

2011-5024
2011-11-22

GROUP	1B	INSECTICIDE
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UBG

PYRIFOS® 15G

GRANULAR INSECTICIDE

COMMERCIAL

CAUTION POISON

WARNING: EYE IRRITANT

READ THE LABEL BEFORE USING

KEEP OUT OF REACH OF CHILDREN

GUARANTEE: Chlorpyrifos 15%

Warning, contains the allergen Tree Nuts (Walnut)

REGISTRATION NO. 24648

PEST CONTROL PRODUCTS ACT

LOVELAND PRODUCTS CANADA INC.

789 Donnybrook Drive

DORCHESTER, ON

N0L 1G5

1-800-265-4624

NET CONTENTS: 22.7 KG

GENERAL INFORMATION

This product is not to be used in and around homes or other residential areas such as parks, school grounds, playing fields. It is not for use by homeowners or other uncertified users.

DO NOT APPLY BY AIR. For use with ground application equipment only.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit Croplife Canada's website at www.croplife.ca.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN

WARNING: EYE IRRITANT

HARMFUL IF SWALLOWED

Avoid contact with skin, eyes and clothing. Impervious chemical resistant gloves must be used, with long-sleeved shirt sleeves worn outside the gloves to prevent granules from falling into the gloves when handling this product. Work with the wind at your back to avoid breathing dust or having chemical blown into the eyes. Do not wear contaminated clothing. Gloves should be replaced frequently and clothing laundered daily. Wash thoroughly with soap and water after handling.

PRECAUTIONS FOR MIXERS/LOADERS

Mixers/Loaders must wear:

- overall over long-sleeved shirt and long pants
- chemical resistant gloves
- chemical resistant footwear and socks
- an air purifying respirator equipped with an –R or –P series filter
- chemical resistant apron

PRECAUTIONS FOR APPLICATORS

Applicators using ground application equipment with a closed cab must wear:

- long-sleeved shirt and long pants
- chemical resistant gloves when leaving the cab for cleanup and repairs (gloves must be removed when-re-entering the cab)
- socks and shoes

Applicators using ground application equipment with an open cab must wear:

- coveralls over long-sleeved shirt and long pants
- chemical resistant gloves
- socks and shoes

ENVIRONMENTAL HAZARDS

TOXIC to birds. TOXIC to wild mammals. Extremely TOXIC to fish and aquatic organisms.

TOXIC to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

TOXIC to bees exposed to direct treatment, drift or residues on blooming plants. DO NOT use on flowering crops or weeds.

DO NOT apply this product or allow it to drift to flowering crops or weeds if bees are visiting the treatment area. Applicators should inform local bee keepers prior to application if hives are in adjacent fields. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site.

To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to, heavy rainfall, moderate to steep slope, bare soil, poorly drained soil (eg., soils that are compacted or fined textured such as clay).

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip (buffer zone) between the treated area and the edge of the water body.

FIRST AID:

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 centre or doctor for treatment advice.

IF ON SKIN OR CLOTHING, take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

IF SWALLOWED, call a poison control centre or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION: Chlorpyrifos is an organophosphate that is a cholinesterase inhibitor. Typical symptoms of overexposure to cholinesterase inhibitors include headache, nausea, dizziness, sweating, salivation, runny nose and eyes. This may progress to muscle twitching, weakness, tremor, incoordination, vomiting, abdominal cramps and diarrhea in more serious poisonings. A life-threatening poisoning is signified by loss of consciousness, incontinence, convulsions and respiratory depression with a secondary cardiovascular component. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate degree of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as pralidoxime chloride, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidotes immediately after establishing an open airway and respiration. With oral exposure, the decision of whether to induce vomiting or not should be made by an attending physician.

STORAGE: Do not contaminate water, food or feed by storage or disposal.

