

88901-1

11/26/2012

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**U.S. ENVIRONMENTAL PROTECTION AGENCY**

Office of Chemical Safety and Pollution Prevention  
Office of Pesticide Programs  
Registration Division (7504P)  
1200 Pennsylvania Ave., N.W.  
Washington, DC 20460

EPA Reg. Number:

Date of Issuance:

**88901-1**

**NOV 26 2012**

Term of Issuance:  
Unconditional

Name of Pesticide Product:  
**Polydex**

**NOTICE OF PESTICIDE:**

Registration  
 Reregistration  
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

EnvirEau Technologies Inc.  
350-3771 Jacombs Rd  
Richmond, BC V6V 2L9  
Canada

Mailed to:

Dave Paulson  
Water Think Tank, LLC  
19406 East Bethel Blvd  
Cedar, MN 55011

**Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.**

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

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Signature of Approving Official:

Date:

**NOV 26 2012**

Tony Kish, Product Manager (22)  
Fungicide Branch/Registration Division/OPP/OCSP (7504P)

2. Make the following changes to the label:
  - a. Change the product registration number to "EPA Reg. No. 88901-1"
  - b. Pg 1 - delete the word "Poison"
  - c. Pg 4 - add an asterisk after the word "shelf-life" in the final bullet
  - d. Pg 10 - in the Extension of Shelf Life section add an asterisk to the word "bacteria\*" in the first line of the second paragraph.
  - e. Pg 15 at top delete "...FOOD AND..." as there are no food crops on label.
2. You must submit the following conditional data before the due date of 12/31/2013:
  - a. Storage Stability (830.6317) and Corrosion Characteristics (830.6320) studies. The cited studies are not from an identical product.
3. Submit one copy of the revised final printed label for the record before the product is released for shipment.

Your release for shipment of the product constitutes acceptance of these conditions.

A copy of the label stamped "Accepted with Comments" is enclosed for your records.

Enclosure:

Label stamped "Accepted with Comments"



Certified to ANSI/NSF 60

# MASTER LABEL

## POLYDEX

### ALGICIDE / BACTERICIDE\*/FUNGICIDE

\*Non Public Health Bacteria

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

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NOV 26 2012

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.

88901-1

Intended for Commercial use only. Not intended for residential/homeowner use.

#### ACTIVE INGREDIENT

Copper Sulfate Pentahydrate*	20.3%
Other Ingredients	79.7%
Total	100%

\* METALLIC COPPER CONTENT 5.16%  
CAS No. 7758-99-8

KEEP OUT OF REACH OF CHILDREN

## DANGER – PELIGRO POISON

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

#### 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 to rinse eye. Call a poison control center or doctor for treatment advice
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.
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 swallowed	Call 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 to an unconscious person.

**Note:** Have the product container or label with you when calling a poison control center or doctor for treatment. Contact your poison control center at 1-800-222-1222. For help with a spill, leak, fire or exposure involving this material call CHEMTREC 1-800-424-9300.

**Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage..

### NET CONTENTS: 2.64 Gallons (10 L)

EnvirEau Technologies Inc.  
350-3771 Jacombs Road  
Richmond, BC V6V 2L9

EPA Reg. No. 88901-R  
EPA Establishment No. 88901-XX-XXX

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER: Corrosive. Causes irreversible eye damage. Harmful if swallowed. Harmful if absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin.**

For application in waters destined for use as drinking water, those waters must receive additional and separate potable water treatment. Do not apply more than 1.0 ppm as metallic copper in these waters.

#### PERSONAL PROTECTIVE EQUIPMENT

Mixers, loaders, applicators and other handlers must wear:

- Long sleeved shirt,
- Long pants,
- Shoes plus socks,
- Chemical-resistant gloves, and
- Protective eyewear such as goggles, face shield or safety glasses.

Some materials that are chemical-resistant to this product are: barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, or viton. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

#### USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Users should remove clothing / PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should remove clothing/PPE immediately after handling the product. As soon as possible, wash thoroughly and change into clean clothing.

Wash the outside of gloves before removing.

#### ENVIRONMENTAL HAZARDS

##### AQUATIC USES

This pesticide is toxic to fish and aquatic invertebrates. Waters treated with this product may be hazardous to aquatic organisms. Treatment of aquatic weeds and algae can result in oxygen loss from decomposition of dead algae and weeds. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than 1/2 of the water body to avoid depletion of oxygen due to decaying vegetation. Wait at least 10-14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State or local agency with primary responsibility for regulating pesticides before applying to public waters, to determine if a permit is required. Certain water conditions including low pH ( $\leq 6.5$ ), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower), and "soft" waters (i.e., alkalinity less than 50 mg/L), increases the potential acute toxicity to non-target aquatic organisms.

