

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 CONQUEST™
- 1.2 **RECOMMENDED USE:** SEED TREATMENT PRODUCT TO PROTECT SEEDLINGS OF VARIOUS LEGUMES AGAINST PESTS
- 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

Acute Toxicity - Oral	Category 4	H302
Germ Cell Mutagenicity	Category 2	H341
Hazardous To the Aquatic Environment	Category 2	H401
Hazardous To the Aquatic Environment	Category 2	H411

2.2 Label elements



- Signal word: WARNING
- Hazard Statement:
 H302 – Harmful if swallowed.
 H341 – Suspected of causing genetic defects.
 H401 – Toxic to aquatic life.
 H411 – Toxic to aquatic life with long lasting effects.
- Precautionary Statement:
 (Prevention):
 P264 – Wash hands thoroughly after handling.
 P270 – Do not eat, drink or smoke when using this product.
 P201 – Obtain special instructions before use.
 P202 – Do not handle until all safety precautions have been read and understood.
 P280 – Wear protective gloves/protective clothing/eye protection/face protection.
- Precautionary Statement:
 (Response):
 P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
 P330 – Rinse mouth.
 P308+P313 – If exposed or concerned: Get medical advice/attention.
- Precautionary Statement:
 (Storage):
 P405 – Store locked up.
- Precautionary Statement:
 (Disposal):
 P501 – Dispose of in accordance with local, state, and federal regulations.

2.3 Other hazards

None known



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3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Classification according to 29 CFR 1910.1200

Chemical Name:	CAS No.	Concentration [%]
Imidacloprod	138261-41-3	19.5 – 20.8
Metalaxyl	57837-19-1	4.75 – 5.35
Thiophanate-methyl	23564-05-8	3.10 – 3.50
Fludioxonil	131341-86-1	0.70 – 0.92
*Other ingredients	Trade Secret	Trade Secret

*Ingredients not specifically listed are non-hazardous or are to be considered proprietary or confidential business information per 29 CFR 1910.1200(i)

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

Ingestion:	Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. Call a poison control center or doctor for treatment advice.
Inhalation:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Eye contact:	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.
Skin contact:	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.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Ingestion: Harmful if swallowed.

4.3 Immediate Medical Attention and Special Treatment

Treatment: Treat symptomatically. Symptoms may be delayed.

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

Take container, label or product name with you when seeking medical attention.

NOTES TO PHYSICIAN: Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Use media appropriate for surrounding materials. Dry chemical, carbon dioxide (CO₂), alcohol foam, foam, water spray or fog.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: During a fire, may produce gases such as oxides of nitrogen and oxides of carbon

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.



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6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Avoid inhalation of vapors and spray mist and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing. See section 8 for Personal Protection information.

6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: This product is toxic to birds, fish and aquatic invertebrates. For terrestrial use, **Do NOT** apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. **Do NOT** contaminate water when disposing of equipment washwaters or rinsate.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to Remove residual contamination. Never return spills to original containers for re-use.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling: Avoid inhalation of mists, vapors / spray and contact with eyes, skin and clothing. Do not breathe mists or vapor. Wear personal protective equipment. Do not use in areas without adequate ventilation. Avoid prolonged exposure. Wash thoroughly after handling. Do not empty into drains. Handle and open container with care. Use care in handling/storage. Wash hands and face before eating, drinking and/or smoking.

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, or cleaning of equipment.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**8.1 CONTROL PARAMETERS:
OCCUPATIONAL EXPOSURE LIMITS**

U.S. Workplace Exposure Level (ACGIH) TLVs

Components	Type	Value
No data available.		

U.S. Workplace Exposure Level (OSHA) PELs

Components	Type	Value
No data available.		

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Specimen
No listings		

8.2 EXPOSURE CONTROLS:

Engineering Measures

When handlers use closed systems in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticide [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Individual Protection Measures:

Eye / Face Protection: Goggles or shielded safety glasses are recommended. An eyewash station should be readily accessible.
Skin Protection: Long-sleeved shirt and long pants. Shoes plus socks. Chemical-resistant gloves made of: Barrier Laminate, Butyl Rubber ≥ 14 mils, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥ 14 mils, Polyvinyl Chloride (PVC) ≥ 14 mils, or Viton® ≥ 14 mils, and chemical resistant aprons for mixers, loaders and other handlers exposed to the concentrate.
Respiratory Protection: Not normally required. 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.



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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 APPEARANCE :	Liquid
ODOR:	Mild, sweet.
ODOR THRESHOLD:	No data available.
COLOR:	Red.
pH:	4.69 (1% suspension).
MELTING POINT / FREEZING POINT:	No data available
BOILING POINT:	No data available
FLASH POINT:	No data available.
FLAMMABILITY (solid, gas):	No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	No data available.
VAPOR PRESSURE:	Fluidioxonil: 2.9×10^{-9} mmHg @ 77°F / 25°C.
SOLUBILITIES:	Fluidioxonil: 1.8 mg/l @ 77°F / 25°C
PARTITION CO-EFFICIENT, n-OCTANOL / WATER:	No data available.
AUTO-IGNITION TEMPERATURE:	No data available.
DECOMPOSITION TEMPERATURE:	No data available
VISCOSITY: (kinematic):	266 cPs @ 25 °C, 50 speed and 309 cPs @ 38 °C, 50 speed.
SPECIFIC GRAVITY (Water = 1):	1.173 g/ml
DENSITY:	9.79 lbs./gal / 1.17 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 and use conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No data available. Will not polymerize.