DISPOSAL:

1. Completely empty contents of bag into application equipment.
2. Make the empty bag unsuitable for further use.
3. Dispose of the bag in accordance with provincial requirements.
4. For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *PEST CONTROL PRODUCTS ACT* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that PYRIFOS 15G Insecticide contains a Group 1B insecticide. Any insect population may contain individuals naturally resistant to PYRIFOS 15G Insecticide and other Group 1B insecticide. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance:

- Where possible, rotate the use of PYRIFOS 15G Insecticide or other Group 1B insecticides with different groups that control the same pests.
- Avoid application of more than the indicated number of sprays of PYRIFOS 15G Insecticide or other insecticides in the same group in a season.
- Use tank mixtures with insecticides from a different group when such use is permitted.
- Insecticide use should be based on an IPM program that includes scouting, record keeping and considers cultural, biological and other chemical control practices.
- Monitor treated pest populations for resistance development.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information and to report suspected resistance, contact the Technical Service, Loveland Products Canada Inc., 1-800-265-4624 or at www.uap.ca.

DIRECTIONS FOR USE

DO NOT apply this product directly to aquatic habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries habitats or marine habitats.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Ground application only (do not apply by aircraft).

Restricted Entry Intervals

Do not enter treated fields until 10 days after application for cauliflower, 1 day (24hrs) after application for all other crops.

Apply PYRIFOS 15G Insecticide to control corn rootworm and aid in the suppression of cutworm in corn, onion maggot larvae in onions and cabbage maggot in broccoli, brussels sprouts, cabbage, cauliflower and rutabagas.

Apply as an in-furrow at-plant treatment.
Do not apply more than one (1) application per season.

A plantback interval of 30 days must be observed between application and planting of rotational crops, with the exception of radishes, Chinese cabbage, pak choi and cole crops for which no plantback restriction is required.

CORN (Field, Seed and Sweet):

Do not apply within 70 days of harvest.

To control larvae of northern and western corn rootworms and suppress cutworm larvae, apply PYRIFOS 15G Insecticide at planting time as a band (row) treatment at the rate of 75 grams per 100 metres of row (11.25 grams ai/100m of row). Equivalent rates of PYRIFOS 15G Insecticide per hectare for various row spacing are given in the accompanying table. Incorporate the granules into the top 2.5 cm of soil by placing a 15 to 18 cm wide band over the row behind the planter shoe and ahead of the press wheels. When applied as directed for rootworm control, this product will provide some reduction of cutworm populations. However, under heavier infestations of cutworms, further insecticidal treatment with other formulations may be necessary.

Amount of PYRIFOS 15G Insecticide per 100 m of Row	Kg of PYRIFOS 15G Insecticide Required for Various Row Spacings					
75 g	102 cm	96.5 cm	91.5 cm	86.5 cm	81 cm	76 cm
	7.4	7.8	8.2	8.7	9.2	9.8

GENERAL INSTRUCTIONS FOR EQUIPMENT CALIBRATION: CAUTION: The following chart lists suggested initial gauge settings for application of PYRIFOS 15G with one hopper opening per row. Be sure to check the actual application rate under your operating conditions.

1. Fill hopper.
2. Attach a plastic bag to the tub opening.
3. Set your planter to the initial settings shown on the chart.
4. Measure off 100 row meters and drive your planter the premeasured distance at your desired speed.
5. Each bag should contain 75 grams of granules depending on your desired rate.

Note: <u>Grams WT of Granules</u>	<u>Approx. mL (Volume)</u>
75 grams	100 mL

6. If the result is over or under the desired rate, adjust the settings and repeat the calibration.

CALIBRATION	SPEED, Km/h								
	3	4.5	6.5	8	10	11	13	14.5	16
Application Rate, 75 g/100 Row Metres									
Planter	Gauge Setting								
Gandy ¹	13.6	16.7	19.7	22.8	24.8	26.3	27.8	29.3	30.7
John Deere 7000 Max Emerge ¹	9	12	16	19	22	25	27	30	31
John Deere 721 Flexi-Planter ²	1/22	1/25	1/28	2/4	2/7	2/11	2/16	2/22	2/29
Allis Chalmers 70 Series ³	8	8	8	8	8	8	8	8	8
Allis Chalmers 78 & 79 Series ⁴	1/2.9	1/5.1	1/7.3	2/0.5	2/2.8	2/6	2/9	3/2.3	3/5.5
Noble1 (new)	6	8	10	13	14	15	17	18	20
Noble1 (old)	7	10	13	16	19	22	25	27	30
International Harvester ⁴	1/2.9	1/5.1	1/7.3	2/0.5	1/2.8	2/6	2/9	3/2.3	3/5.5