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## ENVIRONMENTAL HAZARDS - continued

### TERRESTRIAL USES

For terrestrial uses, this pesticide is toxic to aquatic invertebrates and may contaminate water through runoff. This product has the potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. For terrestrial uses, do not apply directly to water, 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 washwater or rinsate.

### APPLICATION AND HANDLING EQUIPMENT

**FABRICS CONTAINING COTTON OR NYLON MAY DISSOLVE ON CONTACT WITH UNDILUTED POLYDEX.** Do not allow clothing to come in contact with concentrated or dilute product. Application, handling and storage equipment **MUST** be fibreglass, PVC, polypropylene, viton, most plastics, aluminum or stainless steel. **NEVER** use nylon, copper or brass or mild steel parts / components in contact with product. Wash spray equipment thoroughly with fresh clean water after each use.

### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labelling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labelling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours. Notify workers of the application by warning them orally OR by posting warning signs at entrances to treated areas.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls, chemical-resistant gloves made of any waterproof material (See Personal Protective Equipment section of this label), shoes plus socks, and protective eyewear such as goggles, face shield or safety glasses.

### GREENHOUSE USE

The Restricted Entry Interval (REI) for greenhouses is 24 hrs providing the following conditions are met:

For at least seven days following the application of copper sulfate pentahydrate in greenhouses:

1. At least one container or station designed specifically for flushing eyes is available in operating condition with the WPS-required decontamination supplies for workers entering the treated area, and
2. Workers must be informed orally, in a manner they can understand:
  - o That residues in the treated area may be highly irritating to their eyes
  - o That they should take precautions, such as refraining from rubbing their eyes
  - o That they should keep the residues out of their eyes
  - o That if they do get residues in their eyes, they should immediately flush their eyes with the eye flush container or eye flush station that is located with the decontamination supplies
  - o How to operate the eye flush container or eye wash station.

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Do not enter or allow others to enter until sprays have dried.

### PRODUCT INFORMATION

Polydex is an innovative product that does not precipitate or stratify. When labeled concentrations are maintained, it stays evenly dispersed in water providing on-going protection to the water.

Use Polydex to control:

- Algae, bacteria\* and aquatic plants in lakes, reservoirs, lagoons, swimming areas, ponds (farm, industrial, golf course, ornamental, aquaculture, irrigation), decorative water features (fountains, waterfalls), irrigation systems, ditches, streams, waters destined for use as drinking water, and rice fields.
- Tadpole Shrimp in rice fields.
- Bacteria\*, bacterial odors, and algae in sewage lagoons, feedlot run-off pits, animal confinement facilities, waste tanks, digesters, manure pits, and similar applications.
- Listed plant diseases in non-food crops, tropical foliage plants, annual/perennial plants, potted flowering plants, shrubs, trees and vines, and in nurseries, greenhouses, fields.
- Black algae and moss on turfgrass.
- to extend the shelf-life of raw fruits and vegetables.

\*Non-public Health bacteria

## SPECIFIC DIRECTIONS FOR USE

### CONTROL OF ALGAE, NON-PUBLIC HEALTH BACTERIA, AND AQUATIC PLANTS IN LAKES, RESERVOIRS, LAGOONS, SWIMMING AREAS, PONDS (FARM, INDUSTRIAL, GOLF COURSE, ORNAMENTAL, AQUACULTURE) DECORATIVE WATER FEATURES (FOUNTAINS, WATERFALLS ETC.)

#### ALGAE CONTROL

Apply in late spring or early summer when algae first appear. Application rates vary; higher application rates are needed for lower water temperatures, higher algae concentrations, hard or turbid waters, and flowing water. If there is uncertainty about the dosages, begin with a lower dose and increase until control is achieved, or until the maximum allowable level has been reached.

When possible, treat algae on a sunny day when the heavy mats of filamentous algae are most likely to be floating on the surface where they can be sprayed directly. Physical removal of large mats gives the best results.

Treatment of algae and aquatic weeds can result in oxygen loss when the dead algae/ weeds start to decompose. This oxygen loss can suffocate fish and other pond life. To minimize this hazard, do not treat more than 1/2 of the water body at once and wait at least 14 days between treatments to allow oxygen levels to recover. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas.

For applications in waters destined for eventual use as drinking water, those waters must receive additional and separate potable water treatment. Do not apply more than 1.0 ppm as metallic copper in these waters. Applications may be repeated at 14 day intervals.

