

(Container)

# Marengo<sup>®</sup> Herbicide

GROUP	1	HERBICIDE
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A SUSPENSION CONCENTRATE HERBICIDE FOR POST EMERGENCE CONTROL OF ANNUAL GRASSES IN SMALL GRAIN CEREALS FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND PEACE RIVER, OKANAGAN AND CRESTON FLATS REGIONS OF BRITISH COLUMBIA ONLY.

AGRICULTURAL

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

GUARANTEE: Tralkoxydim .....400 grams per litre  
Contains 1,2-benzisothiazolin-3-one at 0.025 % as a preservative.

REGISTRATION NO. 29289 PEST CONTROL PRODUCTS ACT

**CAUTION: SKIN AND EYE IRRITANT**

NET CONTENTS: 4 L - bulk

**Loveland Products Canada Inc.**  
789 Donnybrook Drive  
Dorchester, ON N0L 1G5  
For information: 1-800-328-4678  
In case of emergency call: 1-800-561-8273

**Dow AgroSciences Canada Inc.**  
2400, 215 – 2<sup>nd</sup> Street S.W.  
Calgary, Alberta T2P 1M4  
1-800-667-3852

®Marengo is a registered trademark

## **PRECAUTIONS**

### **KEEP OUT OF REACH OF CHILDREN.**

Harmful if swallowed. May cause skin and eye irritation. Do not get on skin or in eyes. Do not wear contact lenses when using chemicals. DO NOT ingest. DO NOT get on skin, clothing, or in eyes. Contact with eyes may be painful. Do not smoke, eat, or drink while using this product.

Workers must wear coveralls over long-sleeved shirt, long pants, safety goggles, boots and chemical resistant gloves when mixing, loading and during clean up or when adjusting or repairing sprayer. Wash gloves thoroughly with water before removing them during any operation.

Applicators must wear long-sleeved shirt and long pants.

Wash hands thoroughly with soap and water after using the product and before eating, drinking or smoking.

Do not contaminate food, water supplies or animal feed.

For all uses, **DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

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 web site at [www.croplife.ca](http://www.croplife.ca).

## **FIRST AID**

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

**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 a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

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

**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.

## **TOXICOLOGICAL INFORMATION**

Treat symptomatically for ingestion and/or skin and eye contact. Symptoms are likely to be those of CNS depression. Avoid respiratory depressants unless otherwise indicated.

## **ENVIRONMENTAL HAZARDS**

**TOXIC** to non target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

To reduce runoff from treated areas to aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil or clay. 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. Avoid application when heavy rain is forecast.

## **STORAGE**

Store in a cool, dry place, away from children, animals, food, feed or fertilizers. Keep unused product in resealed original container. Store above  $-5^{\circ}\text{C}$ . Shake well before use.

## **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. Contact Loveland Products Canada Inc. for further information.

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. Contact the manufacturer and the provincial regulatory agency in case of a spill and for clean-up of spills.

## **DISPOSAL**

### **Recyclable Containers:**

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.

If there is no container collection site in your area, dispose of the container 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.

### **Refillable Containers**

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

**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.

(Booklet)

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For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

### **Disposal of unused, unwanted product:**

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.

## **PRODUCT INFORMATION**

Marengo Herbicide is a systemic, postemergence herbicide for the selective control of wild oats, volunteer tame oats, green foxtail, yellow foxtail, barnyard grass and Persian Darnel in spring wheat, durum wheat, winter wheat, barley, triticale, spring rye and winter rye.

## **DIRECTIONS FOR USE**

### **Rates of Use**

Apply Marengo Herbicide at 0.5 L/ha in 50-100 L/ha of water.

**Note:** Always add Marengo ® Adjuvant, Intake™ Adjuvant or Turbocharge B ® Adjuvant to the spray solution at a rate of 0.5 L per 100 L of spray mixture (0.5% v/v). Under adverse conditions, such as dense weed population, late weed growth stage, or poor environmental conditions apply 1.0% V/V of Marengo or Intake Adjuvant (10 L Marengo or Intake Adjuvant /1000 L spray mixture). The incorrect Marengo Adjuvant, Intake adjuvant or Turbocharge B Adjuvant rate can result in unacceptable weed control or crop injury. See MIXING and SPRAYING INSTRUCTION sections.

Only one application per season is permitted.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

Marengo Herbicide can be used on the following crops:

**CEREAL CROPS:** (Spring Wheat, Durum Wheat, Winter Wheat, Barley, Triticale, Spring Rye and Winter Rye) Marengo Herbicide can be used in all varieties of spring wheat (including Canada Western red spring, amber durum, soft white spring, extra strong and Canada prairie spring), red winter wheat, all 2 or 6 row varieties of barley (malting and feed varieties), all varieties of triticale, spring rye and winter rye.

**Note:** Tillered cereal crops may incur injury if applications are made within 48 hours of freezing temperatures. Non-tillering cereal crops which are exposed to temperatures of 4°C or less up to 48 hours before or after application may incur injury. Tank mixing Marengo Herbicide with a broadleaf weed herbicide under adverse conditions may increase severity of crop injury. Crops under stress from foliar diseases or low fertility are more susceptible to injury from Marengo Herbicide.

**Do not use in tame oat crops. Avoid drift onto tame oat and corn crops.  
Do not replant treated areas to tame oats or corn for at least 4 weeks after application.**

**Minimum Interval to Harvest**

Immature cereal crops may be grazed or cut for hay 16 days after treatment. Grain may be harvested 60 days after treatment. Mature straw may be fed to livestock. Do not feed or graze underseeded forage crops in the year of treatment, sufficient data are not available to support this use.

**CEREAL CROPS UNDERSEEDED TO FORAGE LEGUMES:** alfalfa, birdsfoot trefoil, sainfoin and clovers.

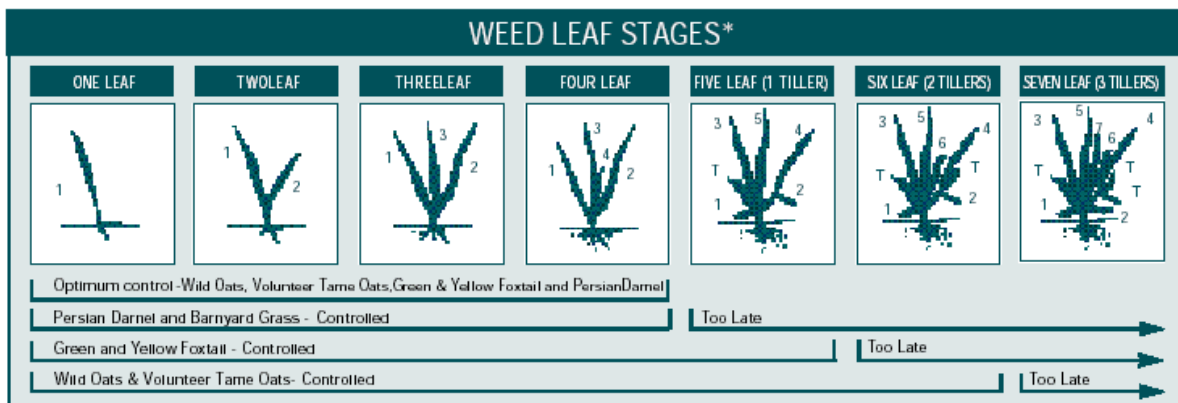
**Note:** Do not tank-mix Marengo Herbicide with any broadleaf herbicides when applying to cereal crops underseeded to forage legumes, as the forages may be injured or killed.

**WEEDS CONTROLLED**

Apply Marengo Herbicide to actively growing weeds for best results. Weeds emerging after application of Marengo Herbicide will not be controlled.

CROP	WEEDS CONTROLLED	WEED GROWTH STAGE (ZADOKS or BBCH)
WHEAT DURUM BARLEY TRITICALE RYE	WILD OATS, VOLUNTEER OATS	1-6 leaf (11,20 to 14,22)
	GREEN FOXTAIL, YELLOW FOXTAIL	1-5 leaf (11,20 to 14,21)
	BARNYARD GRASS PERSIAN DARNEL	1-4 leaf (11 to 14)

Optimum weed control and crop yield response occurs when grassy weeds are removed before they begin to tiller. Refer to the illustration.



### Weed Control Notes

- Perennial grasses such as quack grass will not be controlled.
- Susceptible grassy weeds treated with Marengo Herbicide cease growth soon after application, however, complete die-back of the weeds could take up to 2 weeks.
- When grass weeds are stressed due to drought, heat, lack of fertility, flooding or prolonged cool temperatures, control can be reduced or delayed since the grasses are not actively growing. Grass escapes or re-tillering may occur when application is made under prolonged stress conditions. Optimum weed control will be obtained if application of Marengo Herbicide is delayed until the stress conditions have ended and weeds are once again actively growing.
- The herbicidal activity of Marengo Herbicide can be negatively affected if water containing high concentrations (>400 ppm) of bicarbonate ions is used as a diluent. Water from deep wells is more likely to contain high concentrations of bicarbonate ions. Ammonium sulfate at 9 to 18 kg per 1000 litres of spray solution, can be used to counteract this antagonistic effect. Use only granular or liquid ammonium sulfate formulations which do not contain additional wetters or surfactants.
- Marengo Herbicide is not affected by rain falling one hour or more after application.

