PRODUCT IDENTIFIER:

TRADE NAME: DYNA-SHIELD® FLUDIOXONIL

1.2 RECOMMENDED USE:

SEED TREATMENT

1.3 SUPPLIER DETAILS:

LOVELAND PRODUCTS, INC.

P.O. Box 1286 • Greeley, CO 80632-1286

1.4 24 Hour Emergency Phone: 1-800-424-9300 - Medical Emergencies: 1-866-944-8565 – Product Information: 1-888-574-2878 (LPI-CUST)

U.S. Coast Guard National Response Center: 1-800-424-8802

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to 29 CFR 1910.1200

Not applicable

2.2 Label elements

Signal word: NOT APPLICABLE
Hazard Statement: None

Precautionary Statement: None
(Prevention):
Precautionary Statement: None
(Response):

Precautionary Statement: None
(Storage):

Precautionary Statement: None
(Disposal):

2.3 Other hazards

None known



SAFETY DATA SHEET

DYNA-SHIELD® FLUDIOXONIL

SDS NUMBER: 001074-16-LPI

SDS REVISIONS: FORMAT

DATE OF ISSUE: 03/21/16

SUPERSEDES: 04/23/14

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

Classification according to 29 CFR 1910.1200

Chemical Name:	CAS No.	Classification	Concentration [%]
----------------	---------	----------------	-------------------

3.2 Mixtures

Classification according to 29 CFR 1910.1200

Chemical Name:	CAS No.	Classification	Concentration [%]
Ethylene Glycol	107-21-1	None	Trade Secret
Fludioxonil	13141-86-1		40.30
Other ingredients	Trade Secret		59.70

Ingredients not precisely identified are proprietary or non-hazardous.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

If inhaled: Move person to fresh air. If person is breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Harmful if inhaled. Harmful if absorbed through skin. Causes moderate eye irritation.

4.3 Immediate Medical Attention and Special Treatment

NOTES TO PHYSICIAN: No specific antidote is available. Treat symptomatically.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565

Have the product label or container with you when calling a poison control center or doctor or going for treatment.

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Use medium appropriate to surrounding fire. Dry chemical, carbon dioxide (CO₂), foam.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: Fires involving this product may release carbon monoxide, carbon dioxide, reactive hydrocarbons, and irritating vapors.

5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and deny unnecessary entry.



SAFETY DATA SHEET

DYNA-SHIELD® FLUDIOXONIL

SDS NUMBER: 001074-16-LPI

SDS REVISIONS: FORMAT

DATE OF ISSUE: 03/21/16

SUPERSEDES: 04/23/14

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Release or Spill: Wear chemical safety glasses with side shields or chemical goggles, rubber gloves, rubber boots, long-sleeved shirt, long pants, head covering, and a NIOSH-approved pesticide respirator or air-supplied respirator. Shovel into a container for later disposal.

6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: For spills: Spills may be collected with absorbent material and placed in a container for proper disposal in accordance with Federal, State and Local Regulations. Prevent runoff from entering sewer drains and waterways.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Avoid cleanup procedures that may result in water pollution.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling: Avoid eye and skin contact. Use with ventilation and avoid breathing vapors. Wash hands before eating, drinking, chewing gum, using tobacco products or using the toilet.

7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers: Store in a cool place. DO NOT store in direct sunlight. Protect from freezing temperatures. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS

U.S. Workplace Exposure Level (ACGIH) TLVs

Components	Type	Value
Ethylene glycol	STEL/CEIL(C)	100 mg/m ³ (Aerosol only)

U.S. Workplace Exposure Level (OSHA) PELs

Components	Type	Value
No listings	TWA	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Specimen
No listings		

8.2 EXPOSURE CONTROLS:

Engineering Measures

Local ventilation recommended. Work in well-ventilated areas. Follow label directions.

Individual Protection Measures:

Eye / Face Protection: Goggles or shielded safety glasses are recommended.
Skin Protection: Long-sleeved shirt and long pants. Chemical-resistant gloves. Shoes plus socks.
Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists or vapors, use suitable respiratory equipment approved by MSHA/NIOSH. Wear respiratory protection during operations where spraying or misting occurs. If respirators are used, a program should be in place to assure compliance with 29 CFR 1910.134, the OSHA Respiratory Protection standard. Wear air supplied respiratory protection if exposure concentrations are unknown.



SAFETY DATA SHEET

SDS NUMBER: 001074-16-LPI

SDS REVISIONS: FORMAT

DYNA-SHIELD® FLUDIOXONIL

DATE OF ISSUE: 03/21/16

SUPERSEDES: 04/23/14

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 APPEARANCE :	Liquid
ODOR:	Sweet, latex paint-like.
ODOR THRESHOLD:	No data available.
COLOR:	Colorless.
pH:	5.5 – 7.5
MELTING POINT / FREEZING POINT:	Not applicable.
BOILING POINT:	No data available.
FLASH POINT:	209°F / 98.3°C.
FLAMMABILITY (solid, gas):	No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	No data available.
VAPOR PRESSURE:	2.9 x 10 ⁻⁹ @ 25°C / 77°F.
SOLUBILITY:	1.8 mg/l @ 25°C / 77°F.
PARTITION CO-EFFICIENT, n-OCTANOL / WATER:	No data available.
AUTO-IGNITION TEMPERATURE:	No data available.
DECOMPOSITION TEMPERATURE:	No data available.
VISCOSITY:	No data available
SPECIFIC GRAVITY (Water = 1):	1.19 g/ml
BULK DENSITY:	9.93 lbs./gal 1.19 kg/L

Note: These physical data are typical values based on material tested but may vary from sample to sample.
Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

10. STABILITY AND REACTIVITY

10.1 REACTIVITY

Stable

10.2 CHEMICAL STABILITY

Stable under normal temperature conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No data available. Will not polymerize.