¹ Gauge Setting

² Gauge Setting with range 1 & 2 - number shown is range/notch

³ Gauge Setting is constant regardless of speed

⁴ Gauge Setting shown with stem gates and dial settings - number shown is gate/dial

ONIONS:

To control larvae of the onion maggot, apply PYRIFOS 15G Insecticide as an in-furrow, at-plant treatment at the rate of 7.9-15.7 kg/hectare (1.2-2.4kg ai/hectare). Refer to the table for the required amount of PYRIFOS 15G Insecticide.

Spacing of Seed Furrow Width (cm)	2.5-5	7.5	10-15
Grams/100 metres	32	48	64
Kilograms of Product/ha	7.9	11.8	15.7
Kilograms ai/ha	1.2	1.8	2.4

Calculate the amount of PYRIFOS 15G Insecticide per 100 metres of row required as shown in the following examples: For dry onions, using a precision seeder equipped with a double line coulters, seed furrow width is 2.5 cm per line x 2 lines; therefore, apply 32 g of PYRIFOS 15G Insecticide per 100 metres of double row.

For pickling onions, use a Planet Jr. seeder equipped with a 10 cm shoe. Seed furrow width is 10 cm; therefore, apply 64 g of PYRIFOS 15G Insecticide per 100 metres of row. Use no more than 16 kg of PYRIFOS 15G Insecticide per hectare.

Do not harvest dry onions within 109 days of treatment (planting). Do not harvest pickling onions within 97 days of treatment (planting). Do not apply to bunching onions.

BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CAULIFLOWER, AND RUTABAGAS:

To control larvae of the cabbage maggot, apply PYRIFOS 15G Insecticide as an in-furrow, at-plant treatment. Apply 90-150 g ai/1000m of row. Refer to the table below for the rate of application for different row spacings. For rutabaga, do not apply within 30 days of harvest.

Rate Per Hectare at Indicated Row Spacing						
	30 cm	60 cm	75 cm	80 cm	90 cm	105 cm
g ai/1000 m row	90-150	90-150	90-150	90-150	90-150	90-150
kg product/1000 m row	0.6-1	0.6-1	0.6-1	0.6-1	0.6-1	0.6-1
kg product/ha	20-33.3	10-16.7	8-13.3	7.5-12.5	6.7-11.1	5.7-9.5
kg ai/ha	3-5	1.5-2.5	1.2-2	1.125-1.875	1-1.7	0.86-1.42

DIRECTIONS FOR USE**Potato**

In-furrow application at planting.

Crop	Pest	Rate	Maximum No. of Applications	Days Before Harvest
Potato	Wireworm	0.1 kg per 100 metres of row. (equivalent to 11.2 kg product/ha or 1.7 kg ai/ha based on 90 cm row spacing)	1	70

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED

SPECIAL USE APPLICATIONS: The DIRECTIONS FOR USE for reduction of wireworms in potato were developed by persons other than Loveland Products Canada Inc. Loveland Products Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) in connection with the use described for reduction of wireworms in potato. Accordingly, the Buyer and User assume responsibility for all damage or loss arising, and agree to hold Loveland Products Canada Inc. harmless from any claims based on efficacy and/or phytotoxicity in connection with the use described for reduction of wireworms in potato.

This label transcript service is offered by the Pest Management Regulatory Agency to provide efficient searching for label information. This service and this information do not replace the official hard-copy label. The PMRA does not provide any guarantee or assurance that the information obtained through this service is accurate, current or correct, and is therefore not liable for any loss resulting, directly or indirectly, from reliance upon this service.

**FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL DAY OR NIGHT 1-800-561-8273 or
CHEMTREC – DAY OR NIGHT 1 800-424-9300**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 PRODUCT IDENTIFIER:

TRADE NAME: PYRIFOS 15G

1.2 RECOMMENDED USE:

GROUP 1B INSECTICIDE

1.3 DISTRIBUTED BY:

LOVELAND PRODUCTS CANADA, INC.