### TANK MIXES OF MARENGO HERBICIDE WITH BROADLEAF WEED HERBICIDES

Marengo Herbicide alone will not control broadleaf weeds. For broad spectrum control of both annual grasses and broadleaf weeds, Marengo Herbicide can be tank mixed with a variety of broadleaf weed herbicides. Refer to the following table for details and additional guidance. Read the appropriate broadleaf herbicide label for information on broadleaf weeds controlled.

### Tank Mixing Notes

- Read and strictly adhere to the use directions and precautions on the label of the product(s) that is/are being tank mixed with Marengo Herbicide. Also note all environmental restrictions and guidance such as rain fastness and maximum spraying temperatures on the label of the other product(s) being tank mixed.
- Do not tank mix with amine formulations of 2,4-D or with amine formulations of MCPA or with any other herbicide, insecticide, fungicide, fertilizer solution or adjuvant not recommended on the label as poor grass control and/or unacceptable crop injury may result.**
- With reduced water volumes, tank mixes with Buctril M, Thumper or Pardner may result in some initial injury in the form of "tip burn". This injury, however, will not have any adverse effect on crop maturity or yield.
- Do not tank mix Marengo Herbicide with broadleaf herbicides when applying to cereal crops underseeded to forage legumes as the forages may be injured or killed.



5. Tank mixes with the high rate of Attain XC A Herbicide + Attain XC B Herbicide or high rate of Prestige XC Herbicide may cause temporary crop injury if applied before the 4 leaf stage, however, yield will not normally be affected. These tank mixes may provide a lower level of wild oat control than Marengo Herbicide alone.
6. Temporary crop injury may occur with registered tank mixes, in particular 2,4-D Ester/dichlorprop products, under extreme weather conditions or when the crop is suffering from stress due to inadequate or abnormally high moisture levels, or extreme temperatures. Barley may be injured with tank mixes of 2,4-D Ester/dichlorprop and Buctril M plus MCPA.
7. Herbicides not listed on this label for tank mixing with Marengo Herbicide may be applied separately in sequence. Always apply Marengo Herbicide first and allow at least 7 days after the application of Marengo Herbicide before applying the other herbicide. Herbicides labelled for tank mixing with Marengo Herbicide may also be applied sequentially, either before or after application of Marengo Herbicide.

#### **TANK MIXES OF MARENGO HERBICIDE TANK-MIX WITH INSECTICIDE**

Marengo Herbicide alone or in combination with Buctril M or Pardner can be tank mixed with Decis Flowable for one pass weed and insect control. Always add Matador 120EC Emulsifiable Concentrate Insecticide or Decis Flowable to the spray tank after the herbicides but before adding the adjuvant.

<b>FOR ALL TANK MIXES, USE 0.5 LITRES MARENGO HERBICIDE PER HECTARE, PLUS THE FOLLOWING:</b>	
<b>MIXING PARTNER</b>	<b>REMARKS</b>
Buctril M	Additional MCPA Ester may be added to this tank mix to improve control of certain broadleaf weeds (i.e. hemp nettle, volunteer canola). Refer to the Buctril M label for recommended MCPA Ester rates. A reduction in control of green foxtail may occur with the tank-mix of Buctril M and additional MCPA Ester. Maximum rate of Buctril M of 1 L/ha.
Attain™ XC A Herbicide + Attain XC B Herbicide	Apply postemergence when weeds are in the seedling stage (2-4 leaf) and when spring wheat and spring barley are in the 4-leaf to flag-leaf stage. Apply to winter wheat in the spring from the 3 tiller stage to just before the flag leaf stage. Do not apply later than the flag-leaf emergence stage. See Attain XC A Herbicide use directions for application of the low rate or high rate depending on broadleaf weed species.
Pardner	Maximum rate of 1 L/ha
Thumper	Maximum rate of 1 L/ha
Dichlorprop/2,4-D Ester	Maximum rate of 1.75 L/ha (assuming 600 g dichlorprop/2,4-D Ester ai/L). To ensure optimum crop safety, do not apply prior to the 4 leaf stage of the crop as per the dichlorprop/2,4-D Ester label timing.
2,4-D Ester	Maximum rate of 0.9 L/ha (assuming 600 g 2,4-D ai/L). Do not apply prior to the 4 leaf stage of the crop as temporary crop injury could occur, particularly in spray overlaps.
MCPA Ester	Maximum rate of 1.12 L/ha (assuming 500 g MCPA ai/L).
Lontrel™ Herbicide + MCPA Ester	Maximum rate of 0.28 L/ha + 1.12 L/ha (assuming 500 g MCPA ai/L). Apply between 3 leaf expanded to before flag leaf of the crop. DO NOT apply after 6 leaf stage of the crop.
Curtail™ M Herbicide	Apply between 3 leaf expanded to before flag leaf of the crop. DO NOT apply after 6 leaf stage of the crop. Rate range of 1.5-2 L/ha.
Prestige™ XC Herbicide	For use on spring barley and wheat (spring, durum and winter) only. Apply postemergence when weeds are in the seedling stage (2-4 leaf) and when spring wheat and spring barley are in the 3-leaf to just before the flag-leaf emergence stage. Do not apply later than the flag-leaf emergence stage. See Prestige XC Herbicide use directions for application of the low rate or higher rate depending on broadleaf weed species.

Decis Flowable Insecticide	Maximum rate of 120 mL/ha.
Trophy Herbicide	Apply post-emergence when weeds are in the seedling stage (2-4 leaf) and when spring wheat, durum wheat and spring barley are in the 3-leaf to flag-leaf stage. Do not apply later than the flag-leaf stage. Trophy A Emulsifiable Concentrate Herbicide 0.6 L/ha + Trophy B Emulsifiable Concentrate Herbicide 1.12 L/ha rates. DO NOT APPLY BY AIR
Matador® 120EC Emulsifiable Concentrate Insecticide	Apply 63-83 mL/ha for control of grasshoppers.
Starane™ Herbicide	Apply 0.4 L/ha for control of cleavers (1-4 whorls). Apply 0.6 L/ha for control of cleavers (1-4 whorls), kochia (2-8 leaf), volunteer flax (1-12 cm) and suppression of stork's bill (1-8 leaf). Apply 0.8 L/ha for control/suppression of aforementioned weeds plus control of round-leaved mallow (1-6 leaf), and suppression of chickweed (up to 8 cm), hempnettle (2-6 leaf) and wild buckwheat (1-4 leaf).
OcTTain™ XL Herbicide	For use on spring barley and wheat (spring, durum and winter) only. Apply postemergence when weeds are in the seedling stage (2-4 leaf, unless otherwise noted), and actively growing, and when spring wheat, durum wheat and spring barley are in the 4-leaf to flag-leaf stage. Do not apply later than the flag-leaf stage. Apply to winter wheat in the spring from the 3 tiller stage to just before the flag leaf stage. Apply 1.1 L/ha of OcTTain XL Herbicide

### Tank Mixtures

In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user should contact Dow AgroSciences Canada Inc. at 1-800-667-3852 or [www.dowagro.ca](http://www.dowagro.ca) for information before mixing any pesticide or fertilizer that is not specifically recommended on this label. The user assumes the risk of losses that result from the use of tank mixes that do not appear on this label or that are not specifically recommended by Dow AgroSciences Canada Inc.

### MIXING INSTRUCTIONS

Follow the mixing instructions below for adding Marengo Herbicide to the spray tank.

1. Only use sprayers in good running condition with high agitation. Ensure the sprayer and pre-mix tank is cleaned according to instructions on label of the product used prior to Marengo Herbicide. Use only clean water for the spray solution. **Ensure that** all in-line **strainer** and **nozzle** screens in the sprayer are **50 mesh or coarser**. Screens of 80 mesh size or finer should not be used.
2. Begin to fill sprayer tank or premix tank with clean water, and engage agitator. **Agitation must be continued throughout the entire mixing and spraying procedure.**
3. When the sprayer or premix tank is three quarters full of water, add Marengo Herbicide. If more than 1 case of Marengo Herbicide is to be used, add the Marengo Herbicide from all cases prior to adding tank mixed products or adjuvant.
4. If tank mixing, add the recommended product(s) next.
5. Lastly, add the adjuvant, and then continue to fill tank to desired level with water.

## GROUND SPRAYING INSTRUCTIONS

1. Apply in a spray volume of 50-100 L/ha at a pressure of 275 kPa to ensure proper dispersion, spraying characteristics and performance of Marengo Herbicide.
2. Flat fan nozzles of 80° or 110° are recommended for optimum coverage. Do not use floodjet nozzles or controlled droplet application equipment. Nozzles may be angled forward 45° to enhance penetration of the crop and provide better coverage. Ensure that all in-line strainer and nozzle screens in the sprayer are 50 mesh or coarser. Screens of 80 mesh or finer should not be used.
3. Always ensure that agitation is continued until spraying is completed, even if stopped for brief periods of time. **If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying. Do not begin spraying until fully re-suspended. Marengo Herbicide must be sprayed within the same day of mixing.**
4. When spraying is completed and prior to using other products, ensure the sprayer tank is thoroughly rinsed with clean water to remove any remaining Marengo Herbicide residues. Using a pressure washer and the addition of a detergent or Agral® 90 to the rinse water will enhance removal of residues.