#### CALCULATION OF AREA TO BE TREATED

1. Obtain surface area by measuring regular shaped ponds or mapping irregular ponds or by use of previously recorded data or maps.
2. Calculate average depth by sounding in a regular pattern and taking the mean of these readings or by use of previously recorded data.

#### APPLICATION RATES

##### USING ACRE FEET:

Once the surface area in acres of the body of water has been calculated, use the below chart to determine how many gallons of Polydex are required For example, if the water to be treated has a surface area of 7 acres and a depth of 4 ft, and the algae growth is moderate, you will need:  $7 \times 15.2 = 106$  gallons to treat the area. If you have a 12 acre pond that is 3 feet deep and heavy algae growth, you will need  $12 \times 16.2 = 194$  gallons. Application rates for depths greater than 4 feet may be obtained by adding the rates below to give proper depth. The application rates in the chart below are based on static or low flow conditions. For effective control, the proper chemical concentration should be maintained for a minimum of three hours duration to assure adequate uptake. When significant dilution occurs from inflow of untreated waters within the three-hour period the chemical may need to be metered. (See drip system application, pg. 9))

**APPLICATION RATES IN GALLONS PER SURFACE ACRE**

Relative Density & Growth Stage	ppm copper	Average Depth in Feet			
		1	2	3	4
Low density (early season)	0.4	2.1 gal	4.2 gal	6.3 gal	8.4 gal
Moderate density (Mid season)	0.7	3.7 gal	7.4 gal	11.1 gal	14.8 gal
Heavy Density (Late season)	1.0	5.3 gal	10.6 gal	15.9 gal	21.2 gal

**USING CUBIC FEET:**

1. First calculate total gallons of water:

Shape of Pond	Formulas for gallons (measurements in feet)
Rectangular	Length x width x depth x 7.5 = gallons
Circle	Diameter x diameter x depth x 5.9 = gallons
Oval	Length x width x depth x 6.7 = gallons

For example: If you have a rectangular ponds that has a length of 1000 feet and a width of 70 ft and a depth of 5 ft, then the calculation would be:  $1000 \times 70 \times 5 \times 7.5 = 525,000$  gallons of water in the pond. The diameter of a round pond is the measurement from one side of the pond to the opposite side going through the midpoint of the pond.

2. Once the total gallons of the pond have been calculated, use the following application rates:

Relative Density & Growth Stage	ppm copper	Application Rate
Low density (early season)	0.4	1 qt per 38,500 gallons
Moderate density (Mid season)	0.7	1 qt per 22,000 gallons
Heavy Density (Late season)	1.0	1 qt per 15,500 gallons

Apply Polydex as a concentrate or dilute spray from either the shoreline or from a boat. Pre-dilution of Polydex in a 1:4 ratio before application will result in faster dispersion of Polydex within the body of water. This pesticide is toxic to fish and aquatic invertebrates. Carefully read the **PRECAUTIONARY STATEMENTS** and **SPRAY DRIFT MANAGEMENT** sections of this label before application.

**BOAT APPLICATION:**

In larger bodies of water, the best way to apply Polydex is by boat. Use minimal speed during application to allow the prop wash to disperse and mix the product into the treated waters.

**Submerged Hoses:**

A small pump mounted in the boat can easily be used for this purpose. When using this method, Polydex is pumped from either its original container or a nurse tank into a hose (or manifolded gang of hoses) where hose(s) are trailing over the side or back of the boat and where the hose outlet is just below the surface of the water. Application through hoses eliminates or minimizes the risk of drift.

**Surface Spray:**

Polydex may be applied as a surface spray by boat mounted booms. Boat mounted booms should be mounted so nozzle tips are no more than 2 feet above the water's surface. Polydex can either be pumped from its original container or a nurse tank.



## SHORELINE APPLICATION

### *Using a Sprayer*

In smaller lakes, ponds, and reservoirs, Polydex is most easily applied by using either an electrically or manually operated hand sprayer. REMOVE THE SPRAY NOZZLE from the sprayer so that, when activated, the spray device dispenses a straight stream rather than a spray pattern. This will minimize or eliminate the potential for any drift and enable you to project the dispensed stream of Polydex further away from the shore line than if the spray nozzle were attached. Always use a sprayer that is constructed of materials listed in the **STORAGE AND HANDLING EQUIPMENT** section of this label. Never use this method of application when you must stand down wind of the direction of application or in any position that could expose you to drift. Pre-dilution of Polydex in a 1:4 ratio before application will result in faster dispersion of Polydex within the body of water.

