

2016-7366  
2016-12-20

Container label

GROUP	<b>8</b>	HERBICIDE
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**EPTAM® LIQUID EC HERBICIDE**  
**Emulsifiable Concentrate Herbicide**  
COMMERCIAL

Selective Herbicide for Use in Mineral Soils

**GUARANTEE:**

EPTC..... 800 g/L

**KEEP OUT OF REACH OF CHILDREN**  
**READ LABEL AND ATTACHED BOOKLET BEFORE USING**

**CAUTION**



**POISON**

REGISTRATION NO. 11284  
PEST CONTROL PRODUCTS ACT

NET CONTENTS : 10 L, 110 L, 415 L, BULK



**Gowan Company**  
P.O. Box 5569  
Yuma, AZ 85366-5569

**Product Information: 1-800-883-1844**

**NOTICE TO USER**

This pest control product is to be used only in accordance with the directions on the label. It is an offense 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.

## FIRST AID

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

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

**IF IN EYES:** hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre 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 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.

**IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL 1-888-478-0798.**

## TOXICOLOGICAL INFORMATION:

Contains petroleum distillate – vomiting may cause aspiration pneumonia. Treat symptomatically.

## PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN - HARMFUL IF SWALLOWED

Avoid contact with skin, eyes and clothing. Avoid breathing spray mist. Wash skin thoroughly with soap and water after use. Avoid contamination of food and feed. Do not contaminate irrigation water or water used for domestic purposes. Keep container closed when not in use.

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 U.S., visit CropLife Canada's website at [www.croplife.ca](http://www.croplife.ca).

## STORAGE

Keep container closed when not in use. Do not store near food, feed, seeds or fertilizers. Can be stored at temperatures as low as minus 45°C.

## SPILL CLEANUP

Wear appropriate protective equipment (gloves, glasses, apron) when attempting to clean up the spill. If the container is leaking, secure leak and place the container into a drum or heavy gauge plastic bag. In case of emergency involving a major spill, leak or fire call Chemtrec® at 1-800-424-9300..

For spills and leaks; contain the liquid with dikes of inert material (soil, clay, kitty litter etc.). Absorb the spill onto inert material and shovel into a sealable waste container.

On hard surfaces - sprinkle spill area with detergent and scrub in a small quantity of water with a coarse broom. Let stand 10 minutes then absorb onto an inert material and shovel into the waste container.

On soil - remove the top 15 cm of soil in the spill area and replace with fresh soil. Dispose of all waste including scrub brush in accordance with provincial requirements. For information on 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.

#### **DECONTAMINATION AND DISPOSAL:**

For information on 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.

#### **CONTAINER DISPOSAL:**

##### **FOR DISPOSAL OF PLASTIC JUGS:**

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

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If the container is not being refilled, refer to the section "FOR DISPOSAL OF PLASTIC JUGS".

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Brochure

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## PERSONAL PROTECTIVE EQUIPMENT

### MIXERS, LOADERS AND APPLICATORS

Wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, socks, chemical-resistant footwear and respirator during mixing, loading, application, clean-up and repair. The respirator must be equipped with a NIOSH/MSHA/BHSE-approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH/MSHA/BHSE-approved canister approved for pesticides.

When handling greater than 755 kilogram of active ingredient per day (i.e., treating over 110 ha at highest label rate of 6.8 kg. a.i. ha), a closed mixing and loading system is required. Handlers must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, socks, and chemical-resistant footwear during application, clean-up and repair. A respirator is also required

during application. The respirator must be equipped with a NIOSH/MSHA/BHSE-approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH/MSHA/BHSE-approved canister approved for pesticides.

## **ENVIRONMENTAL HAZARDS**

TOXIC to wild mammals. Toxic to aquatic organisms and terrestrial plants.

Observe buffer zones specified under DIRECTIONS FOR USE.

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 draining soil (e.g. soils that are compacted or fine 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 between the treated area and the edge of the water body.

## **STORAGE**

Keep container closed when not in use. Do not store near food, feed, seeds or fertilizers. Can be stored at temperatures as low as minus 45°C.