**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.

## AERIAL APPLICATION

### Generic Aerial Application Label Instructions - Directions for Use

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

### Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *Basic Knowledge Requirements for Pesticide Education in Canada: Applicator Core and Aerial Module*, developed by CAPCO.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

**DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 16 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing or rotorspan.

### Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

### AERIAL SPRAYING INSTRUCTIONS

1. Apply in a spray volume of 30 to 45 L/ha at a pressure of 140-275 kPa to ensure proper dispersion, spraying characteristics and performance of Marengo Herbicide.
2. Flat fan nozzles of 80° or 110° are recommended for optimum coverage. Do not use floodjet nozzles or controlled droplet application equipment. **Ensure that** all in-line **strainer** and **nozzle** screens in the sprayer are **50 mesh or coarser**. Screens of 80 mesh size or finer should not be used.
3. Always ensure that agitation is continued until spraying is completed, even if stopped for brief periods of time. **If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying. Marengo Herbicide must be sprayed within the same day of mixing.**
4. Do not apply Marengo Herbicide if the wind is more than 13 km/h. This will avoid spray drift onto non-target areas.
5. **Do not** spray Marengo Herbicide if tame oats are present in adjacent, downwind fields.
6. When spraying is completed and prior to using other products, ensure the sprayer tank is thoroughly rinsed with clean water to remove any remaining Marengo Herbicide residues. Using a pressure washer and the addition of a detergent or Agral 90 to the rinse water will enhance removal of residues.
7. **DO NOT APPLY within 50 m of non-crop areas.** This includes fish-bearing waters, wetlands (potholes, sloughs etc.) and wildlife habitat (hedgerows, rights of way, etc.).

### BUFFER ZONES

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, riparian areas and shrublands).

Method of Application	Buffer Zones (metres) Required for Protection of:
	Terrestrial Habitat
Field Sprayer	3
Aerial (fixed-wing)	100
Aerial (rotary-wing)	80

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.

**NOTE:** Applicators may recalculate a site-specific buffer zone by combining information on current weather conditions and spray configuration for the following applications: all airblast applications, and for field and aerial applications which specify the following droplet size category wording on the product label: 'DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) [Fine or Medium or Coarse] classification.' To access the Buffer Zone Calculator, please visit the Pest Management Regulatory Agency web site.

### **RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management, Marengo Herbicide is a Group 1 herbicide. Any weed population may contain or develop plants naturally resistant to Marengo Herbicide and other Group 1 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 Marengo Herbicide or other Group 1 herbicides 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.
- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- 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 Loveland Products Canada Inc. at 1-800-328-4678.

**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.

®Agral, Matador and Turbocharge are registered trademarks of a Syngenta group company.  
™ Attain XC, Curtail, Lontrel, Prestige XC, Starane, OcTTain XL and Intake Adjuvant are registered Trademarks of The Dow Chemical Company ("Dow") or an affiliated company of Dow  
All other products listed are trademarks of their respective companies.

**IN CASE OF EMERGENCY DUE TO A MAJOR SPILL, FIRE OR POISONING INVOLVING THIS PRODUCT CALL DAY OR NIGHT, 1-800-561-8273 or CHEMTREC 1-800-424-9300**

**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

**1.1 PRODUCT IDENTIFIER:**

**TRADE NAME:** MARENGO® HERBICIDE

**1.2 RECOMMENDED USE:** GROUP 1 HERBICIDE

**1.3 MANUFACTURED FOR AND 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

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

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

Acute Toxicity – Oral	Category 4	H302
Acute Toxicity – Inhalation	Category 4	H332
Eye Damage/Irritation	Category 2B	H320

**2.2 Label elements**



Signal word: WARNING

Hazard Statement: H302 – Harmful if swallowed.  
H332 – Harmful if inhaled.  
H320 – Causes eye irritation.

Precautionary Statement: (Prevention): P264 – Wash hands thoroughly after handling.  
P270 – Do not eat, drink or smoke when using this product.  
P261 – Avoid breathing dust/fume/gas/mist/vapours/spray.  
P271 – Use only outdoors or in a well-ventilated area.

Precautionary Statement: (Response): P301+P312 – IF SWALLOWED: Call a poison centre or doctor/physician if you feel unwell.  
P330 – Rinse mouth.  
P304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312 – Call a poison centre or doctor/physician if you feel unwell.  
P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 – If eye irritation persists: Get medical advice/attention.

Precautionary Statement: (Storage): Not required or applicable.

Precautionary Statement: (Disposal): P501 – Dispose of contents/container in accordance with local, provincial and national regulations.

**2.3 Other hazards**  
None known.



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# MARENGO® HERBICIDE

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## 3. COMPOSITION, INFORMATION ON INGREDIENTS

### 3.2 Mixtures

Chemical Name:	CAS No.	Concentration [%]
Tralkoxydim	87820-88-0	35.00   400 g/L

Ingredients not listed are proprietary or non-hazardous

## 4. FIRST AID MEASURES

### 4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

- Ingestion:** 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 a poison control centre or doctor. Do not give anything by mouth to an unconscious person.
- Skin contact:** 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.
- Inhalation:** 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 treatment advice.
- Eye contact:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

### 4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Spray mist or vapours may be irritating to the respiratory tract.

### 4.3 Immediate Medical Attention and Special Treatment

Treatment: Maintain adequate ventilation and oxygenation of the patient. The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. If burn is present, treat as any thermal burn, after decontamination.

**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.

**NOTES TO PHYSICIAN:** No specific antidote. Employ supportive care. Treatment should be based on judgment of the physician in response to reactions of the patient. Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

### 5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Carbon dioxide (CO<sub>2</sub>), foam, water fog, dry chemical, or other extinguishing media suitable for the fire.

### 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. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. 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.



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## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them.

### 6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not contaminate water.

### 6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Contain or dike spilled material if possible. Should not be released into the environment. Large spills: Dike the spilled material where this is possible. Dig up heavily contaminated soil. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with small quantities of water. Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS

## 7. HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING:

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

### 7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers: Store in a cool, dry place, away from children, animals, food, feed or fertilizers. Keep unused product in resealed original container. Store above -5 °C. Shake well before use.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS:

Not normally required.

### 8.2 EXPOSURE CONTROLS:

#### Engineering Measures

Avoid breathing mists, vapours, or aerosols. Provide adequate general and local exhaust ventilation. Provide eyewash station.

#### OCCUPATIONAL EXPOSURE LIMITS

Components	List	Type	Value
None listed			

#### Individual Protection Measures:

Eye / Face Protection: Chemical goggles are recommended.

Skin Protection: Chemical resistant clothing is recommended. Routinely wash work clothing and protective equipment to remove contaminants. The use of neoprene gloves is recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Respiratory Protection: In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment. Wear respiratory protection during operations where spraying or misting occurs. Wear NIOSH-certified air-purifying respiratory protection with an N, P or R95 or HE class filter and organic vapour cartridge if necessary. Wear air supplied respiratory protection if exposure concentrations are unknown or if air-purifying respirators may not provide adequate protection.



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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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<b>9.1 APPEARANCE :</b>	Liquid
<b>ODOUR:</b>	Odourless.
<b>ODOUR THRESHOLD:</b>	No data available.
<b>COLOUR:</b>	Beige.
<b>pH:</b>	7 - 8 (Neat)
<b>MELTING POINT / FREEZING POINT:</b>	No data available / Freezing Point: -18 °C.
<b>BOILING POINT:</b>	No data available.
<b>FLASH POINT:</b>	> 100 °C (closed cup).
<b>FLAMMABILITY (solid, gas):</b>	This product is not flammable.
<b>UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:</b>	No data available.
<b>VAPOUR PRESSURE:</b>	4 x 10 <sup>-10</sup> mm Hg @ 22 °C (Tralkoxydim Technical).
<b>SOLUBILITY:</b>	7 mg/L @ 20 °C (Tralkoxydim Technical).
<b>PARTITION CO-EFFICIENT, n-OCTANOL / WATER:</b>	2.1 @ 20 °C (Tralkoxydim Technical).
<b>AUTO-IGNITION TEMPERATURE:</b>	~ 510 °C.
<b>DECOMPOSITION TEMPERATURE:</b>	No data available.
<b>VISCOSITY:</b>	884 cPs @ 20 °C.
<b>SPECIFIC GRAVITY (Water = 1):</b>	1.16 g/ml
<b>DENSITY:</b>	1.16 kg/L

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

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**10. STABILITY AND REACTIVITY**

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**10.1 REACTIVITY**

Stable

**10.2 CHEMICAL STABILITY**

Stable under normal conditions. Unstable at elevated temperatures.

**10.3 POSSIBILITY OF HAZARDOUS REACTIONS**

No reactions known under normal use conditions. Will not polymerize.

**10.4 CONDITIONS TO AVOID**

None known.

**10.5 INCOMPATIBLE MATERIALS**

None known.

**10.6 HAZARDOUS DECOMPOSITION PRODUCTS**

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

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**11. TOXICOLOGICAL INFORMATION**

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**11.1 LIKELY ROUTES OF EXPOSURE**

Ingestion. Inhalation. Skin contact, eye contact.