789 DONNYBROOK DRIVE • DORCHESTER, ONTARIO N0L 1G5

1.4 24 Hour Emergency Phone: (Chemtrec): 1-800-424-9300 (Toll Free) - Additional Emergency Phone 1-800-561-8273

Loveland Technical Service: 1-800-328-4678

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Acute Toxicity – Oral	Category 4	H302
Acute Toxicity – Dermal	Category 4	H312
Germ Cell Mutagenicity	Category 1B	H340
Carcinogenicity	Category 1B	H350

2.2 Label elements



Signal word:

DANGER

Hazard Statement:

H302 – Harmful if swallowed.

H312 – Harmful in contact with skin.

H340 – May cause genetic defects.

H350 – May cause cancer.

Precautionary

Statement:

(Prevention):

P264 – Wash hands and face thoroughly after handling.

P270 – Do not eat, drink or smoke when using this product.

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

P201 – Obtain special instructions before use.

P202 – Do not handle until all safety precautions have been read and understood.

Precautionary

Statement:

(Response):

P301+P312: IF SWALLOWED: Call a poison centre or doctor/physician if you feel unwell.

P330 – Rinse mouth.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P312 – Call a poison centre or doctor/physician if you feel unwell.

P321 – Specific treatment (see Toxicological Information on the product label).

P362 – Take off contaminated clothing and wash it before reuse.

P308+P313 – If exposed or concerned: Get medical advice/attention.

Precautionary

Statement:

(Storage):

P405 – Store locked up.

Precautionary

Statement:

(Disposal):

P501 – Dispose of contents/container at an approved waste disposal facility or in accordance with provincial requirements.



SAFETY DATA SHEET

SDS NUMBER: 24648-19-LPI

SDS REVISIONS: FORMAT

DATE OF ISSUE: 02/08/19

PYRIFOS 15G
SUPERSEDES: 09/15/15

- 2.3 Other hazards
None known

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Chemical Name:	CAS No.	Concentration [%]
Chlorpyrifos	2921-88-2	15.00
Solvent naphtha (petroleum) light aromatic	64742-95-6	1.00 – 5.00

Warning, contains the allergen Tree Nuts (Walnut)

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

- 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 centre or doctor for treatment advice.
- If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.
- If swallowed:** Call a poison control centre 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 centre or doctor. Do not give anything by mouth to an unconscious person.
- If inhaled:** 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 centre or doctor for further treatment advice.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Harmful if swallowed. Harmful in contact with skin.

4.3 Immediate Medical Attention and Special Treatment

Treatment: **NOTES TO PHYSICIAN:** Chlorpyrifos is an organophosphate that is a cholinesterase inhibitor affecting the central and peripheral nervous systems and producing respiratory and cardiac depression. Typical symptoms of overexposure to cholinesterase inhibitors include headache, nausea, dizziness, sweating, salivation, runny nose and eyes. This may progress to muscle twitching, weakness and tremor in coordination, vomiting, abdominal cramps and diarrhea in more serious poisonings. A life-threatening poisoning is signified by loss of consciousness, incontinence, convulsions and respiratory depression with a secondary cardiovascular component. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate degree of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as pralidoxime chloride, may be therapeutic if used early; however, use only in conjunction with atropine. In cases of severe acute poisoning, use antidotes immediately after establishing an open airway and respiration. With oral exposure, the decision of whether to induce vomiting or not should be made by an attending physician.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-561-8273

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

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

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: 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. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this SDS.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Avoid inhalation of dusts and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing. Remove all sources of ignition.

6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Use personal protective equipment as required. Cover granular spill with plastic tarp or sheet to minimize spreading and keep material dry. Take up mechanically, placing into appropriate containers for disposal. Avoid creating dust. Clean contaminated surfaces thoroughly. Never return spills to original containers for re-use.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling: Use personal protective equipment as required. Avoid contact with eyes, skin and clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mists/vapours/spray. Do not eat, drink or smoke when using this product.