1. Based on your developed knowledge of the body of water, mark two points on opposing shorelines where, when drawing an imaginary line between them, ½ the volume of water is on each side of the line. Verify your water volume calculations
2. Determine the amount of Polydex required to treat the portion of the body of water selected in #1 above. Dilution of Polydex 1: 4 with clean water prior to application may be done so that uniform distribution is more easily accomplished
3. Beginning at one mark on the shoreline, simultaneously begin walking towards the other mark while projecting a stream of Polydex or Polydex solution to a point approximately 5 feet from the shoreline
4. When the opposing mark has been reached, reverse course and while walking back to the beginning mark, project a stream approximately 10 feet from the shoreline
5. Repeat steps 3 & 4, increasing the distance of stream projection from the shoreline by 5 feet each time, until all Polydex is dispensed.
6. Do not treat more than ½ of the water body at once and wait at least 14 days between treatments

### *Direct Pour*

For small ponds, decorative water features (fountains, & waterfalls) apply by pouring Polydex directly from the container into the water around the perimeter of the body of water. Several evenly-spaced application points will speed up dispersal.

## CONTROL OF ALGAE, AND NON-PUBLIC HEALTH BACTERIA IN DITCHES, STREAMS AND IRRIGATION SYSTEMS (PUMPING STATIONS, CONVEYANCE SYSTEMS, DISTRIBUTION, AND FIELD APPLICATION SYSTEMS)

**CALCULATION OF WATER FLOW:** In ditches, streams, and canal type irrigation systems, the amount of water flow in cubic feet per second is found by means of a weir or other measuring device. If no weir or other measuring device is available, water flow and volume can be estimated as: Average width X Depth X Velocity in feet/sec = Cubic Feet per Second (CFS). Velocity can be determined by the time it takes for a floating object to move a given distance. This measurement should be made three to four times and the results should be averaged. Note: 1 CFS. per hour = 27,000 gals per hour.

**DRIP-SYSTEM APPLICATION RATES:**

Calculate the continuous application rate of Polydex from the chart below (based on heavy algae growth - 1 ppm application).

Water Flow Rate		Application Rates		
CFS	gal / min	qt /hr	ml / min	fl oz / min
1	450	2.0	32	1
2	900	4.0	64	2.2
3	1350	6.0	94	3.3
4	1800	8.0	125	4.2
5	2250	10.0	157	5.5

Calculate the amount of Polydex needed to maintain the drip rate for a period of 4 hours by multiplying qt / hr by 4, OR ml / min by 240, OR fl. oz. / min by 240. **This dosage will maintain the copper level at 1.0 ppm for 4 hours (to be used as a general reference rate to control heavy algae growth). Effective control of most algae species can be obtained with copper levels between 0.5 - 1.0 ppm maintained for 4 - 6 hours.** Begin continuous addition of product when water is first turned into the system. The chemical must be introduced at a point of turbulence. Readjust as required if flows change. Distance of control will vary. For conveyance systems longer than 10 miles, it is recommended that the above dosage be dispersed among injection points every 10 miles. Do not exceed total recommended dosage. Periodic maintenance treatments may be required.

Irrigation water treated with this product may be hazardous to aquatic organisms. Treated water must be held on the irrigated field until absorbed by the soil.

**CONTROL OF ALGAE IN RICE (DOMESTIC AND WILD) FIELDS**

Apply product when algae has formed on the soil surface of the flooded field. Applications are most effective when made prior to the algae leaving the soil surface and rising to the water surface. Factors such as water depth, temperature, pH and the amount of algae can affect the amount of Polydex required. Do not exceed 1 ppm metallic copper. Polydex can be metered into the rice field as water is being applied, slug fed into each paddy when water is being held, or applied by plane. Read **Aerial Application** instructions in the **SPRAY DRIFT MANAGEMENT** section of this label for specific instructions for aerial applications. Applications may be repeated after 14 day intervals.

**CONTROL OF ALGAE IN AQUACULTURE PONDS**

Before treating ponds containing fish, measure total alkalinity (NOT HARDNESS OR PH). The toxicity of copper to fish increases as the total alkalinity decreases. If the total alkalinity is less than 50 ppm, copper treatments are not recommended because of the high risk of killing fish. When algae concentrations are high, to avoid suffocation of fish after treatment, either treat in a series of smaller doses over time or have emergency aeration available. Do not exceed 0.4 ppm of metallic copper in aquaculture ponds when fish are present.

**CONTROL OF ROOTED AND SUBMERGED PLANTS**

Rooted and submerged plants such as Hydrilla and Potamogeton can be controlled using Polydex at 0.4 - 1.0 ppm. Application rates are dependent on the density, stage of growth and the water depth. Only treat one half of the body of water at one time. Applications may be repeated in 14 days.