**LC<sub>50</sub> (rat):** 9.52 mg/L (4 HR).**LD<sub>50</sub> Oral (rat):** 2952 mg/kg**LD<sub>50</sub> Dermal (rat):** > 5000 mg/kg**Acute Toxicity Estimates:** No data available**Skin Irritation (rabbit):** Slight irritant**Eye Irritation (rabbit):** Moderate irritant**Specific Target Organ Toxicity:** No data available.**Aspiration:** No data available.**Skin Sensitization (guinea pig):** Not a sensitizer**Carcinogenicity:** No data available.**Germ Cell Mutagenicity:** No data available**Interactive Effects:** None known.



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### 12. ECOLOGICAL INFORMATION

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#### 12.1 ECOTOXICITY

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Tralkoxydim Technical.

LC <sub>50</sub> / EC <sub>50</sub> : Apis mellifera (bees):	> 100 µg/bee
LC <sub>50</sub> / EC <sub>50</sub> : Rainbow trout ( <i>Oncorhynchus mykiss</i> )	> 7.2 ppm, 72 hours
LC <sub>50</sub> / EC <sub>50</sub> : <i>Daphnia magna</i>	> 175 ppm, 48 hours
LD <sub>50</sub> (dietary) <i>Colinus virginianus</i> (Bobwhite quail):	6,237 ppm
LD <sub>50</sub> (oral) Mallard Duck	> 3,020 ppm
LC <sub>50</sub> / EC <sub>50</sub> : (8-day dietary) Mallard Duck:	> 7,400 ppm

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: Soil (1/2 life): approximately 1 – 2 days.

#### 12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Moderate for major product components; low for minor components.

#### 12.4 MOBILITY IN SOIL

Rapidly degrades in soil.

#### 12.5 OTHER ADVERSE EFFECTS

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

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### 13. DISPOSAL CONSIDERATIONS

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#### 13.1 WASTE TREATMENT METHODS

Do not reuse containers for any purpose. Container is recyclable, and is to be disposed of at a container collection site. Contact your local dealer/distributor for the location of the nearest collection site. Before taking container to the collection site: Triple or pressure-rinse the empty container, adding the rinsate to the spray tank. Make the empty container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Do not contaminate water, food or feed by storage or disposal.

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### 14. TRANSPORT INFORMATION

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#### 14.1 LAND TRANSPORT

TDG Shipping Description: NOT REGULATED

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### 15. REGULATORY INFORMATION

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#### 15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA

HMIS

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



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**CEPA – Domestic Substances List (DSL):** All substances in this product are listed on the DSL or not required to be listed  
**Hazardous Products Act Information: CPR Compliance:** This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.  
**WHMIS Classification:** Exempt.  
**National Fire Code of Canada:** Not applicable.

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### 16. OTHER INFORMATION

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**SDS STATUS:** Sections 1, 2 and 16 revised.

**PREPARED BY:** Product Stewardship and Regulatory Affairs

**REVIEWED BY:** Safety, Health and Environment

*PCP (Pest Control Products Act) Registration No. 29289*

*®Marengo is a registered trademark of Loveland Products, Inc.*

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

(Container)

# Marengo<sup>®</sup> Herbicide

GROUP	1	HERBICIDE
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A SUSPENSION CONCENTRATE HERBICIDE FOR POST EMERGENCE CONTROL OF ANNUAL GRASSES IN SMALL GRAIN CEREALS FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND PEACE RIVER, OKANAGAN AND CRESTON FLATS REGIONS OF BRITISH COLUMBIA ONLY.

AGRICULTURAL

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

GUARANTEE: Tralkoxydim .....400 grams per litre  
Contains 1,2-benzisothiazolin-3-one at 0.025 % as a preservative.

REGISTRATION NO. 29289 PEST CONTROL PRODUCTS ACT

**CAUTION: SKIN AND EYE IRRITANT**

NET CONTENTS: 4 L - bulk

**Loveland Products Canada Inc.**  
789 Donnybrook Drive  
Dorchester, ON N0L 1G5  
For information: 1-800-328-4678  
In case of emergency call: 1-800-561-8273

**Dow AgroSciences Canada Inc.**  
2400, 215 – 2<sup>nd</sup> Street S.W.  
Calgary, Alberta T2P 1M4  
1-800-667-3852

®Marengo is a registered trademark

## **PRECAUTIONS**

### **KEEP OUT OF REACH OF CHILDREN.**

Harmful if swallowed. May cause skin and eye irritation. Do not get on skin or in eyes. Do not wear contact lenses when using chemicals. DO NOT ingest. DO NOT get on skin, clothing, or in eyes. Contact with eyes may be painful. Do not smoke, eat, or drink while using this product.

Workers must wear coveralls over long-sleeved shirt, long pants, safety goggles, boots and chemical resistant gloves when mixing, loading and during clean up or when adjusting or repairing sprayer. Wash gloves thoroughly with water before removing them during any operation.

Applicators must wear long-sleeved shirt and long pants.

Wash hands thoroughly with soap and water after using the product and before eating, drinking or smoking.

Do not contaminate food, water supplies or animal feed.

For all uses, **DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

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 web site at [www.croplife.ca](http://www.croplife.ca).

## **FIRST AID**

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

**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 a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

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

**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.

## **TOXICOLOGICAL INFORMATION**

Treat symptomatically for ingestion and/or skin and eye contact. Symptoms are likely to be those of CNS depression. Avoid respiratory depressants unless otherwise indicated.

## **ENVIRONMENTAL HAZARDS**

**TOXIC** to non target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

To reduce runoff from treated areas to aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil or clay. 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. Avoid application when heavy rain is forecast.

## **STORAGE**

Store in a cool, dry place, away from children, animals, food, feed or fertilizers. Keep unused product in resealed original container. Store above  $-5^{\circ}\text{C}$ . Shake well before use.

## **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. Contact Loveland Products Canada Inc. for further information.

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. Contact the manufacturer and the provincial regulatory agency in case of a spill and for clean-up of spills.

## **DISPOSAL**

### **Recyclable Containers:**

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.

If there is no container collection site in your area, dispose of the container 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.

### **Refillable Containers**

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

**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.

(Booklet)

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Workers must wear coveralls over long-sleeved shirt, long pants, safety goggles, boots and chemical resistant gloves when mixing, loading and during clean up or when adjusting or repairing sprayer. Wash gloves thoroughly with water before removing them during any operation.

Applicators must wear long-sleeved shirt and long pants.

Wash hands thoroughly with soap and water after using the product and before eating, drinking or smoking.

Do not contaminate food, water supplies or animal feed.

For all uses, **DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

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## **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. Contact Loveland Products Canada Inc. for further information.

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. Contact the manufacturer and the provincial regulatory agency in case of a spill and for clean-up of spills.

## **DISPOSAL**

### **Recyclable Containers:**

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.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

### **Refillable Containers**

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

### **Disposal of unused, unwanted product:**

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.

## **PRODUCT INFORMATION**

Marengo Herbicide is a systemic, postemergence herbicide for the selective control of wild oats, volunteer tame oats, green foxtail, yellow foxtail, barnyard grass and Persian Darnel in spring wheat, durum wheat, winter wheat, barley, triticale, spring rye and winter rye.

## **DIRECTIONS FOR USE**

### **Rates of Use**

Apply Marengo Herbicide at 0.5 L/ha in 50-100 L/ha of water.

**Note:** Always add Marengo ® Adjuvant, Intake™ Adjuvant or Turbocharge B ® Adjuvant to the spray solution at a rate of 0.5 L per 100 L of spray mixture (0.5% v/v). Under adverse conditions, such as dense weed population, late weed growth stage, or poor environmental conditions apply 1.0% V/V of Marengo or Intake Adjuvant (10 L Marengo or Intake Adjuvant /1000 L spray mixture). The incorrect Marengo Adjuvant, Intake adjuvant or Turbocharge B Adjuvant rate can result in unacceptable weed control or crop injury. See MIXING and SPRAYING INSTRUCTION sections.

Only one application per season is permitted.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

Marengo Herbicide can be used on the following crops:

**CEREAL CROPS:** (Spring Wheat, Durum Wheat, Winter Wheat, Barley, Triticale, Spring Rye and Winter Rye) Marengo Herbicide can be used in all varieties of spring wheat (including Canada Western red spring, amber durum, soft white spring, extra strong and Canada prairie spring), red winter wheat, all 2 or 6 row varieties of barley (malting and feed varieties), all varieties of triticale, spring rye and winter rye.

**Note:** Tillered cereal crops may incur injury if applications are made within 48 hours of freezing temperatures. Non-tillering cereal crops which are exposed to temperatures of 4°C or less up to 48 hours before or after application may incur injury. Tank mixing Marengo Herbicide with a broadleaf weed herbicide under adverse conditions may increase severity of crop injury. Crops under stress from foliar diseases or low fertility are more susceptible to injury from Marengo Herbicide.

**Do not use in tame oat crops. Avoid drift onto tame oat and corn crops.  
Do not replant treated areas to tame oats or corn for at least 4 weeks after application.**

**Minimum Interval to Harvest**

Immature cereal crops may be grazed or cut for hay 16 days after treatment. Grain may be harvested 60 days after treatment. Mature straw may be fed to livestock. Do not feed or graze underseeded forage crops in the year of treatment, sufficient data are not available to support this use.