## **SPILL CLEANUP**

Wear appropriate protective equipment (gloves, glasses, apron) when attempting to clean up the spill. If the container is leaking, secure leak and place the container into a drum or heavy gauge plastic bag. In case of emergency involving major spill, leak or fire call Chemtrec ® at 1-800-424-9300.

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## **PRODUCT INFORMATION**

**EPTAM LIQUID EC HERBICIDE** is a selective herbicide which is mixed (incorporated) in the soil for control of weeds listed on this label. **EPTAM LIQUID EC HERBICIDE** controls weeds by interfering with normal germination and seedling development. It does not control established weeds. All weed growth and crop stubble should be thoroughly worked into the soil before treatment.

## **DIRECTIONS FOR USE**

Make only two applications per year.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

Field sprayer application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. Boom height must be 60 cm. or less above the crop or ground.

## BUFFER ZONES:

Use of the following spray methods or equipment DO NOT require a buffer zone; hand-held or backpack sprayer, inter-row hooded sprayer, spot treatment, soil drench, and soil incorporation.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, rangelands, riparian areas and shrub lands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine or marine habitats.

Method of application	Crop	Buffer Zones (metres) Required for the Protection of:		
		Aquatic Habitat of Depths:		Terrestrial habitat
		Less than 1 m	Greater than 1 m	
Field sprayer*	Potatoes	1	1	4
	Flax, cicer milkvetch, sugar beets	0	0	2

\*For field sprayer application, buffer zones can be reduced with the use of drift reducing spray shields. When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy, the labeled buffer zone can be reduced by 70%. When using a spray boom where the individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy, the labeled buffer zone can be reduced by 30%.

When a tank mixture is used, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture.

**EPTAM LIQUID EC HERBICIDE** is recommended for use on mineral soils only.

**EPTAM LIQUID EC HERBICIDE** should be used only for recommended purposes and at recommended rates. (DO NOT OVERDOSE).

Applied according to directions and under normal growing conditions, **EPTAM LIQUID EC HERBICIDE** will not harm the treated crop. However, during germination and early stages of growth, unusually cold and wet or hot and dry weather, insect, nematode, or plant disease attack, the use of certain soil-applied systemic insecticides, highly saline or alkaline soil conditions, improperly placed fertilizers or soil insecticides may create abnormal conditions that weaken crop seedlings. **EPTAM LIQUID EC HERBICIDE** used under these abnormal conditions could result in crop injury.

When applied according to directions and under conditions for normal crop growth, no harmful residues should remain beyond harvest.

Do not tank mix **EPTAM LIQUID EC HERBICIDE** with insecticides or fungicides unless compatibility has been tested prior to use.

Do not apply prior to pre-irrigation.

**DO NOT APPLY BY AIR.**



## WEEDS CONTROLLED

**EPTAM LIQUID EC HERBICIDE** will not control established weeds.

	TANK MIXES		
	ALONE	SENCOR/ LEXONE	TREFLAN EC/ RIVAL EC
<b>Annual Grasses</b>			
Annual Blue Grass	Y	Y	N
Annual Rye Grass (Italian Rye Grass)	Y	Y	N
Barnyard Grass (Water grass)	Y	Y	Y
Crab Grass	Y	Y	Y
Foxtails (Green and Yellow)	Y	Y	Y
Giant Foxtail	N	Y	N
Goose Grass	Y	Y	N
Volunteer Grains (Barley, Oats, Wheat)	Y	Y	N
Wild Oats	Y	Y	N
Witch Grass	Y	Y	N
Fall Panicum	Y	Y	N
Cheat Grass	N	Y	N
<b>Annual Broadleaf Weeds</b>			
Common Chickweed	Y*	Y	N
Corn Spurry	Y*	Y	N
Hairy Nightshade**	Y*	Y	N
Hempnettle	N	Y	N
Henbit (Deadnettle)	Y*	Y	N
Lamb's-quarters	Y*	Y	Y
Pigweed (Prostrate, Redroot, Tumble)	Y*	Y	N
Purslane	Y*	Y	N
Nettleleaf Goosefoot	N	Y	N
Ragweed	N	Y	N
Ball Mustard	N	Y	N
Wild Mustard	N	Y	N
Lady's-thumb	N	Y	N
Velvetleaf	N	Y	N
Common Yellow (Wood-sorrel)	N	Y	N
Jimsonweed	N	Y	N
Prickly Mallow	N	Y	N
Shepherd's-purse	N	Y	N
Stinkweed	N	Y	N
Tartary buckwheat	N	Y	N
Green Smartweed	N	Y	N
Russian-thistle	N	Y	N
Seedling Dandelion	N	Y	N
Volunteer non-triazine tolerant canola	N	Y	N
<b>Perennial Weeds ***</b>			
Quack Grass (Couch Grass, Twitch Grass)****	Y	N	N
Yellow Nutsedge	Y	N	N