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### **CONTROL OF FLOATING AQUATIC PLANTS**

Water hyacinth and other floating aquatic vegetation can be suppressed BUT NOT ERADICATED (Effective eradication requires stronger rates and/or mixtures with other herbicides) by using a mixture of 1 gallon of Polydex per 7 gallons of water. Apply this solution as a coverage spray to thoroughly wet all exposed vegetation. In areas of heavy infestation, multiple applications may be required. Applications may be repeated in 14 days. Do not exceed 5.3 gallons of product per acre foot of water.

### **CONTROL OF ALGAE AND NON PUBLIC HEALTH BACTERIA IN RESERVOIRS & TANKS FOR WATER DESTINED FOR USE AS DRINKING WATER**

Polydex is certified to ANSI/NSF 60 for use in potable water. For application in waters destined for use as drinking water, those waters must receive additional and separate potable water treatment. **DO NOT** apply more than 1.0 ppm as metallic copper in potable water.

#### **Stock Watering Ponds, Tanks and Troughs**

For the control of algae and non public health bacteria in stock watering ponds, tanks, and troughs, add ¼ tsp Polydex to 30 gallons of water for a final ppm of 0.7 ppm. Do not exceed 1 ppm (¼ tsp per 20 gallons).

#### **Reservoirs of water intended for drinking water use**

For the control of algae in water reservoirs destined for use as drinking, refer to the **CALCULATION OF AREA TO BE TREATED** section to determine area to be treated and for specific application rates. Treated water must receive additional and separate potable water treatment. Applications may be repeated in 14 days.

#### **For Drip-system use in Livestock Watering Tanks:**

Tanks fed by a continuous flow of spring or well water may be equipped with a chemical drip system designed to meter-in Polydex based upon water flow rates. Systems should be adjusted to maintain a concentration of 0.7 ppm copper in incoming stock water (1.5 fl oz of product per minute to a water flow of 1 gallon per minute). Treat continuously or as needed to control and prevent algae re-growth.

#### **Water intended for human use in Municipal water reservoirs and tanks**

Use Polydex to control algae in municipal potable water supplies before they are purified for drinking. Apply 2 fl. oz. Per 125 cu. ft. (1/4 tsp per 20 gallons) of water for 1 ppm of copper.

### **CONTROL OF NON PUBLIC HEALTH BACTERIA, BACTERIAL ODORS, AND ALGAE IN SEWAGE LAGOONS, FEEDLOT RUN-OFF PITS, ANIMAL CONFINEMENT FACILITIES, WASTE TANKS, DIGESTERS, MANURE PITS**

Application rates may vary depending on the amount of organic matter, characteristics of manure or sewage, extent of bacterial activity, and the degree of odor reduction desired.

Calculate the total gallons of waste to be treated. Apply by pouring Polydex directly from the container into the pit or lagoon. Several evenly-spaced application points will speed up dispersal. Bacterial odors will be noticeably reduced in 1-2 weeks. Additional applications may be required when odour reoccurs or when new waste is added to the lagoon.

**Sewage Lagoons and Pits (Except California):** Use a maximum of one gallon of Polydex per 60,000 gallons of sewage. Bacterial odors should be noticeably reduced in 1 or 2 weeks. Repeat application when odors reoccur.

**Animal Confinement Facilities:** Use a maximum of one gallon of Polydex per 60,000 gallons of liquid waste if pits are located under the confinement buildings, add Polydex directly to these pits. If the pits are outside, insert or inject Polydex into the transfer line to the pit.

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**Other Organic Sludge:** Apply at the rate of one gallon Polydex to 30,000 gallons of sludge. Polydex must be thoroughly mixed with the sludge.

**CONTROL OF TADPOLE SHRIMP IN RICE FIELDS**

Apply to the flooded fields as soon as pest is detected anytime from planting time until the seedlings are well rooted and have emerged through the water. Apply a minimum of 2 gallons Polydex per acre to a maximum of 4 gallons per acre. Do not exceed 2.5 ppm metallic copper per application.

**EXTENSION OF SHELF LIFE OF RAW FRUIT AND VEGETABLES**

Use as a post-harvest wash / spray to reduce spoilage and extend the shelf life of the raw agricultural commodities on this label. Apply with any type of application equipment that gives uniform and thorough coverage. Devices may include, but are not limited to, dunk and dip tanks, spray applicators or foggers.