**CEREAL CROPS UNDERSEED TO FORAGE LEGUMES:** alfalfa, birdsfoot trefoil, sainfoin and clovers.

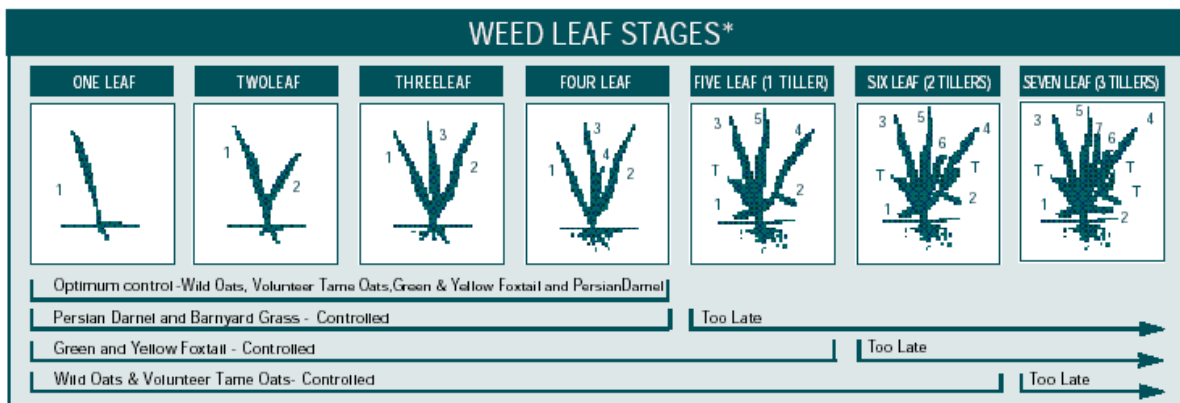
**Note:** Do not tank-mix Marengo Herbicide with any broadleaf herbicides when applying to cereal crops underseeded to forage legumes, as the forages may be injured or killed.

**WEEDS CONTROLLED**

Apply Marengo Herbicide to actively growing weeds for best results. Weeds emerging after application of Marengo Herbicide will not be controlled.

CROP	WEEDS CONTROLLED	WEED GROWTH STAGE (ZADOKS or BBCH)
WHEAT DURUM BARLEY TRITICALE RYE	WILD OATS, VOLUNTEER OATS	1-6 leaf (11,20 to 14,22)
	GREEN FOXTAIL, YELLOW FOXTAIL	1-5 leaf (11,20 to 14,21)
	BARNYARD GRASS PERSIAN DARNEL	1-4 leaf (11 to 14)

Optimum weed control and crop yield response occurs when grassy weeds are removed before they begin to tiller. Refer to the illustration.



### Weed Control Notes

- Perennial grasses such as quack grass will not be controlled.
- Susceptible grassy weeds treated with Marengo Herbicide cease growth soon after application, however, complete die-back of the weeds could take up to 2 weeks.
- When grass weeds are stressed due to drought, heat, lack of fertility, flooding or prolonged cool temperatures, control can be reduced or delayed since the grasses are not actively growing. Grass escapes or re-tillering may occur when application is made under prolonged stress conditions. Optimum weed control will be obtained if application of Marengo Herbicide is delayed until the stress conditions have ended and weeds are once again actively growing.
- The herbicidal activity of Marengo Herbicide can be negatively affected if water containing high concentrations (>400 ppm) of bicarbonate ions is used as a diluent. Water from deep wells is more likely to contain high concentrations of bicarbonate ions. Ammonium sulfate at 9 to 18 kg per 1000 litres of spray solution, can be used to counteract this antagonistic effect. Use only granular or liquid ammonium sulfate formulations which do not contain additional wetters or surfactants.
- Marengo Herbicide is not affected by rain falling one hour or more after application.

### TANK MIXES OF MARENGO HERBICIDE WITH BROADLEAF WEED HERBICIDES

Marengo Herbicide alone will not control broadleaf weeds. For broad spectrum control of both annual grasses and broadleaf weeds, Marengo Herbicide can be tank mixed with a variety of broadleaf weed herbicides. Refer to the following table for details and additional guidance. Read the appropriate broadleaf herbicide label for information on broadleaf weeds controlled.

### Tank Mixing Notes

- Read and strictly adhere to the use directions and precautions on the label of the product(s) that is/are being tank mixed with Marengo Herbicide. Also note all environmental restrictions and guidance such as rain fastness and maximum spraying temperatures on the label of the other product(s) being tank mixed.
- Do not tank mix with amine formulations of 2,4-D or with amine formulations of MCPA or with any other herbicide, insecticide, fungicide, fertilizer solution or adjuvant not recommended on the label as poor grass control and/or unacceptable crop injury may result.**
- With reduced water volumes, tank mixes with Buctril M, Thumper or Pardner may result in some initial injury in the form of "tip burn". This injury, however, will not have any adverse effect on crop maturity or yield.
- Do not tank mix Marengo Herbicide with broadleaf herbicides when applying to cereal crops underseeded to forage legumes as the forages may be injured or killed.

5. Tank mixes with the high rate of Attain XC A Herbicide + Attain XC B Herbicide or high rate of Prestige XC Herbicide may cause temporary crop injury if applied before the 4 leaf stage, however, yield will not normally be affected. These tank mixes may provide a lower level of wild oat control than Marengo Herbicide alone.
6. Temporary crop injury may occur with registered tank mixes, in particular 2,4-D Ester/dichlorprop products, under extreme weather conditions or when the crop is suffering from stress due to inadequate or abnormally high moisture levels, or extreme temperatures. Barley may be injured with tank mixes of 2,4-D Ester/dichlorprop and Buctril M plus MCPA.
7. Herbicides not listed on this label for tank mixing with Marengo Herbicide may be applied separately in sequence. Always apply Marengo Herbicide first and allow at least 7 days after the application of Marengo Herbicide before applying the other herbicide. Herbicides labelled for tank mixing with Marengo Herbicide may also be applied sequentially, either before or after application of Marengo Herbicide.

#### **TANK MIXES OF MARENGO HERBICIDE TANK-MIX WITH INSECTICIDE**

Marengo Herbicide alone or in combination with Buctril M or Pardner can be tank mixed with Decis Flowable for one pass weed and insect control. Always add Matador 120EC Emulsifiable Concentrate Insecticide or Decis Flowable to the spray tank after the herbicides but before adding the adjuvant.

<b>FOR ALL TANK MIXES, USE 0.5 LITRES MARENGO HERBICIDE PER HECTARE, PLUS THE FOLLOWING:</b>	
<b>MIXING PARTNER</b>	<b>REMARKS</b>
Buctril M	Additional MCPA Ester may be added to this tank mix to improve control of certain broadleaf weeds (i.e. hemp nettle, volunteer canola). Refer to the Buctril M label for recommended MCPA Ester rates. A reduction in control of green foxtail may occur with the tank-mix of Buctril M and additional MCPA Ester. Maximum rate of Buctril M of 1 L/ha.
Attain™ XC A Herbicide + Attain XC B Herbicide	Apply postemergence when weeds are in the seedling stage (2-4 leaf) and when spring wheat and spring barley are in the 4-leaf to flag-leaf stage. Apply to winter wheat in the spring from the 3 tiller stage to just before the flag leaf stage. Do not apply later than the flag-leaf emergence stage. See Attain XC A Herbicide use directions for application of the low rate or high rate depending on broadleaf weed species.
Pardner	Maximum rate of 1 L/ha
Thumper	Maximum rate of 1 L/ha
Dichlorprop/2,4-D Ester	Maximum rate of 1.75 L/ha (assuming 600 g dichlorprop/2,4-D Ester ai/L). To ensure optimum crop safety, do not apply prior to the 4 leaf stage of the crop as per the dichlorprop/2,4-D Ester label timing.
2,4-D Ester	Maximum rate of 0.9 L/ha (assuming 600 g 2,4-D ai/L). Do not apply prior to the 4 leaf stage of the crop as temporary crop injury could occur, particularly in spray overlaps.
MCPA Ester	Maximum rate of 1.12 L/ha (assuming 500 g MCPA ai/L).
Lontrel™ Herbicide + MCPA Ester	Maximum rate of 0.28 L/ha + 1.12 L/ha (assuming 500 g MCPA ai/L). Apply between 3 leaf expanded to before flag leaf of the crop. DO NOT apply after 6 leaf stage of the crop.
Curtail™ M Herbicide	Apply between 3 leaf expanded to before flag leaf of the crop. DO NOT apply after 6 leaf stage of the crop. Rate range of 1.5-2 L/ha.
Prestige™ XC Herbicide	For use on spring barley and wheat (spring, durum and winter) only. Apply postemergence when weeds are in the seedling stage (2-4 leaf) and when spring wheat and spring barley are in the 3-leaf to just before the flag-leaf emergence stage. Do not apply later than the flag-leaf emergence stage. See Prestige XC Herbicide use directions for application of the low rate or higher rate depending on broadleaf weed species.