\* These annual broadleaf weeds will be controlled by **EPTAM LIQUID EC HERBICIDE** alone, only if treatment is made when conditions are favourable for germination and growth.

\*\* Western Canada only.

\*\*\* Perennial weeds must be turned under and chopped up thoroughly prior to treatment.

\*\*\*\* For the control of quack grass the disc must be set to cut 15 centimetres deep and the higher rates (7 - 8.5 litres per hectare) of **EPTAM LIQUID EC HERBICIDE** must be used. The underground rhizomes of quack grass must be cut up thoroughly so that four or less nodes remain on a strand. Consult the use directions for crops on which these higher rates may be used.

## APPLICATION RATES

These recommendations are given as broadcast (overall) rates of **EPTAM LIQUID EC HERBICIDE** per hectare. For band treatment, use proportionately less material per hectare depending upon the width of the band to be treated and the crop row spacing. Do not use band treatment on rocky ground because thorough incorporation is not possible.

**ALFALFA AND BIRDSFOOT TREFOIL (new seedlings)** - Before planting, apply and incorporate 4.25 litres **EPTAM LIQUID EC HERBICIDE** per hectare. Temporary crop stunting and sealing of first leaves will occur in legumes if conditions for germination and growth are not optimum. Do not use **EPTAM LIQUID EC HERBICIDE** if a grass or grain nurse crop is to be planted with the legume.

**BEANS, SNAP COMMON OR DRY COMMON<sup>1</sup> (of the species *Phaseolus vulgaris*)** - Do not use **EPTAM LIQUID EC HERBICIDE** on Adzuki (Japanese) beans or crop cowpeas (blackeye peas, blackeye beans), soybeans, lima beans or other flat-podded beans, except Romano, fababeans or mungbeans. Before planting, apply and incorporate 4.25 to 5.5 litres **EPTAM LIQUID EC HERBICIDE** per hectare. If dry weather prevails at time of treatment, delay seeding of beans seven to ten days. For dense nut grass stands and for quack grass, apply 5.5 litres **EPTAM LIQUID EC HERBICIDE** per hectare.

<sup>1</sup> Dry common bean varieties may vary in their tolerance to herbicides, including to **EPTAM LIQUID EC HERBICIDE**. Since not all dry common bean varieties have been tested for tolerance to **EPTAM LIQUID EC HERBICIDE** Herbicide, first use of **EPTAM LIQUID EC HERBICIDE** should be limited to a small area of each variety to confirm tolerance prior to adoption as a general field practice. Additionally, consult your seed supplier for information on the tolerance of specific varieties of dry common beans to **EPTAM LIQUID EC HERBICIDE**.

Rotary hoe lightly during or shortly after emergence of the beans to break any crust which occurs. Supplementary row cultivation will be required to improve quack grass control.

**NOTE:** Under extreme weather conditions, such as cold temperatures and wet soils or higher temperatures and dry soils, stunting may occur.

**BEANS, DRY COMMON (WHITE AND RED KIDNEY ONLY): EPTAM LIQUID EC HERBICIDE /Trifluralin(TREFLAN EC, RIVAL EC).** The combination of **EPTAM LIQUID EC HERBICIDE** /Trifluralin or **EPTAM LIQUID EC HERBICIDE** /Ethalfuralin is recommended for the control of barnyard grass, crabgrass, foxtails (green and yellow), pigweeds (redroot and prostrate) and lamb's quarters on mineral soils. Use of higher than recommended rates may result in crop injury. Before planting, apply and incorporate 3.0 litres of **EPTAM LIQUID EC HERBICIDE** in combination with 1.1 litres of TREFLAN EC or 1.2 litres of RIVAL EC per hectare. Follow the mixing, application and incorporation directions specified on this label. Observe all precautions and limitations on labelling of all products.