7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers: Store in original containers, tightly closed in secure, safe place away from children. Keep out of reach of children. Do not contaminate food, feedstuffs, or domestic (potable) water supplies.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS

U.S. Workplace Exposure Level (ACGIH) TLVs

Components	Type	Value
Chlorpyrifos	TWA	0.1 mg/m ³ (Inhalable fraction and vapour)

U.S. Workplace Exposure Level (OSHA) PELs

Components	Type	Value
No listings	TWA	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Specimen
Chlorpyrifos	0.1 mg/m ³ (IFV)	Cholinesterase activity in red blood cells BEI: 70% on individual's baseline

8.2 EXPOSURE CONTROLS:

Engineering Measures

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at www.croplife.ca.

Individual Protection Measures:

Eye / Face Protection: Goggles or shielded safety glasses are recommended.

Skin Protection: Long sleeved shirt and long pants, chemical-resistant gloves, such as barrier laminate or viton. Socks and chemical-resistant footwear.

Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists or vapours, 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 national or provincial standards. Wear air supplied respiratory protection if exposure concentrations are unknown.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 APPEARANCE:	Solid. Dry free-flowing granules.
ODOUR:	Solvent odour.
ODOUR THRESHOLD:	No data available.
COLOUR:	Light brown.
pH:	No applicable.
MELTING POINT / FREEZING POINT:	No data available.
BOILING POINT:	No data available.
FLASH POINT:	Does not flash.
FLAMMABILITY (solid, gas):	No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	No data available.
VAPOUR PRESSURE:	< 10 ⁻⁸ mm Hg (Diquat dibromide technical).
SOLUBILITY:	Soluble.
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):	0.48 – 0.64 g/ml
DENSITY:	480 – 640 kg/cm ³

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

Excessive heat; temperatures above 70 °C.

10.5 INCOMPATIBLE MATERIALS

Oxidizers and bases.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Decomposition products can include and are not limited to: oxides of sulfur, oxides of nitrogen, oxides of carbon, phosphorus compounds, and hydrogen chloride from burning and hydrogen chloride, organic sulfides, and sulfur dioxide from decomposition.

11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE

Eyes. Skin. Ingestion. Inhalation

LC₅₀ (male rat): 2.06 mg/L (4H)

LD₅₀ Oral (male rat): 2250 mg/kg.

LD₅₀ Dermal (rabbit): > 5,000 mg/kg

Acute Toxicity Estimates: No data available.

Eye Irritation (rabbit): Causes moderate eye irritation.

Skin Irritation (rabbit): Causes slight skin irritation.

Inhalation: Harmful if inhaled.

Ingestion: Harmful if swallowed.

Specific Target Organ Toxicity: Central nervous system, Peripheral nervous system, Plasma cholinesterase, Respiratory system.

Aspiration: No data available.

Skin Sensitization (guinea pig): Not a sensitizer

Carcinogenicity: Chlorpyrifos – IARC: Group 2A; OSHA: X.

Germ Cell Mutagenicity: No data available.

Interactive Effects: None known.



SAFETY DATA SHEET

SDS NUMBER: 24648-19-LPI

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PYRIFOS 15G

SUPERSEDES: 09/15/15

12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY

The pesticide is toxic to fish and aquatic invertebrates.

Ecotoxicological Data

	Species	Test Results
Chlorpyrifos	Oncorhynchus mykiss	0.011 mg/L - 96-hour LC ₅₀
	Pimephales promelas	0.11 – 0.13 mg/L - 96-hour LC ₅₀
	Daphnia magna	0.00012 – 0.00023 mg/L – 48-hour 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: Not readily biodegradable.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Does not bioaccumulate.

12.4 MOBILITY IN SOIL

No data available.

12.5 OTHER ADVERSE EFFECTS

Assessment: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Completely empty contents of bag into application equipment. Make the empty bag unsuitable for further use. Dispose of the bag in accordance with provincial requirements. For further information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

14 TRANSPORT INFORMATION

14.3 LAND TRANSPORT

TDG Shipping Description: UN3077 RQ ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III (CHLORPYRIFOS) ERG GUIDE 171.

This product contains a chemical which is listed as a severe marine pollutant according to DOT.