Decis Flowable Insecticide	Maximum rate of 120 mL/ha.
Trophy Herbicide	Apply post-emergence when weeds are in the seedling stage (2-4 leaf) and when spring wheat, durum wheat and spring barley are in the 3-leaf to flag-leaf stage. Do not apply later than the flag-leaf stage. Trophy A Emulsifiable Concentrate Herbicide 0.6 L/ha + Trophy B Emulsifiable Concentrate Herbicide 1.12 L/ha rates. <b>DO NOT APPLY BY AIR</b>
Matador® 120EC Emulsifiable Concentrate Insecticide	Apply 63-83 mL/ha for control of grasshoppers.
Starane™ Herbicide	Apply 0.4 L/ha for control of cleavers (1-4 whorls). Apply 0.6 L/ha for control of cleavers (1-4 whorls), kochia (2-8 leaf), volunteer flax (1-12 cm) and suppression of stork's bill (1-8 leaf). Apply 0.8 L/ha for control/suppression of aforementioned weeds plus control of round-leaved mallow (1-6 leaf), and suppression of chickweed (up to 8 cm), hempnettle (2-6 leaf) and wild buckwheat (1-4 leaf).
OcTTain™ XL Herbicide	For use on spring barley and wheat (spring, durum and winter) only. Apply postemergence when weeds are in the seedling stage (2-4 leaf, unless otherwise noted), and actively growing, and when spring wheat, durum wheat and spring barley are in the 4-leaf to flag-leaf stage. Do not apply later than the flag-leaf stage. Apply to winter wheat in the spring from the 3 tiller stage to just before the flag leaf stage. Apply 1.1 L/ha of OcTTain XL Herbicide

### Tank Mixtures

In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user should contact Dow AgroSciences Canada Inc. at 1-800-667-3852 or [www.dowagro.ca](http://www.dowagro.ca) for information before mixing any pesticide or fertilizer that is not specifically recommended on this label. The user assumes the risk of losses that result from the use of tank mixes that do not appear on this label or that are not specifically recommended by Dow AgroSciences Canada Inc.

### MIXING INSTRUCTIONS

Follow the mixing instructions below for adding Marengo Herbicide to the spray tank.

1. Only use sprayers in good running condition with high agitation. Ensure the sprayer and pre-mix tank is cleaned according to instructions on label of the product used prior to Marengo Herbicide. Use only clean water for the spray solution. **Ensure that** all in-line **strainer** and **nozzle** screens in the sprayer are **50 mesh or coarser**. Screens of 80 mesh size or finer should not be used.
2. Begin to fill sprayer tank or premix tank with clean water, and engage agitator. **Agitation must be continued throughout the entire mixing and spraying procedure.**
3. When the sprayer or premix tank is three quarters full of water, add Marengo Herbicide. If more than 1 case of Marengo Herbicide is to be used, add the Marengo Herbicide from all cases prior to adding tank mixed products or adjuvant.
4. If tank mixing, add the recommended product(s) next.
5. Lastly, add the adjuvant, and then continue to fill tank to desired level with water.

## GROUND SPRAYING INSTRUCTIONS

1. Apply in a spray volume of 50-100 L/ha at a pressure of 275 kPa to ensure proper dispersion, spraying characteristics and performance of Marengo Herbicide.
2. Flat fan nozzles of 80° or 110° are recommended for optimum coverage. Do not use floodjet nozzles or controlled droplet application equipment. Nozzles may be angled forward 45° to enhance penetration of the crop and provide better coverage. Ensure that all in-line strainer and nozzle screens in the sprayer are 50 mesh or coarser. Screens of 80 mesh or finer should not be used.
3. Always ensure that agitation is continued until spraying is completed, even if stopped for brief periods of time. **If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying. Do not begin spraying until fully re-suspended. Marengo Herbicide must be sprayed within the same day of mixing.**
4. When spraying is completed and prior to using other products, ensure the sprayer tank is thoroughly rinsed with clean water to remove any remaining Marengo Herbicide residues. Using a pressure washer and the addition of a detergent or Agral® 90 to the rinse water will enhance removal of residues.

**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.

## AERIAL APPLICATION

### Generic Aerial Application Label Instructions - Directions for Use

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

### Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *Basic Knowledge Requirements for Pesticide Education in Canada: Applicator Core and Aerial Module*, developed by CAPCO.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

**DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 16 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing or rotorspan.

### Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

**AERIAL SPRAYING INSTRUCTIONS**

1. Apply in a spray volume of 30 to 45 L/ha at a pressure of 140-275 kPa to ensure proper dispersion, spraying characteristics and performance of Marengo Herbicide.
2. Flat fan nozzles of 80° or 110° are recommended for optimum coverage. Do not use floodjet nozzles or controlled droplet application equipment. **Ensure that** all in-line **strainer** and **nozzle** screens in the sprayer are **50 mesh or coarser**. Screens of 80 mesh size or finer should not be used.
3. Always ensure that agitation is continued until spraying is completed, even if stopped for brief periods of time. **If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying. Marengo Herbicide must be sprayed within the same day of mixing.**
4. Do not apply Marengo Herbicide if the wind is more than 13 km/h. This will avoid spray drift onto non-target areas.
5. **Do not** spray Marengo Herbicide if tame oats are present in adjacent, downwind fields.
6. When spraying is completed and prior to using other products, ensure the sprayer tank is thoroughly rinsed with clean water to remove any remaining Marengo Herbicide residues. Using a pressure washer and the addition of a detergent or Agral 90 to the rinse water will enhance removal of residues.
7. **DO NOT APPLY within 50 m of non-crop areas.** This includes fish-bearing waters, wetlands (potholes, sloughs etc.) and wildlife habitat (hedgerows, rights of way, etc.).

**BUFFER ZONES**

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, riparian areas and shrublands).

Method of Application	Buffer Zones (metres) Required for Protection of:
	Terrestrial Habitat
Field Sprayer	3
Aerial (fixed-wing)	100
Aerial (rotary-wing)	80

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.

**NOTE:** Applicators may recalculate a site-specific buffer zone by combining information on current weather conditions and spray configuration for the following applications: all airblast applications, and for field and aerial applications which specify the following droplet size category wording on the product label: 'DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) [Fine or Medium or Coarse] classification.' To access the Buffer Zone Calculator, please visit the Pest Management Regulatory Agency web site.

### **RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management, Marengo Herbicide is a Group 1 herbicide. Any weed population may contain or develop plants naturally resistant to Marengo Herbicide and other Group 1 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 Marengo Herbicide or other Group 1 herbicides 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.
- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- 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 Loveland Products Canada Inc. at 1-800-328-4678.

**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.

®Agral, Matador and Turbocharge are registered trademarks of a Syngenta group company.  
™ Attain XC, Curtail, Lontrel, Prestige XC, Starane, OcTTain XL and Intake Adjuvant are registered Trademarks of The Dow Chemical Company ("Dow") or an affiliated company of Dow  
All other products listed are trademarks of their respective companies.



**EN CAS D'URGENCE RÉSULTANT D'UN DÉVERSEMENT IMPORTANT, D'UN INCENDIE OU D'UNE INTOXICATION IMPLIQUANT CE PRODUIT, TÉLÉPHONER EN TOUT TEMPS AU 1-800-561-8273 OU À CHEMTREC : 1-800-424-9300**

## 1. IDENTIFICATION DU PRODUIT ET RENSEIGNEMENTS SUR LE FOURNISSEUR

### 1.1 Identification du produit :

**Nom commercial :** HERBICIDE MARENGO®

**1.2 Usages recommandés :** Herbicide du Groupe 1

### 1.3 Fabriqué pour et Distribué par :

LOVELAND PRODUCTS CANADA, INC.  
789 DONNYBROOK DRIVE – Dorchester, Ontario N0L 1G5

**1.4 Numéro d'urgence 24 h (Chemtrec) :** 1-800-424-9300 (Sans frais)

**Autre numéro d'urgence :** 1-800-561-8273

**Services techniques de Loveland :** 1-800-328-4678

**Centre national d'intervention d'urgence de la Garde côtière américaine :** 1-800-424-8802

## 2. IDENTIFICATION DES RISQUES

### 2.1 Classification de la substance ou du mélange

Toxicité aiguë – Par voie orale	Catégorie 4	H302
Toxicité aiguë – Par inhalation	Catégorie 4	H332
Irritation/Dommages oculaires	Catégorie 2B	H320

### 2.2 Éléments d'étiquetage



Termes d'avertissement :

AVERTISSEMENT

Codes de danger :

H302 – Nocif en cas d'ingestion.  
H332 – Nocif si inhalé.  
H320 – Cause l'irritation des yeux.

Conseils de prudence :  
(Prévention)

P264 – Se laver soigneusement les mains et le visage après manipulation.  
P270 – Ne pas manger, boire ou fumer en manipulant le produit.  
P261 – Éviter de respirer les poussières/fumées/gaz/brouillards/vapeurs/aérosols.  
P271 – Utiliser seulement en plein air ou dans un endroit bien ventilé.

Conseils de prudence :  
(Intervention)

P301+P312 – EN CAS D'INGESTION : appeler un CENTRE ANTIPOISON ou un médecin en cas de malaise.  
P330 – Rincer la bouche.  
P304+P340 – EN CAS D'INHALATION : transporter la victime à l'extérieur et la maintenir au repos dans une position où elle peut confortablement respirer.  
P312 – Appeler un CENTRE ANTIPOISON ou un médecin en cas de malaise.  
P305+P351+P338 – EN CAS DE CONTACT AVEC LES YEUX : rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.  
P337+P313 – Si l'irritation oculaire persiste : consulter un médecin.