Rotary hoe lightly during or shortly after emergence of the beans to break any crust which occurs. Supplementary row cultivation will be required to improve quack grass control.

**NOTE:** Under extreme weather conditions, such as cold temperatures and wet soils or higher temperatures and dry soils, stunting may occur.

**CICERMILKVETCH AND SWEET CLOVER – (For seed production)** Before planting, apply and incorporate 4.25 litres **EPTAM® LIQUID EC HERBICIDE** per hectare.

## FLAX

Seed shallow, no deeper than 3.0 centimetres into a firm seedbed. Reduced stands and crop damage may occur with deep seeding.

**FLAX - SPRING TREATMENT** - Apply and incorporate 3.5 to 4.25 litres **EPTAM® LIQUID EC HERBICIDE** per hectare just before planting. Use the lower rate on light, sandy soils and the higher rate on heavier textured soils. Do not use on soils with less than 3% organic matter.

**FLAX (Do not use on low linolenic acid varieties) - SPRING TREATMENT: EPTAM® LIQUID EC HERBICIDE /Trifluralin TREFLAN EC, RIVAL EC)** - The combination of **EPTAM® LIQUID EC HERBICIDE** /trifluralin is recommended for the control of barnyard grass, wild oats, green foxtails, redroot pigweed and lamb's quarters on mineral soils. Use of higher than recommended rates may result in crop injury. Before planting, apply and incorporate 3.0 litres of **EPTAM® LIQUID EC HERBICIDE** in combination with 1.1 litres of TREFLAN EC or 1.2 litres of RIVAL EC per hectare.

**Note:** The tank mix combination of **EPTAM® LIQUID EC HERBICIDE** /Trifluralin (TREFLAN EC, RIVAL EC) may result in reduced crop stand and/or crop damage, however yield should not be affected.

**Note:** Seed shallow, no deeper than 3.0 centimeters into a firm seedbed. Reduced stands and crop damage may occur with deep seeding. Observe all precautions and limitations on labelling of all products.

**FLAX - FALL TREATMENT (Western Canada Only)** - Apply and incorporate 4.25 to 5.5 litres **EPTAM® LIQUID EC HERBICIDE** per hectare in late fall before the ground freezes. Use the lower rate on light sandy soils and the higher rate on heavier textured soils. The following spring, prior to seeding, cultivate lightly to destroy any surviving winter germinating seeds.

## **SUNFLOWERS**

**SUNFLOWER - SPRING TREATMENT** - Before planting, apply and incorporate 4.25 litres **EPTAM® LIQUID EC HERBICIDE** per hectare. Do not use on light, sandy soils with less than 3% organic matter.

**SUNFLOWER - FALL TREATMENT (Prairie Provinces Only)** - Apply and incorporate 4.25 to 5.5 litres **EPTAM® LIQUID EC HERBICIDE** per hectare in the late fall before the ground freezes. The following spring prior to seeding cultivate lightly to destroy any surviving winter germinating seeds. Use the lower rate on light sandy soils and the higher rate on heavier textures soils.

## **SUGAR BEETS**

**SUGAR BEETS - SPRINKLER IRRIGATION WATER** - Meter 2.75 to 4.25 litres **EPTAM® LIQUID EC HERBICIDE** into the first irrigation water immediately after clean cultivation. Do not apply within 49 days of harvest.

**SUGAR BEETS - FALL TREATMENT (Recommended in Alberta and Manitoba Only)** - Apply and incorporate 4.25 to 5.5 litres **EPTAM® LIQUID EC HERBICIDE** per hectare (use 5.5 litres in Alberta) in the late fall before the ground freezes. Mix thoroughly into the top 7.5 to 10 centimetres of soil. When a disc is used for incorporation, disc twice, the second time at right angles to the first. In Manitoba, use the lower rate on lighter (sandy) soils; use the higher rate on medium to heavy textured soils. Use the higher rate in Alberta.