10.4 CONDITIONS TO AVOID

None known.

10.5 INCOMPATIBLE MATERIALS

Avoid strong oxidizers.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition may release oxides of carbon and oxides of nitrogen.

11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE

Inhalation. Dermal.

LC₅₀ (rat): > 2.05 mg/L (4 HR).

LD₅₀ Oral (female rat): 1750 mg/kg

LD₅₀ Dermal (rat): > 5000 mg/kg

Acute Toxicity Estimates: No data available

Skin Irritation (rabbit): Minimally toxic and slight irritant.

Eye Irritation (rabbit): Mild irritant

Specific Target Organ Toxicity: STOT-Single Exposure: No data available for end-use product.
STOT-Repeated Exposure: No data available for end-use product.

Aspiration: No data available

Skin Sensitization (guinea pig): Not a sensitizer

Carcinogenicity: No data available

Reproductive Toxicity: No data available for end-use product

Germ Cell Mutagenicity: Contains Thiophanate-methyl which is suspected of causing genetic defects.

Interactive Effects: None known.



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12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY

The product is toxic to birds, fish and aquatic invertebrates. Metalaxyl is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this chemical where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Imidacloprod is highly toxic to bees. Ensure that planting equipment is functioning properly to minimize seed coat abrasion during planting to reduce which can drift to blooming crops or weeds.

Ecotoxicological Data

	Species	Test Results
Imidacloprod Technical	Apis mellifera	0.005 – 0.07 µg/bee – LD ₅₀ acute oral
	Apis mellifera	0.078 µg/bee – LD ₅₀ contact
	Rainbow Trout	211 mg/l - 96-hour LC ₅₀
	Daphnia Magna	85 mg/l - 48-hour EC ₅₀
	Bluegill	105 mg/l – 96-hour LC ₅₀
	Bobwhite Quail	1532 ppm - 8-day Dietary LC ₅₀
Metalaxyl Technical	Mallard Duck	152 mg/kg – Oral LD ₅₀
	House Sparrow	> 4797 ppm – 8-day Dietary LC ₅₀
	Rainbow Trout	41 mg/kg – Oral LD ₅₀
	Bluegill	> 130 mg/l – 96-hour LC ₅₀
	Daphnia Magna	> 139 mg/l – 96-hour LC ₅₀
	Bobwhite Quail	121 mg/l – 48-hour EC ₅₀
Thiophanate-methyl Technical	Mallard Duck	> 10000 ppm – 8-day Dietary LC ₅₀
	Rainbow Trout	> 10000 ppm – LD ₅₀
	Bluegill	8.3 ppm – 96-hour LC ₅₀
	Daphnia Magna	>41 ppm – 96-hour LC ₅₀
	Bobwhite Quail	121 mg/l – 48-hour EC ₅₀
	Mallard Duck	> 10000 ppm – 8-day Dietary LC ₅₀
Fludioxonil Technical	Apis mellifera	4640 mg/kg – Oral LD ₅₀
	Bluegill	0.078 µg/bee – LD ₅₀ contact
	Rainbow Trout	0.74 ppm – 96-hour LC ₅₀
	Daphnia Magna	0.47 ppm – 96-hour LC ₅₀
	Bobwhite Quail	0.90 ppm – 48-hour EC ₅₀
	Apis mellifera	> 5200 ppm – Oral LD ₅₀
	Mallard Duck	> 5200 mg/kg – 8-day Dietary LC ₅₀
	Apis mellifera	> 25 µg/bee – LD ₅₀ Oral

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: Fludioxonil is persistent in soil and is stable in water.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Fludioxonil does not bioaccumulate.

12.4 MOBILITY IN SOIL

Fludioxonil has low mobility in soil. Metalaxyl is very water soluble and variably binds to organic materials in the soils.

12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.

13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

PESTICIDE DISPOSAL: Wastes may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL [HANDLING]:

“NOTE: This product is available in multiple containers. Refer to the Net Contents section of this product’s labeling for the applicable “Nonrefillable” or “Refillable” designation. Follow the container disposal [handling] instructions below that apply to your container type / size.”

[Nonrefillable Containers 5 Gallons or Less] Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.



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[Nonrefillable containers larger than 5 gallons]

Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **[Refillable containers larger than 5 gallons] Refillable container.** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. 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: LESS THAN 29 GALLONS: NOT REGULATED BY USDOT

DOT Shipping Description: GREATER THAN 29 GALLONS: RQ UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S (THIOPHANATE-METHYL), 9, III, ERG GUIDE 171

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

15 REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA		HMIS			
1	Health	0	Least	1	Health
1	Flammability	1	Slight	1	Flammability
0	Instability	2	Moderate	0	Reactivity
		3	High	C	PPE
		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: Thiophanate-methyl (CAS: 23564-05-8) 10 lbs.

SARA, Title III, Section 313: Thiophanate-methyl (CAS: 23564-05-8)

RCRA Waste Code: Thiophanate-methyl (U409)

CA Proposition 65: Not applicable



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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 swallowed.

16 OTHER INFORMATION

SDS STATUS: New.

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

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

EPA REG. NO.: 34704-1102

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