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

15 REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA

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

HMIS

2	Health
0	Flammability
0	Reactivity
X	PPE

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>		



SAFETY DATA SHEET

SDS NUMBER: 24648-19-LPI

SDS REVISIONS: FORMAT

DATE OF ISSUE: 02/08/19

PYRIFOS 15G

SUPERSEDES: 09/15/15

Reportable Quantity (RQ) under U.S. CERCLA: Chlorpyrifos (CAS: 2921-88-2) 1 lb.

SARA, Title III, Section 313: Not listed.

RCRA Waste Code: Not applicable.

CA Proposition 65: Not applicable.

WHMIS [Canada]: Pest control products are not controlled under WHMIS. Classified D2B

16 OTHER INFORMATION

SDS STATUS: Format revised.

PREPARED BY: Product Stewardship and Regulatory Affairs

REVIEWED BY: Safety, Health and Environment

Pest Control Products Act REG. NO.: 24648

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2011-5024
2011-11-22

GROUP	1B	INSECTICIDE
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UBG

PYRIFOS® 15G

GRANULAR INSECTICIDE

COMMERCIAL

CAUTION POISON

WARNING: EYE IRRITANT

READ THE LABEL BEFORE USING

KEEP OUT OF REACH OF CHILDREN

GUARANTEE: Chlorpyrifos 15%

Warning, contains the allergen Tree Nuts (Walnut)

REGISTRATION NO. 24648

PEST CONTROL PRODUCTS ACT

LOVELAND PRODUCTS CANADA INC.

789 Donnybrook Drive

DORCHESTER, ON

N0L 1G5

1-800-265-4624

NET CONTENTS: 22.7 KG

GENERAL INFORMATION

This product is not to be used in and around homes or other residential areas such as parks, school grounds, playing fields. It is not for use by homeowners or other uncertified users.

DO NOT APPLY BY AIR. For use with ground application equipment only.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit Croplife Canada's website at www.croplife.ca.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN

WARNING: EYE IRRITANT

HARMFUL IF SWALLOWED

Avoid contact with skin, eyes and clothing. Impervious chemical resistant gloves must be used, with long-sleeved shirt sleeves worn outside the gloves to prevent granules from falling into the gloves when handling this product. Work with the wind at your back to avoid breathing dust or having chemical blown into the eyes. Do not wear contaminated clothing. Gloves should be replaced frequently and clothing laundered daily. Wash thoroughly with soap and water after handling.

PRECAUTIONS FOR MIXERS/LOADERS

Mixers/Loaders must wear:

- overall over long-sleeved shirt and long pants
- chemical resistant gloves
- chemical resistant footwear and socks
- an air purifying respirator equipped with an –R or –P series filter
- chemical resistant apron

PRECAUTIONS FOR APPLICATORS

Applicators using ground application equipment with a closed cab must wear:

- long-sleeved shirt and long pants
- chemical resistant gloves when leaving the cab for cleanup and repairs (gloves must be removed when-re-entering the cab)
- socks and shoes

Applicators using ground application equipment with an open cab must wear:

- coveralls over long-sleeved shirt and long pants
- chemical resistant gloves
- socks and shoes

ENVIRONMENTAL HAZARDS

TOXIC to birds. TOXIC to wild mammals. Extremely TOXIC to fish and aquatic organisms.

TOXIC to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

TOXIC to bees exposed to direct treatment, drift or residues on blooming plants. DO NOT use on flowering crops or weeds.

DO NOT apply this product or allow it to drift to flowering crops or weeds if bees are visiting the treatment area. Applicators should inform local bee keepers prior to application if hives are in adjacent fields. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site.

To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to, heavy rainfall, moderate to steep slope, bare soil, poorly drained soil (eg., soils that are compacted or fined textured such as clay).

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip (buffer zone) between the treated area and the edge of the water body.

FIRST AID:

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 centre or doctor for treatment advice.

IF ON SKIN OR CLOTHING, take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

IF SWALLOWED, call a poison control centre or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION: Chlorpyrifos is an organophosphate that is a cholinesterase inhibitor. Typical symptoms of overexposure to cholinesterase inhibitors include headache, nausea, dizziness, sweating, salivation, runny nose and eyes. This may progress to muscle twitching, weakness, tremor, incoordination, vomiting, abdominal cramps and diarrhea in more serious poisonings. A life-threatening poisoning is signified by loss of consciousness, incontinence, convulsions and respiratory depression with a secondary cardiovascular component. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate degree of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as pralidoxime chloride, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidotes immediately after establishing an open airway and respiration. With oral exposure, the decision of whether to induce vomiting or not should be made by an attending physician.