The following spring, prior to seeding, cultivate lightly using a harrow or other shallow cultivator to destroy any surviving winter-germinating seeds. Keep spring tillage at a minimum to conserve moisture.

**TURNIPS (Rutabagas) - (Do not use in Eastern Canada).** Six to ten days before planting, apply and incorporate 3.25 litres **EPTAM® LIQUID EC HERBICIDE** per hectare on light sandy soils or 4.25 litres on medium to heavy textured soils. If dry weather prevails at time of treatment, do not use **EPTAM® LIQUID EC HERBICIDE** on sand and use the lower rate on medium and heavy textured soils.

**POTATOES (IRISH)**

**POTATOES - FALL TREATMENT (Prairie Provinces Only)** - Apply and incorporate 5.5 to 8.5 litres **EPTAM® LIQUID EC HERBICIDE** per hectare in the late fall before the ground freezes. The following spring prior to seeding cultivate lightly to destroy any surviving winter germinating seeds. For quack grass use 7 to 8.5 litres per hectare. Consult notes for perennial weed control.

**POTATOES - BEFORE PLANTING** - Apply and incorporate 4.25 to 8.5 litres **EPTAM® LIQUID EC HERBICIDE** per hectare. For dense nut grass stands and quack grass, use 7 to 8.5 litres per hectare.

**POTATOES - BEFORE PLANTING: EPTAM® LIQUID EC HERBICIDE /Metribuzin (LEXONE, SENCOR)\* TANK MIX COMBINATION** - A tank mix combination of **EPTAM® LIQUID EC HERBICIDE /Metribuzin (LEXONE, SENCOR)**, applied pre-plant and soil-incorporated, will give a broader spectrum of weed control than either product used separately. Please see precautions listed below.

Apply 4.25 to 5.5 litres **EPTAM® LIQUID EC HERBICIDE** per hectare in combination with Metribuzin (LEXONE, SENCOR) as follows,

**Metribuzin (LEXONE, SENCOR)**

SOIL TEXTURE*	Kilograms of Metribuzin (LEXONE, SENCOR) in 200 - 300 L of water per hectare		
		2 - 4% organic matter	4-7% organic matter**
Medium Soils (loam, silt loam, silt sandy loam, sandy clay loam)	LEXONE DF SENCOR 75 DF SENCOR 500 F	0.75 kg 0.75 kg 1.10 L	1.0 kg 1.0 kg 1.5 L
Heavy Soils (silty clay, silty clay loam, clay loam)	LEXONE DF SENCOR 75 DF SENCOR 500 F	1.0 kg 1.0 kg 1.5 L	1.1 kg 1.1 kg 1.7 L

\* Do not use on sandy or coarse textured soils with less than 2% organic matter as crop injury may result.

\*\* DO NOT apply on soils greater than 7% organic matter.

**PRECAUTIONS**

Do not use on red-skinned or early potatoes, or on the varieties Belleisle or Tobique.

Do not use **EPTAM® LIQUID EC HERBICIDE /Metribuzin** on muck soil or subsequent crops may be injured. Refer to the tank mix partner label for specific regions/ areas of use.

Rotation crops such as onions, celery, peppers, cole crops, lettuce, spinach, sugar beets, table beets, turnips, pumpkin, squash, cucumbers, melons, tobacco and rapeseed are sensitive to **EPTAM® LIQUID EC HERBICIDE /Metribuzin**, and may be injured if planted in **EPTAM® LIQUID EC HERBICIDE /Metribuzin** treated soil both during the year of application and the following crop year.

Applications of **EPTAM® LIQUID EC HERBICIDE /Metribuzin** made at rates above those recommended may result in burning, yellowing or stunting of the crop. If heavy rains occur soon after application, plant injury may result, especially in poorly drained areas where water may stand for several days.

Uneven application such as swath overlapping, variable tractor speed, spraying on turns, etc. may result in crop injury and increase chance of injury to rotation crops.