Conseils de prudence  
(Entreposage)

Non requis ou non applicable.

Conseils de prudence :  
(Élimination)

P501 – Éliminer le contenu/récipient en respectant la réglementation locale, provinciale et nationale.

### 2.3 Autres dangers

Aucun connu.

### 3. COMPOSITION, RENSEIGNEMENTS SUR LES INGRÉDIENTS

#### 3.2 Mélanges

Ingrédients chimiques	N° de CAS	Concentration [%]
Tralkoxydime	87820-88-0	35,00   400 g/L

Les ingrédients qui ne sont pas répertoriés de façon précise sont de propriété exclusive ou sans danger.

### 4. PREMIERS SOINS

#### 4.1 Descriptions des mesures de premiers soins

Recommandation générale : Consulter un médecin en cas de symptômes.

**En cas d'ingestion :** Appeler un centre antipoison ou un médecin immédiatement pour obtenir des conseils sur le traitement à administrer. Si la personne incommodée est capable d'avaler, lui faire boire un verre d'eau à petites gorgées. Ne pas faire vomir à moins d'avoir reçu le conseil de procéder ainsi par le centre antipoison ou le médecin. Ne jamais rien administrer par la bouche à une personne inconsciente.

**En cas de contact avec la peau/vêtements :**

Retirer tous les vêtements contaminés. Bien rincer la peau à grande eau immédiatement pendant 15 à 20 minutes. Appeler un centre antipoison ou un médecin pour des conseils sur le traitement à administrer.

**En cas d'inhalation :**

Déplacer la personne vers une source d'air frais. Si la personne ne respire plus, appeler le 911 ou une ambulance, puis pratiquer la respiration artificielle, de préférence le bouche-à-bouche, si possible. Appeler un centre antipoison ou un médecin pour obtenir plus de conseils sur le traitement à administrer.

**En cas de contact avec les yeux :** Rincer les yeux à l'eau doucement et lentement pendant 15 à 20 minutes en tenant les paupières ouvertes. Si la personne porte des lentilles cornéennes, les retirer après 5 minutes, puis continuer à rincer. Appeler un centre antipoison ou un médecin pour obtenir des conseils sur le traitement à administrer.

#### 4.2 Principaux symptômes et effets, tant aigus que différés

Symptômes : Le brouillard et les vapeurs de pulvérisation peuvent irriter les voies respiratoires.

#### 4.3 Soins médicaux immédiats et traitements particuliers éventuels

Traitement : Maintenir un degré adéquat de ventilation et d'oxygénation du patient. La décision de faire vomir ou non devrait être prise par un médecin. Si on pratique un lavage gastrique, il est recommandé de le faire sous intubation endotrachéale et/ou par tube obturateur œsophagien. Lorsqu'on envisage de vider l'estomac, il faut bien peser le danger d'aspiration pulmonaire par rapport à la toxicité. S'il y a une brûlure, la traiter comme une brûlure thermique, après décontamination.

**POUR TOUTE URGENCE MÉDICALE CONCERNANT CE PRODUIT, COMPOSER LE 1-800-561-8273.**

Avoir l'étiquette, le contenant ou le nom du produit ainsi que son numéro d'homologation de produit antiparasitaire lorsqu'on cherche à obtenir des soins médicaux.

**REMARQUES POUR LE MÉDECIN :** Il n'existe pas d'antidote spécifique. Donner des soins de soutien. Le traitement devrait être fondé sur le jugement du médecin et les réactions du patient. Traiter selon les symptômes.

### 5. TECHNIQUES DE LUTTE CONTRE L'INCENDIE

#### 5.1 Moyens d'extinction

Moyens d'extinction appropriés : Utiliser du dioxyde de carbone (CO<sub>2</sub>), de la mousse, du brouillard d'eau, de la poudre chimique ou un autre moyen d'extinction approprié pour combattre le feu.

#### 5.2 Dangers particuliers résultant de la substance ou du mélange

Dangers durant la lutte contre le feu : Pendant un incendie, la fumée peut contenir, en plus du matériau d'origine, des produits de combustion à composition variée qui peuvent être toxiques et/ou irritants. Les produits de combustion peuvent inclure, sans toutefois s'y limiter : des oxydes de carbone.

#### 5.3 Équipement de protection et précautions particuliers pour les pompiers

Équipement de protection pour les pompiers : Les personnes combattant un feu important impliquant des produits chimiques devraient porter un appareil respiratoire autonome et un équipement de protection complet. Utiliser de l'eau pulvérisée pour refroidir les contenants exposés au feu. Tenir les gens à l'écart. Isoler la zone d'incendie et en interdire l'accès aux personnes dont la présence est inutile. Utiliser un jet d'eau pour refroidir les contenants exposés au feu et la zone affectée par l'incendie jusqu'à ce que le feu soit éteint et que tout danger de reprise soit écarté. Combattre l'incendie d'un endroit protégé ou à distance sécuritaire. Envisager l'usage d'une lance sur affût télécommandé ou lance monitor, ne nécessitant pas une présence humaine. Évacuer immédiatement tout le personnel de la zone si le son s'échappant de la soupape de sécurité s'amplifie ou si le contenant change de couleur. Les liquides en feu peuvent être éteints en les diluant avec de l'eau. Ne pas arroser de plein fouet avec un jet d'eau car cela pourrait propager le feu. Déplacer le contenant à l'extérieur de la zone de feu si cette manœuvre ne comporte pas de danger. Les liquides en feu peuvent être déplacés en les arrosant à grande eau afin de protéger le personnel et réduire les dommages matériels. Si possible, contenir les eaux ayant servi à combattre le feu car elles pourraient causer des dommages à l'environnement. Consulter les sections «Mesures en cas de déversements accidentels» et «Renseignements écologiques» de cette fiche signalétique.

**6. MESURES EN CAS DE DÉVERSEMENTS ACCIDENTELS**
**6.1 Précautions personnelles, équipement de protection individuelle et mesures d'urgence**

Précautions personnelles : Ne pas toucher aux contenants endommagés ou aux matériaux déversés si on ne porte pas des vêtements de protection appropriés. Rester en amont du vent par rapport au déversement et ne pas se tenir dans les dépressions de terrain et les zones basses. Aérer les endroits clos avant d'y pénétrer.

**6.2 Précautions environnementales**

Précautions environnementales : Empêcher toute fuite ou tout déversement additionnel s'il est possible de le faire sans danger. Éviter de contaminer l'eau.

**6.3 Méthodes et matériaux de confinement et de nettoyage**

Méthodes de nettoyage : Contenir et endiguer le produit déversé si possible. Éviter que celui-ci ne soit libéré dans l'environnement. Déversements majeurs : Endiguer le produit déversé lorsque possible. Excaver le sol fortement contaminé. Couvrir d'une feuille de plastique pour prévenir sa dissémination. Absorber avec de la vermiculite, du sable sec ou de la terre et placer dans des contenants appropriés. Après récupération du produit déversé, laver la zone touchée avec de petites quantités d'eau. Déversements mineurs : Absorber le produit déversé avec une matière absorbante (p. ex. tissu, laine). Bien nettoyer la surface pour éliminer toute contamination résiduelle. Ne jamais remettre les produits déversés dans les contenants d'origine pour réutilisation. Pour l'élimination des déchets, consulter la section 13 de cette fiche signalétique.

**7. MANIPULATION ET ENTREPOSAGE**
**7.1 Précautions à prendre pour une manipulation sécuritaire**

Conseils pour une manipulation sécuritaire :

Éviter tout contact avec les yeux, la peau et les vêtements. Ne pas respirer le brouillard ou les vapeurs. Porter un équipement de protection individuelle. Ne pas utiliser dans les endroits où la ventilation est insuffisante. Éviter l'exposition prolongée. Bien se laver après avoir manipulé le produit. Ne pas jeter dans les égouts. Manipuler et ouvrir les contenants avec prudence. Toujours faire preuve de prudence pendant la manipulation et l'entreposage. Se laver avant de manger, boire et/ou fumer.

**7.2 Conditions pour un entreposage sécuritaire**

Exigences pour les lieux de stockage et les contenants :

Conserver dans un endroit frais et sec, hors de la portée des enfants et à l'écart des animaux, des aliments de consommation humaine et animale et des engrais. Conserver à des températures supérieures à -5 °C. Bien agiter avant d'utiliser.

**8. EXPOSITION/PROTECTION PERSONNELLE**
**8.1 PARAMÈTRES DE CONTRÔLE**

Non requis normalement

**8.2 CONTRÔLE DE L'EXPOSITION**

Mesures d'ingénierie :

Éviter de respirer les brouillards, les vapeurs et les aérosols. Assurer une ventilation générale et localisée appropriée. Assurer l'accès à une douche oculaire.

**LIMITES D'EXPOSITION PROFESSIONNELLE**

Ingrédients	Type	Valeur
Aucun ingrédient listé		

**Mesures de protection individuelle :**

Protection des yeux et du visage : Le port de lunettes de protection contre les produits chimiques est recommandé.

Protection de la peau : Le port de vêtements résistants aux produits chimiques est recommandé. Laver régulièrement les vêtements de travail et l'équipement de protection individuelle pour éliminer les contaminants. Le port de gants de néoprène est recommandé. Rester conscient que le liquide peut pénétrer les gants. Il est recommandé de les changer régulièrement.