10.4 CONDITIONS TO AVOID

None known.

10.5 INCOMPATIBLE MATERIALS

None known.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

None known.

11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE

Dermal, Inhalation, Eye Contact.

LC₅₀ (rat): > 3.77 mg/L air (4H)

LD₅₀ Oral (rat): > 5,050 mg/kg.

LD₅₀ Dermal (rabbit): > 2,020 mg/kg

Acute Toxicity Estimates: No data available.

Eye Irritation (rabbit): Minimal eye irritant.

Skin Irritation (rabbit): Non-irritating.

Inhalation: No data available.

Ingestion: No data available.

Specific Target Organ Toxicity: Liver, kidney, Blood, CNS.

Aspiration: No data available.

Skin Sensitization (guinea pig): Not a sensitizer

Carcinogenicity: Not a carcinogen.

Germ Cell Mutagenicity: No data available.

Interactive Effects: None known.



SAFETY DATA SHEET

SDS NUMBER: 001074-16-LPI

SDS REVISIONS: FORMAT

DYNA-SHIELD® FLUDIOXONIL

DATE OF ISSUE: 03/21/16

SUPERSEDES: 04/23/14

12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY

This product is toxic to fish and aquatic invertebrates. DO NOT apply directly to water, to area where surface water is present, or to intertidal areas below the mean high water mark. DO NOT contaminate water when disposing of equipment wash water or rinsate.

Ecotoxicological Data

	Species	Test Results
Fludioxonil	Rainbow trout	0.47 ppm – 96-hour LC ₅₀
	Daphnia Magna	0.9 ppm – 48-hour EC ₅₀
	Bobwhite Quail	> 2000 mg/kg – 14-day LD ₅₀
	Green Algae	0.087 ppm – 5-day EC ₅₀

Drift or runoff may adversely affect non-target plants.
Do not apply directly to water.
Do not contaminate water when disposing of equipment wash water.
Do not apply when weather conditions favor drift from target area.

12.2 PERSISTENCE AND DEGRADABILITY

Biodegradability: Persistent in soil. Stable in water. Sinks in water after 24 hours.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Does not bioaccumulate.

12.4 MOBILITY IN SOIL

Low mobility in soil.

12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.

13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Wastes may be disposed of on site or at an approved waste disposal facility. Triple rinse (or equivalent), adding rinse water to spray tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by appropriate authorities. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at <http://www.acrecycle.org/>. Do not contaminate water, food or feed by storage or disposal.

14 TRANSPORT INFORMATION

14.3 LAND TRANSPORT

DOT Shipping Description: NOT REGULATED BY DOT.

U.S. Surface Freight Classification: INSECTICIDES OR FUNGICIDES, INSECT OR ANIMAL REPELLENTS, NOI, OTHER THAN POISON (NMFC 102120; CLASS: 60)



SAFETY DATA SHEET

DYNA-SHIELD® FLUDIOXONIL

SDS NUMBER: 001074-16-LPI

SDS REVISIONS: FORMAT

DATE OF ISSUE: 03/21/16

SUPERSEDES: 04/23/14

15 REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA		HMIS	
1	Health	0	Least
1	Flammability	1	Slight
0	Instability	2	Moderate
		3	High
		4	Severe

SARA Hazard Notification/Reporting

SARA Title III Hazard Category:	Immediate	<u>Y</u>	Fire	<u>N</u>	Sudden Release of Pressure	<u>N</u>
	Delayed	<u>N</u>	Reactive	<u>N</u>		

Reportable Quantity (RQ) under U.S. CERCLA: Ethylene Glycol (CAS 107-21-1) 5000 lbs..

SARA, Title III, Section 313: Ethylene Glycol (CAS 107-21-1).

RCRA Waste Code: Not listed.

CA Proposition 65: Not listed.

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

- Harmful if inhaled.
- Avoid breathing vapor or spray mist.
- Causes moderate eye irritation.
- Harmful if absorbed through skin.
- Avoid contact with eyes, skin, or clothing.
- Remove contaminated clothing and wash before reuse.

16 OTHER INFORMATION

SDS STATUS: Format revised.

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

EPA REG. NO.: 34704-1074

®Dyna-Shield is a registered trademark of Loveland Products, Inc.

Disclaimer and Limitation of Liability: This data sheet was developed from information on the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or process. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the information contained in this data sheet, and LOVELAND PRODUCTS, INC. disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purpose.