Do not graze or feed forage from treated fields to livestock. Read both the **EPTAM® LIQUID EC HERBICIDE** and Metribuzin (LEXONE, SENCOR) labels carefully before using and observe all precautions and limitations on labelling of all products.

**POTATOES - DRAG-OFF (Come-up, Weeding Time)** - Apply and incorporate 4.25 to 8.5 litres **EPTAM® LIQUID EC HERBICIDE** per hectare. The field must first be "DRAGGED-OFF" followed by **EPTAM® LIQUID EC HERBICIDE** application and incorporation. Use spike-tooth harrows or cultivation equipment for incorporation.

**POTATOES - POST-EMERGENCE** - Apply and incorporate 4.25 to 5.5 litres **EPTAM® LIQUID EC HERBICIDE** per hectare at next to the last or at time of last cultivation. If soil surface is not dry and loose, cultivate before application. Do not apply within 45 days of harvest.

**POTATOES - SPRINKLER IRRIGATION WATER** - Meter 4.25 to 5.5 litres **EPTAM® LIQUID EC HERBICIDE** per hectare into the first irrigation water immediately after clean cultivation. The best weed control can be obtained by using one of the pre-plant (fall or spring) or pre-emergence (drag-off) **EPTAM® LIQUID EC HERBICIDE** applications, followed by the **EPTAM® LIQUID EC HERBICIDE** irrigation application. Do not apply within 45 days of harvest.

## MIXING AND APPLICATION

Pour the recommended amount of **EPTAM® LIQUID EC HERBICIDE**, and/or TREFLAN EC, RIVAL EC into the spray tank during the filling operations. Apply in 100 or more litres of water per hectare using a properly calibrated, low-pressure sprayer having good agitation. The soil should be well worked and dry enough to permit good soil mixing (incorporation). When applying the **EPTAM® LIQUID EC HERBICIDE /Metribuzin** tank mix use 200 - 300 litres of water per hectare.

## INCORPORATION DIRECTIONS

**EPTAM® LIQUID EC HERBICIDE** and **EPTAM® LIQUID EC HERBICIDE /Metribuzin**, **EPTAM® LIQUID EC HERBICIDE /Trifluralin**, **EPTAM® LIQUID EC HERBICIDE /Ethalfluralin** tank mixes must be incorporated into the soil immediately to prevent loss of the herbicide. Whenever possible, application and incorporation should be done in the same operation. The following equipment and recommended working depths are suggested for soil mixing (incorporation) before planting:

TYPE OF EQUIPMENT	WORKING DEPTH*	MINIMUM SPEED
S Tyne (Danish) Cultivator **	10-15 cm	8-13 km/hr

C Type Cultivator with overlapping sweeps **	10-15 cm	9.5+ km/hr
Tandem Disks (max 45cm spacing between disks) ***	10-15 cm	6.5-9.5 km/hr
Power Driven Cultivator****	5-7.5 cm	ANY

\* Shallow incorporation with implements set to cut less than 5.0 centimetres may result in erratic weed control.

\*\* Recommended for lighter soils in good tilth only

\*\*\* For more thorough mixing, (perennial weeds and in heavier soils) cross disk a second time at maximum 10 cm depth.

\*\*\*\* For control of shallow, annual weeds only.

## SPRINKLER IRRIGATION APPLICATION POST-PLANTING AND ESTABLISHED CROPS

Meter **EPTAM® LIQUID EC HERBICIDE** into the sprinkler irrigation water using a metering device that will introduce a constant flow into the water. For centre pivot, straight line and solid set sprinkler systems, meter the **EPTAM® LIQUID EC HERBICIDE** into the water during the entire period using sufficient water to penetrate to a depth of 7.5 to 10 centimetres. Time this **EPTAM® LIQUID EC HERBICIDE** application to ensure that proper penetration of the herbicide corresponds with the end of the irrigation period.

Flush the lines and then turn the water off promptly. Consult the "Directions For Use" section on this label for proper timing of application for each crop for which irrigation application is recommended. A diagram for water run applications can be found in Appendix II of this label.

Tailwater (run-off water) from sprinkler irrigation should be re-circulated or used only on other crops which are registered for this type of application.

Do not apply this product through any other type of irrigation system.