Protection respiratoire : En cas de ventilation insuffisante ou de risque d'inhalation des vapeurs ou du brouillard, porter un appareil respiratoire approprié. Porter une protection respiratoire durant les opérations de pulvérisation ou de brumisation. Porter un appareil respiratoire purificateur d'air certifié par le NIOSH muni d'un filtre N, P, R95 ou HE et d'une cartouche pour vapeurs organiques si requis. Porter un appareil de protection respiratoire à adduction d'air si les concentrations d'exposition sont inconnues ou si les appareils respiratoires purificateurs d'air ne procurent pas une protection suffisante.

## 9. PROPRIÉTÉS PHYSIQUES ET CHIMIQUES

9.1 APPARENCE :	Liquide.
ODEUR :	Inodore.
SEUIL OLFACTIF :	Aucune donnée disponible.
COULEUR :	Beige.
pH :	7 – 8 (non dilué)
POINT DE FUSION / POINT DE CONGÉLATION :	Aucune donnée disponible. Point de congélation : -18 °C.
POINT D'ÉBULLITION :	Aucune donnée disponible.
POINT D'ÉCLAIR :	> 100 °C (en coupelle fermée).
INFLAMMABILITÉ (solide, gaz) :	Ce produit est inflammable.
LIMITES SUPÉRIEURE ET INFÉRIEURE D'INFLAMMABILITÉ OU D'EXPLOSION :	Aucune donnée disponible.
TENSION DE VAPEUR :	4 x 10 <sup>-10</sup> mm Hg @ 22 °C (tralkoxydime de qualité technique).
SOLUBILITÉ :	7 mg/L @ 20 °C (tralkoxydime de qualité technique).
COEFFICIENT DE PARTAGE, n-OCTANE/EAU :	2,1 @ 20 °C (tralkoxydime de qualité technique).
POINT D'AUTO-INFLAMMATION :	≈ 510 °C.
TEMPÉRATURE DE DÉCOMPOSITION :	Aucune donnée disponible.
VISCOSITÉ :	884 cPo @ 20 °C.
POIDS SPÉCIFIQUE (EAU = 1) :	1,16 g/mL
MASSE VOLUMÉTRIQUE APPARENTE :	1,16 kg/L

Remarque : Ces données physiques constituent des valeurs typiques basées sur le matériel mis à l'essai, mais peuvent varier d'un échantillon à l'autre. Les valeurs typiques ne doivent pas être interprétées comme étant une analyse garantie d'un lot particulier ou les caractéristiques du produit.

## 10. STABILITÉ ET RÉACTIVITÉ

### 10.1 Réactivité

Stable.

### 10.2 Stabilité chimique

Stable sous des conditions normales. Instable à des températures élevées.

### 10.3 Possibilité de réactions dangereuses

Aucune réaction connue dans des conditions normales d'utilisation. Ne se polymérise pas.

### 10.4 Conditions à éviter

Aucune connue.

### 10.5 Substances incompatibles

Aucune connue.

### 10.6 Produits de décomposition dangereux

Durant un incendie, la fumée peut contenir le matériau original en plus des produits de combustion de composition diverse, lesquels peuvent être toxiques et/ou irritants.

## 11. RENSEIGNEMENTS TOXICOLOGIQUES

### 11.1 Voies d'exposition probables

Ingestion. Inhalation. Contact avec la peau. Contact avec les yeux.

CL<sub>50</sub> (rat) : 9,52 mg/L (4 h).

Toxicité orale aiguë DL<sub>50</sub> (rat) : 2952 mg/kg.

Toxicité cutanée aiguë DL<sub>50</sub> (rat) : > 5000 mg/kg

Estimations de toxicité aiguë : Aucune donnée disponible.

Irritation cutanée (lapin) : Irritant léger.

Irritation des yeux (lapin) : Irritant modéré.

Toxicité spécifique à un organe cible : Aucune donnée disponible.

Aspiration : Aucune donnée disponible.

Sensibilisation cutanée (cobaye) : N'est pas un sensibilisant.

Potentiel carcinogène : Aucune donnée disponible.

Mutagénicité des cellules germinales : Aucune donnée disponible.

Effets interactifs : Aucun connu.



## FICHE DE DONNÉES DE SÉCURITÉ

HERBICIDE MARENCO®

N° FDS : 29289-19-LPI

Révisions à la FDS : SECTIONS 1, 2, 16

Date de publication : 01/24/2019

Remplace : 12/09/2016

### 12. RENSEIGNEMENTS ÉCOLOGIQUES

#### 12.1 Écotoxicité

Ce produit n'est pas classé comme étant dangereux pour l'environnement. Toutefois, il n'est pas exclu que des déversements importants ou fréquents puissent avoir un effet nocif ou dommageable sur l'environnement.

CL <sub>50</sub> / CE <sub>50</sub> :	Abeille domestique (Apis mellifera) :	> 100 µg/abeille
CL <sub>50</sub> / CE <sub>50</sub> :	Truite arc-en-ciel (Oncorhynchus mykiss)	> 7,2 ppm, 72 heures
CL <sub>50</sub> / CE <sub>50</sub> :	Daphnia magna	> 175 ppm, 48 heures
DL <sub>50</sub> (voie alimentaire) :	Colin de Virginie (Colinus virginianus)	6237 ppm
DL <sub>50</sub> (voie orale)	Canard colvert	> 3020 ppm
CL <sub>50</sub> /CE <sub>50</sub> : (diète de 8 jours) :	Canard colvert	> 7400 ppm

La dérive et le ruissellement peuvent avoir des effets indésirables sur les plantes non visées par le traitement.

Ne pas appliquer directement sur aucun plan d'eau.

Ne pas contaminer l'eau lors de l'élimination des eaux de lavage de l'équipement.

Ne pas appliquer quand les conditions météorologiques favorisent la dérive hors de la zone visée par le traitement.

#### 12.2 Persistance et dégradabilité

Biodégradabilité : Demi-vie dans le sol : 1 à 2 jours environ.

#### 12.3 Potentiel de bioaccumulation

Bioaccumulation : Modérée pour les ingrédients principaux du produit; faible pour les autres ingrédients.

#### 12.4 Mobilité dans le sol

Se dégrade rapidement dans le sol.

#### 12.5 Autres effets indésirables

Évaluation : Tout danger pour l'environnement n'est pas exclus dans le cas où ce produit est manipulé ou éliminé de façon non professionnelle.

### 13. ÉLIMINATION

#### 13.1 Méthodes de traitement des déchets

**NE PAS** réutiliser les contenants à d'autres fins. Ce contenant est recyclable et doit être éliminé à un point de collecte des contenants.

Communiquer avec son détaillant/distributeur local pour connaître l'emplacement du site de collecte le plus proche. Avant d'emporter les contenants au site de collecte, faire un triple rinçage des contenants vides, ou les rincer avec de l'eau sous pression, en ajoutant les rinçures à la cuve du pulvérisateur. Rendre les contenants rincés impropres à toute nouvelle utilisation. S'il n'y a pas de site de collecte dans la région, disposer des contenants conformément aux exigences provinciales. Pour des renseignements sur l'élimination des produits non utilisés ou superflus, communiquer avec le fabricant ou l'organisme provincial de réglementation. Ne pas contaminer l'eau, les aliments pour consommation humaine et les aliments pour animaux lors de l'entreposage ou de l'élimination du produit.

### 14. RENSEIGNEMENTS RELATIFS AU TRANSPORT

#### 14.3 Transport terrestre

Description TMD/DOT : NON RÉGLEMENTÉ

### 15. RÉGLEMENTATION

#### 15.1 Réglementation relative à la sécurité, à la santé et à l'environnement

Classement des dangers selon la NFPA et la HMIS:

NFPA		HMIS			
1	Santé	0	Moindre	1	Santé
0	Inflammabilité	1	Légère	0	Inflammabilité
0	Instabilité	2	Modérée	0	Réactivité
		3	Élevée	X	ÉPI
		4	Grave		



## FICHE DE DONNÉES DE SÉCURITÉ

HERBICIDE MARENGO®

N° FDS : 29289-19-LPI

Révisions à la FDS : SECTIONS 1, 2, 16

Date de publication : 01/24/2019

Remplace : 12/09/2016

**Liste intérieure des substances (LIS) selon la LCPE :** Toutes les substances dans ce produit sont répertoriées dans la LIS ou ne nécessitent pas d'être répertoriées.

**Information concernant la Loi sur les produits dangereux : Conformité au RPC :** Ce produit a été classé conformément aux critères de risque du Règlement sur les produits contrôlés (RPC) canadien et la fiche signalétique contient toutes les informations requises par le RPC.

**Classification SIMDUT :** Ce produit est exempté des exigences du SIMDUT.

**Code national de prévention des incendies :** Sans objet.

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### 16. AUTRES INFORMATIONS

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**STATUT DE LA FICHE SIGNALÉTIQUE :** Révision des sections 1, 2 et 16.

**PRÉPARÉ PAR :** Service de l'intendance et des affaires réglementaires

**RÉVISÉ PAR :** Service de santé environnementale et de sécurité

**N° D'HOMOLOGATION en vertu de la Loi sur les produits antiparasitaires : 29289**

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