STORAGE: Do not contaminate water, food or feed by storage or disposal.

DISPOSAL:

1. Completely empty contents of bag into application equipment.
2. Make the empty bag unsuitable for further use.
3. Dispose of the bag in accordance with provincial requirements.
4. For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *PEST CONTROL PRODUCTS ACT* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that PYRIFOS 15G Insecticide contains a Group 1B insecticide. Any insect population may contain individuals naturally resistant to PYRIFOS 15G Insecticide and other Group 1B insecticide. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance:

- Where possible, rotate the use of PYRIFOS 15G Insecticide or other Group 1B insecticides with different groups that control the same pests.
- Avoid application of more than the indicated number of sprays of PYRIFOS 15G Insecticide or other insecticides in the same group in a season.
- Use tank mixtures with insecticides from a different group when such use is permitted.
- Insecticide use should be based on an IPM program that includes scouting, record keeping and considers cultural, biological and other chemical control practices.
- Monitor treated pest populations for resistance development.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information and to report suspected resistance, contact the Technical Service, Loveland Products Canada Inc., 1-800-265-4624 or at www.uap.ca.

DIRECTIONS FOR USE

DO NOT apply this product directly to aquatic habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries habitats or marine habitats.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Ground application only (do not apply by aircraft).

Restricted Entry Intervals

Do not enter treated fields until 10 days after application for cauliflower, 1 day (24hrs) after application for all other crops.

Apply PYRIFOS 15G Insecticide to control corn rootworm and aid in the suppression of cutworm in corn, onion maggot larvae in onions and cabbage maggot in broccoli, brussels sprouts, cabbage, cauliflower and rutabagas.

Apply as an in-furrow at-plant treatment.

Do not apply more than one (1) application per season.

A plantback interval of 30 days must be observed between application and planting of rotational crops, with the exception of radishes, Chinese cabbage, pak choi and cole crops for which no plantback restriction is required.

CORN (Field, Seed and Sweet):

Do not apply within 70 days of harvest.

To control larvae of northern and western corn rootworms and suppress cutworm larvae, apply PYRIFOS 15G Insecticide at planting time as a band (row) treatment at the rate of 75 grams per 100 metres of row (11.25 grams ai/100m of row). Equivalent rates of PYRIFOS 15G Insecticide per hectare for various row spacing are given in the accompanying table. Incorporate the granules into the top 2.5 cm of soil by placing a 15 to 18 cm wide band over the row behind the planter shoe and ahead of the press wheels. When applied as directed for rootworm control, this product will provide some reduction of cutworm populations. However, under heavier infestations of cutworms, further insecticidal treatment with other formulations may be necessary.

Amount of PYRIFOS 15G Insecticide per 100 m of Row	Kg of PYRIFOS 15G Insecticide Required for Various Row Spacings					
75 g	102 cm	96.5 cm	91.5 cm	86.5 cm	81 cm	76 cm
	7.4	7.8	8.2	8.7	9.2	9.8

GENERAL INSTRUCTIONS FOR EQUIPMENT CALIBRATION: CAUTION: The following chart lists suggested initial gauge settings for application of PYRIFOS 15G with one hopper opening per row. Be sure to check the actual application rate under your operating conditions.

1. Fill hopper.
2. Attach a plastic bag to the tub opening.
3. Set your planter to the initial settings shown on the chart.
4. Measure off 100 row meters and drive your planter the premeasured distance at your desired speed.
5. Each bag should contain 75 grams of granules depending on your desired rate.