Do not apply when wind speed causes non-uniform distribution and/or favours drift beyond the area intended for treatment.

Do not make sprinkler applications when wind velocities are over 8 km/h.

Do not apply by irrigation if treated area is within 100 metres of residential areas and parks.

To prevent accidental contamination of the water source when the pump stops, a shut-off device which will prevent backflow of the chemical must be employed.

## CULTURAL PRACTICES FOLLOWING APPLICATION

To obtain a maximum period of weed control, seeding should be done as soon as possible after application.

Since **EPTAM® LIQUID EC HERBICIDE** is not persistent in the soil, susceptible weeds germinating later during the growing season may not be controlled. Shallow cultivation or the use of post emergent herbicides may be required to control weeds that escape **EPTAM LIQUID EC HERBICIDE** treatment or are not control by **EPTAM® LIQUID EC HERBICIDE** (i.e. tolerant broadleaves and non susceptible weed species). Cultivation should not exceed the depth of herbicide incorporation.

## RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, **EPTAM LIQUID EC HERBICIDE** is a Group 8 herbicide. Any weed population may contain or develop plants naturally resistant to **EPTAM LIQUID EC**

**HERBICIDE** and other Group 8 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field.

Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of **EPTAM LIQUID EC HERBICIDE** or other Group 8 herbicides within a growing season (sequence) or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.
- Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates; precision fertilizer application method and timing to favour the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Monitor weed populations after herbicide application for signs of resistance development (for example, only one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by an alternative herbicide from a different group. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Gowan Company representatives at 1-800-883-1844.

EPTAM is a registered trademark of Gowan Company LLC.

LEXONE is a trademark of E.I. du Pont de Nemours Co. Inc.

SENCOR is a registered trademark of Farbenfabriken Bayer GmbH, Leverkusen.

TREFLAN is a registered trademark of Dow Agrosciences

## **APPENDIX I - EPTAM LIQUID EC HERBICIDE with Fluid Fertilizer**

### **PROCEDURE FOR TESTING THE COMPATIBILITY OF EPTAM LIQUID EC HERBICIDE WITH FLUID FERTILIZERS.**

The following procedure is suggested for determining whether **EPTAM LIQUID EC HERBICIDE** may be combined with a specific fluid fertilizer for spray tank application.

#### **Materials Required:**

1. **EPTAM LIQUID EC HERBICIDE**
2. Fluid fertilizer to be used.
3. Adjuvant for fertilizer tank mix; Unite\* or equivalent. The adjuvant that provides the best emulsification depends on the specific fertilizer under consideration.
4. Two one-litre, wide-mouth glass jars with lids or stoppers.
5. Graduated pipet or cylinder.
6. Measuring cup (250 mL).

#### **PROCEDURE:**

1. Pour 500 mL of the fluid fertilizer into each of the litre jars.
2. Add adjuvant to one of the jars and mix (see next rate table).
3. Add the **EPTAM LIQUID EC HERBICIDE** to both jars (see next rate table).
4. Close both jars with lids or stoppers and mix the contents by turning the jars upside down ten times.
5. Inspect the surface and body of the mixtures;
  - A) Immediately after completing the jar inversions,
  - B) After allowing the jars to stand quietly for 30 minutes,
  - C) And then again after turning the jars upside down ten times.

\* Unite, Hopkins Agricultural Chemical Co., Madison, Wisconsin.

If a uniform mix cannot be made, the mixture should not be used. If either mixture remains uniform for 30 minutes, the combination may be used. Should either mixture separate after 30 minutes, but readily remix uniformly with ten jar inversions, the mixture can be used if adequate agitation is maintained in the tank. If the mixture with the adjuvant is satisfactory, but the one without adjuvant is not, be sure to use the adjuvant in the spray tank.

Add the adjuvant first to the fluid fertilizer at a rate of 375 mL per 100 litres of fluid fertilizer; foaming can be minimized by using moderate agitation.

Even though found to be compatible, constant agitation is necessary to keep the **EPTAM LIQUID EC HERBICIDE** evenly mixed with the fluid fertilizer.

If non-dispersible oil, sludge or clumps form in the mixtures, the combination should not be used.