Add 8 to 12 fl. oz. per 100 gallons of water to clean and control bacteria and fungi that cause spoilage and contamination. Several application points speed up dispersal. Wash fruit or vegetables in solution by immersion, spraying, soaking or other similar method. Drain solution from fruit or vegetables. Fruits and vegetables should remain refrigerated to ensure effectiveness

**CHEMIGATION**

**General Chemigation Instructions:** Apply this product only through one or more of the following types of systems: Sprinkler - including center pivot, lateral move, end row, side (wheel) roll, traveler, big gun, solid set or hand move: flood (basin); furrow; border or drip (trickle) irrigation and system(s). If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts

Apply through chemigation only in the diluted form. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts

**POSTING AREAS TO BE CHEMIGATED IS REQUIRED WHEN:**

- 1) Any part of a treated area is within 300 feet of sensitive areas such as a residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds or other public facilities not including public roads, or
- 2) When chemigated area is open to the public such as golf course or retail greenhouses.

Posting must conform to the following requirements: Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive area. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other locations affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area toward the sensitive areas. The signs shall be printed in English.

Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

**POSTING AREAS TO BE CHEMIGATED IS REQUIRED WHEN: continued**

All words shall consist of letter of at least 2.2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER. This sign is in addition to any sign posted to comply with the Workers Protection Standard.

Do not apply product when wind speed favours drift beyond the area intended for treatment. Follow the directions for the crop to be treated. NEVER exceed the recommended concentrations per acre. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety device for public water systems are in place.

**CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS**

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regular serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction.

As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There must be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top of the overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of liquid back toward the injection.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where the pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (i.e. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

When mixing, agitation is not necessary. If using stickers, spreaders, insecticides, nutrients, etc., add the Polydex last. If compatibility is in question, use a compatibility jar test before mixing a whole tank. Because of a wide variety of possible product combinations, observe all cautions and limitations on the label of all products used in the mixtures.

Polydex may be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Polydex readily disperses and needs no agitation.

**SPRINKER CHEMIGATION**

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally dosed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment. When mixing, agitation is not necessary. If using stickers, spreaders, insecticides, nutrients, etc., add the Polydex last. If compatibility is in question, use a compatibility jar test before mixing a whole tank. Because of a wide variety of possible product combinations, observe all cautions and limitations on the label of all products used in the mixtures.

Polydex may be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Polydex readily disperses and needs no agitation.

**FLOOR (BASIN), FURROW AND BORDER CHEMIGATION**

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from back flow if water flow stops.

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of liquid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown.

**FLOOR (BASIN), FURROW AND BORDER CHEMIGATION -continued**

The system must contain functional interlocking controls automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

**FLOOR (BASIN), FURROW AND BORDER CHEMIGATION continued**

Systems must use a metering pump, such as a positive displacement injection pump (i.e. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

When-mixing, agitation is not necessary. If using stickers, spreaders, insecticides, nutrients, etc., add the Polydex last. If compatibility is in question, use a compatibility jar test before mixing a whole tank. Because of a wide variety of possible product combinations, observe all cautions and limitations on the label of all products used in the mixtures.

Polydex may be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems.

**DRIP (TRICKLE) CHEMIGATION**

The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of liquid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump such as a positive displacement injection pump (i.e. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

When mixing, agitation is not necessary. If using stickers, spreaders, insecticides nutrients, etc., add the Polydex last. If compatibility is in question, use a compatibility jar test before mixing a whole tank. Because of a wide variety of possible product combinations, observe all cautions and limitations on the label of all products used in the mixtures.

Polydex may be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems.

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## SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g. wind direction, wind speed, temperature, relative humidity) and the method of application (e.g. ground, aerial, airblast, Chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

### **Droplet Size**

Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

### **Wind Speed**

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favours on-target deposition (approximately 3 to 10 mph) and there are no sensitive areas within 250 feet down wind.

### **Temperature Inversions**

If applying at wind speed less than 3 mph the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

### **Other State and Local Requirements**

Applicators must follow all state and local pesticide drift requirements regarding application of copper compounds. Where states have more stringent regulations, they must be observed.

### **Equipment**

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

### **For Aerial Application (rice field algae control, crop fungicide)**

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter. Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for safety. When applications are made with a crosswind, the swath must be displaced downwind. The applicatory must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

### **For Groundboom Application**

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.



### CONTROL OF FUNGAL DISEASES IN FOOD AND NON-FOOD CROPS, TROPICAL FOLIAGE PLANTS, ANNUAL / PERENNIAL PLANTS, POTTED FLOWERING PLANTS, SHRUBS, TREES, VINES, AND TURFGRASS IN NURSERIES, GREENHOUSES, AND FIELDS

Polydex is a systemic bactericide & fungicide that prevents / cures the diseases listed on this label. Apply as an aerial or ground dilute spray with any type of application equipment that gives uniform coverage of all foliage. Complete coverage is essential to insure good product performance. To avoid plant injury, do not apply undiluted product to plants.