Note: <u>Grams WT of Granules</u>	<u>Approx. mL (Volume)</u>
75 grams	100 mL

6. If the result is over or under the desired rate, adjust the settings and repeat the calibration.

CALIBRATION	SPEED, Km/h								
	3	4.5	6.5	8	10	11	13	14.5	16
Application Rate, 75 g/100 Row Metres									
Planter	Gauge Setting								
Gandy ¹	13.6	16.7	19.7	22.8	24.8	26.3	27.8	29.3	30.7
John Deere 7000 Max Emerge ¹	9	12	16	19	22	25	27	30	31
John Deere 721 Flexi-Planter ²	1/22	1/25	1/28	2/4	2/7	2/11	2/16	2/22	2/29
Allis Chalmers 70 Series ³	8	8	8	8	8	8	8	8	8
Allis Chalmers 78 & 79 Series ⁴	1/2.9	1/5.1	1/7.3	2/0.5	2/2.8	2/6	2/9	3/2.3	3/5.5
Noble1 (new)	6	8	10	13	14	15	17	18	20
Noble1 (old)	7	10	13	16	19	22	25	27	30
International Harvester ⁴	1/2.9	1/5.1	1/7.3	2/0.5	1/2.8	2/6	2/9	3/2.3	3/5.5

¹ Gauge Setting

² Gauge Setting with range 1 & 2 - number shown is range/notch

³ Gauge Setting is constant regardless of speed

⁴ Gauge Setting shown with stem gates and dial settings - number shown is gate/dial

ONIONS:

To control larvae of the onion maggot, apply PYRIFOS 15G Insecticide as an in-furrow, at-plant treatment at the rate of 7.9-15.7 kg/hectare (1.2-2.4kg ai/hectare). Refer to the table for the required amount of PYRIFOS 15G Insecticide.

Spacing of Seed Furrow Width (cm)	2.5-5	7.5	10-15
Grams/100 metres	32	48	64
Kilograms of Product/ha	7.9	11.8	15.7
Kilograms ai/ha	1.2	1.8	2.4

Calculate the amount of PYRIFOS 15G Insecticide per 100 metres of row required as shown in the following examples: For dry onions, using a precision seeder equipped with a double line couler, seed furrow width is 2.5 cm per line x 2 lines; therefore, apply 32 g of PYRIFOS 15G Insecticide per 100 metres of double row.

For pickling onions, use a Planet Jr. seeder equipped with a 10 cm shoe. Seed furrow width is 10 cm; therefore, apply 64 g of PYRIFOS 15G Insecticide per 100 metres of row. Use no more than 16 kg of PYRIFOS 15G Insecticide per hectare.

Do not harvest dry onions within 109 days of treatment (planting). Do not harvest pickling onions within 97 days of treatment (planting). Do not apply to bunching onions.

BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CAULIFLOWER, AND RUTABAGAS:

To control larvae of the cabbage maggot, apply PYRIFOS 15G Insecticide as an in-furrow, at-plant treatment. Apply 90-150 g ai/1000m of row. Refer to the table below for the rate of application for different row spacings. For rutabaga, do not apply within 30 days of harvest.

Rate Per Hectare at Indicated Row Spacing						
	30 cm	60 cm	75 cm	80 cm	90 cm	105 cm
g ai/1000 m row	90-150	90-150	90-150	90-150	90-150	90-150
kg product/1000 m row	0.6-1	0.6-1	0.6-1	0.6-1	0.6-1	0.6-1
kg product/ha	20-33.3	10-16.7	8-13.3	7.5-12.5	6.7-11.1	5.7-9.5
kg ai/ha	3-5	1.5-2.5	1.2-2	1.125-1.875	1-1.7	0.86-1.42

DIRECTIONS FOR USE**Potato**

In-furrow application at planting.

Crop	Pest	Rate	Maximum No. of Applications	Days Before Harvest
Potato	Wireworm	0.1 kg per 100 metres of row. (equivalent to 11.2 kg product/ha or 1.7 kg ai/ha based on 90 cm row spacing)	1	70

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED

SPECIAL USE APPLICATIONS: The DIRECTIONS FOR USE for reduction of wireworms in potato were developed by persons other than Loveland Products Canada Inc. Loveland Products Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) in connection with the use described for reduction of wireworms in potato. Accordingly, the Buyer and User assume responsibility for all damage or loss arising, and agree to hold Loveland Products Canada Inc. harmless from any claims based on efficacy and/or phytotoxicity in connection with the use described for reduction of wireworms in potato.

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