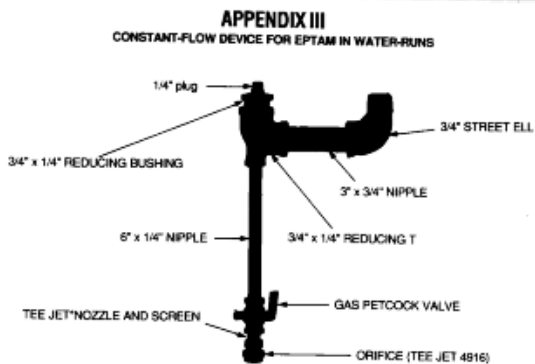
## Compatibility Test Table for EPTAM LIQUID EC HERBICIDE and Adjuvant\* with the Fluid Fertilizer

Litres of Fluid Fertilizer to be applied per Hectare	mL of <b>EPTAM LIQUID EC HERBICIDE</b> ** to be added to 500 mL of Fertilizer
L	ML
100	25.0
150	17.0
200	12.5
250	10.0
300	8.5
400	6.5

\* A typical adjuvant rate of use is 375 mL per 100L of fluid fertilizer. Two (2) millilitres of adjuvant should be added to 500 mL of fluid fertilizer in order to equal rate of 375 mL per 100 litres.

\*\* Based on a rate of 5 litres of **EPTAM LIQUID EC HERBICIDE** per hectare in the fluid fertilizer volumes indicated, adjust amount of pesticide proportionately to correspond with intended field rate (e.g. for field rate of 9.0 litres of **EPTAM LIQUID EC HERBICIDE** in 250 litres fluid fertilizer per hectare, add 18 mL ( $9L/5L \times 10mL$ ) **EPTAM LIQUID EC HERBICIDE** to each jar containing 500 mL of fluid fertilizer for compatibility testing purposes).

## APPENDIX II - Constant Flow Device Diagram



## FLOW RATES FOR VARIOUS Tee Jet\* ORIFICES (4916)\*\*

Tee Jet Orifice	mL Per Minute	Kilograms per hour	Approximate Time (hrs.)	
			4 Litres	20 Litres
.008	.89	.050	74.92	374.6
.009	1.48	.084	45.04	225.2
.010	2.96	.168	22.52	112.6
.012	3.7	.211	18.00	90.0
.014	7.0	.399	9.52	47.6
.015	7.9	.450	8.44	42.2
.016	8.9	.507	7.48	37.4
.018	12.6	.718	5.28	26.4
.020	15.7	.895	4.24	21.2
.022	20.7	1.18	3.24	16.2
.024	24.4	1.39	2.72	13.6
.026	32.5	1.85	2.04	10.2
.028	37.6	2.14	1.76	8.8
.030	41.4	2.36	1.60	8.0
.032	44.4	2.53	1.52	7.6
.034	50.3	2.86	1.32	6.6
.035	54.7	3.12	1.24	6.2
.037	65.2	3.71	1.04	5.2
.039	75.4	4.30	0.88	4.4
.041	85.8	4.89	0.76	3.8
.043	94.8	5.40	0.72	3.6
.045	105	5.99	0.64	3.2
.047	115.4	6.58	0.56	2.8
.049	125.8	7.17	0.52	2.6
.051	133.2	7.59	0.50	2.5
.053	143.5	8.18	0.48	2.4
.054	148	8.44	0.44	2.2
.055	158	9.01	0.42	2.1
.057	167	9.52	0.40	2.0
.059	185	10.55	0.36	1.80
.061	191	10.89	0.35	1.74
.063	200	11.41	0.32	1.6
.065	212	12.09	0.31	1.56
.067	223	12.72	0.30	1.48
.070	240	13.69	0.28	1.40

\* Registered trademark of Spraying Systems Co.

\*\* Figures were taken at 16.8°C and are approximate. Be sure occasionally to measure flow in the field to make certain you have the correct orifice and because rates vary with temperature. (Flow on a 0.037 orifice increases from 65.1 mL at 16.8°C to 71.0 mL at 33.6°C.). Use a 300 mesh screen on orifice sizes below .014.