#### FOLIAR APPLICATIONS

#### ORNAMENTALS AND TURFGRASSES

##### SPRAY APPLICATIONS

Mix 0.083 fl. oz. (i.e.: 1/2 tsp) to 20 fl. oz. into 40 gallons of water and spray to wet all leaf and stem surfaces. Because the properties of local water may affect the efficacy of the product, always try lower concentrations first and move up to higher concentration as needed. Typically, preventive programs can be maintained at the lower concentrations whereas initial or corrective applications require higher concentrations.

Maximum single treatment = 3.87 gallons of product per acre  
Maximum annual treatment = 38.7 gallons of product per acre

##### For Easter Lilies\*:

Maximum single treatment = 4.84 gallons  
Maximum annual treatment = 145 gallons per acre

\*Do not apply any additional copper pesticide to this land for 36 months.

**Plant Injury (phytotoxicity):** Higher concentrations may damage some tender, open blooms and soft young foliage. The user should determine if Polydex can be used safely prior to commercial use. Apply the recommended concentration of Polydex to a small group of test plants, of the same species requiring treatment, and observe for 7 to 10 days for symptoms of phytotoxicity.

#### TROPICAL FOLIAGE PLANTS

Dracaena	Rust
Ferns	Rhizoctonia, Botrytis, Erwinia
Philodendron Selloum	Fireblight
Ivy	Botrytis, Xanthomonas
Palms	Botrytis, Erwinia, Pseudomonas, Xanthomonas
Tropical foliage (most all)	Botrytis, Powdery Mildew, Erwinia, Pseudomonas, Xanthomonas

**ANNUAL / PERENNIAL FLOWERING PLANTS**

Alyssum	Botrytis, Downy Mildew
Anemone	Powdery Mildew
Aster	Powdery Mildew
Begonia	Botrytis, Powdery Mildew, Xanthomonas
Carnation	Powdery Mildew
Chrysanthemum	Pseudomonas
Coleus	Powdery Mildew
Columbine	Powdery Mildew
Coneflower	Powdery Mildew
Coreopsis	Powdery Mildew
Cuphea	Powdery Mildew
Dahlia	Powdery Mildew
Daisy	Powdery Mildew
Dianthus	Powdery Mildew
Daylily	Powdery Mildew
Delphinium	Powdery Mildew
Echinacea	Powdery Mildew
Fuchsia	Botrytis, Powdery Mildew
Geranium	Botrytis, Rust, Pseudomonas, Xanthomonas
Hollyhock	Powdery Mildew
Hosta	Botrytis, Erwinia
Impatiens	Botrytis, Powdery Mildew, Phytophthora, Alternaria, Pseudomonas
Lantana	Powdery Mildew
Liatris	Powdery Mildew
Lisianthus	Botrytis, Erwinia, Pseudomonas, Xanthomonas
Lobelia	Powdery Mildew
Lupine	Powdery Mildew
Marigold	Powdery Mildew
Monarda	Powdery Mildew
New Guinea Impatiens	Botrytis, Powdery Mildew
Pansy	Botrytis, Phytophthora
Pentas	Powdery Mildew
Periwinkle	Botrytis, Phytophthora
Petunia	Powdery Mildew
Phlox	Powdery Mildew
Poppy	Powdery Mildew
Primrose (Primula)	Powdery Mildew. Botrytis, Erwinia
Ranunculus	Powdery Mildew
Rudbeckia	Powdery Mildew
Salvia	Powdery Mildew
Sedum	Powdery Mildew

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**ANNUAL / PERENNIAL FLOWERING PLANTS – continued**

Snapdragon	Botrytis, Downy Mildew, Rust
Verbena	Powdery Mildew
Veronica	Powdery Mildew
Vinca	Powdery Mildew
Viola	Powdery Mildew
Zinnia	Botrytis, Powdery Mildew, Pseudomonas, Xanthomonas

**POTTED FLOWERING PLANTS**

African Violet	Botrytis, Powdery Mildew
Calla Lilly	Botrytis, Erwinia
Chrysanthemum	Botrytis, Crown Gall, Erwinia, Powdery Mildew
Cineraria	Botrytis
Cyclamen	Botrytis, Erwinia
Daffodil	Botrytis
Easter Lilly	Botrytis
Exacum	Botrytis
Gerbera	Botrytis, Powdery Mildew
Gloxinia	Botrytis
Hibiscus	Botrytis, Pseudomonas, Xanthomonas
Holiday Cactus	Botrytis, Erwinia, Pseudomonas, Xanthomonas
Hyacinth	Botrytis
Hydrangea	Botrytis, Powdery Mildew
Iris	Botrytis, Erwinia
Kalanchoe	Botrytis, Erwinia, Powdery Mildew
Poinsettia	Botrytis, Powdery Mildew, Erwinia, Scab, Xanthomonas
Rose Bush	Botrytis, Cyndrocladium, Downy Mildew, Powdery Mildew, Black Spot
Spathiphyllum	Cylindrocladium, Phytophthora, Botrytis, Cyndrocladium
Tulip	Botrytis
Azalea	Anthracoese, Botrytis, Cyndrocladium

**NURSERY CROPS**

Cherry Laurel	Xanthomonas
Conifers	Botrytis, Diplodia
Crape Myrtle	Botrytis, Powdery Mildew
Dogwood	Botrytis, Powdery Mildew
Elm	Erwinia
Hydrangea	Botrytis, Powdery Mildew
Indian Hawthorne	Botrytis, Entemosporium
Japanese Maple	Botrytis, Verticillum, Pseudomonas
Lilac	Botrytis, Pseudomonas, Powdery Mildew
Oak	Anthracoese
Photinia	Entemosporium
Pinus	Dothistroma
Cotoneaster, Malus	Apple Scab
Mountain Ash	Botrytis
Ornamental Crab-apple	Fireblight
Rhododendron	Botrytis, Cylindrocladium, Rhizoctonia
Silver Buttonwood	Powdery Mildew
Sycamore	Anthracoese, Botrytis

**SHRUBS AND VINES**

Treat the following shrubs and vines for Botrytis: Barberry, Bougainvillea, Cornus, Euonymus, Forsythia, Holly, Paeonia, Philadelphus, Physocarpus, Potentilla, Ribes, Rosa, Spirea, Viburnum, Weigela, and Wisteria.

**DECIDUOUS**

Treat the following deciduous varieties for Botrytis: Acer, Betula, Celtis, Cercis, Crataegus, Ficus, Fraxinus, Ginko, Gleditsia, Magnolia, Malus, Populus, Prunus, Pyrus and Tilia.

**CONIFERS**

Treat the following conifers for Botrytis: Abies, Juniper, Picea, Pinus, Pittosporum, Pseudotsuga, Taxus, Thuja, Tsuga.

**TURFGRASS**

Treat turfgrass for black algae and moss at the following rate: Apply 6 fluid ounces per 10 gallons of water. Apply spray mix to 1000 square feet of infested grass."

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## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open burning and dumping is prohibited.

**PESTICIDE STORAGE:** Keep pesticide in original container. Do not put concentrate or dilutions of concentrate in food or drink containers. Always store Polydex above 40°F. Freezing may cause separation. Bulk Polydex must be stored & handled in: stainless steel, fibreglass, stainless steel, polypropylene, PVC or plastic equipment. Do not allow product to come in contact with any galvanized steel, brass, copper, nylon or aluminum storage or handling equipment.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING:** [For Containers < 5 Gal] Nonrefillable container. Do not reuse or refill this container. Triple rinse all containers prior to disposal and then offer for recycling, if available, or puncture and dispose of in an approved manner, or dispose by incineration if allowed by local and state authorities. If disposal is by incineration, stay out of smoke. 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.

**CONTAINER HANDLING:** [For Containers > 5 Gal] Nonrefillable container. Do not reuse or refill this container. Triple rinse all containers prior to disposal and then offer for recycling, if available, or puncture and dispose of in an approved manner, or dispose by incineration if allowed by local and state authorities. If disposal is by incineration, stay out of smoke. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Recap 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.

**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 mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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## LIMITED WARRANTY AND LIMITATION OF REMEDIES

To the extent consistent with applicable law, Envireau Technologies Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose stated on such label when used in accordance with label directions under normal conditions for use. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of the seller. To the extent consistent with applicable law, the seller makes no other warranties of fitness or merchantability, expressed or implied, or any other warranty if the product is used contrary to the label instructions, or under abnormal conditions or under conditions not foreseeable to the seller. Seller makes no warranty for the performance of product that has been frozen.

To the extent consistent with applicable law, the exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling or application of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid for this product. To the extent consistent with applicable law, in no event will the seller be liable for any consequential, special or indirect damages connected with the use or handling of this product. To the extent consistent with applicable law, this product is offered and the buyer or user accepts it subject to the foregoing terms which may not be varied.