

Safety Data Sheet

Marengo[®] Herbicide

®Marengo is a registered trademark of Viterra Inc.

In case of emergency Call CANUTEC at 613 996 6666

1. Product Identification:

Product name: Marengo Herbicide

Product use: A suspension concentrate for post emergence control of annual grasses in small grain cereals and in selected forage grasses grown for seed only.

Effective date: May 29, 2009

Supplier:

Viterra Inc.

2625 Victoria Avenue
Regina, SK S4T 7T9
1-866-569-4411

This product is regulated under authority of the Pest Control Products Act

2. Composition:

Component	CAS Number	% (w/w)
Tralkoxydim	087820-88-0	35.0
Other ingredients	Not available	65.0

3. Hazard Identification:

Emergency Overview:

This product is a beige odorless liquid. This product is mildly irritating to the eyes and skin.

Potential Health Effects:

Eyes: This product is mildly irritating to the eyes.

Skin contact: Contact may cause slight skin irritation.

Skin absorption: This product is not likely to be absorbed through the skin in harmful amounts.

Ingestion: Amounts ingested incidental to normal occupational exposure are not expected to cause injury.

Inhalation: A single prolonged exposure is not likely to cause injury.

4. First Aid Measures:

Consult a physician in every case of suspected chemical poisoning. Never give fluids or induce vomiting if a patient is unconscious or convulsing regardless of cause of injury. If breathing difficulties occur seek medical attention at once.

Eyes: Immediately flush eyes repeatedly with large amounts of clean, running water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Get medical attention if irritation persists.

Skin: Remove contaminated clothing. Using plenty of soap and water, wash then rinse skin, hair and under fingernails for 15 to 20 minutes. Obtain medical attention if irritation persists.

Ingestion: If victim is fully conscious, have the person sip a glass of water if able to swallow. Get medical attention at once. Do not induce vomiting unless instructed to do so by qualified medical personnel. Never give anything by mouth, or attempt to induce vomiting in an unconscious or convulsing person. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer water.

Inhalation: Remove individual to fresh air. Remove victim to fresh air. If person is not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is labored, give oxygen. Obtain immediate medical attention at once. Get medical attention if breathing difficulty persists.

Safety Data Sheet

Marengo[®] Herbicide

®Marengo is a registered trademark of Viterro Inc.

In case of emergency Call CANUTEC at 613 996 6666

Have the Safety Data Sheet, and if available, the product container or label with you when calling for medical assistance.

Note to physician:

There is no specific antidote. Employ supportive care. Treatment should be based on the judgment of the physician in response to reactions of the patient.

5. Fire-Fighting Measures:

Flash point: >100°C

Explosive limits: Not available

Auto-ignition temperature: Not available

Extinguishing media: Foam CO₂, dry chemical, Halon or water fog or mist.

Sensitivity to mechanical impact/static discharge: Not available

Unusual fire and explosion hazards: Toxic irritating gasses and vapors, including oxides of carbon, nitrogen oxide and ammonia may be produced under fire conditions. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of involved buildings, area and equipment until decontaminated. Contain fire-fighting water for future disposal.

Fire-fighting equipment: Wear positive-pressure self-contained breathing apparatus and full turnout gear.

6. Accidental Release Measures:

Soak up small spills with absorbent material such as HAZORB, or ZORBALL, peat moss, commercial sweeping compound or similar absorbent material; if these are not available use adsorbing agents such as kitty litter, sand, clay or topsoil. Store collected absorbed/adsorbed material in secure containers until safe disposal can be arranged. Avoid the use of water for cleanup, since spent water must be collected and may be treated as hazardous waste. Use hot water and heavy duty detergent to clean up any residual stains on hard surfaces. Small spills on topsoil should be worked into the soil and allowed to degrade under natural conditions (see Section 13. Ecological Information – Degradation and Metabolism – Soil). Do not allow spilled material to contaminate water supplies. For large spills, dike and barricade the affected area and contact CANUTEC at 613 996 6666 and local authorities.

7. Handling and Storage:

Handling: Prevent eating, drinking, use of tobacco and cosmetic application in areas where there is a potential for exposure to the material. Wash hands thoroughly with soap and water after handling, and before eating, tobacco use, drinking or using the toilet. Wash contaminated clothing before re-use and separate from household laundry.

Storage: Keep this product out of reach of children, pets or livestock. Keep this product, wash or rinse water and contaminated materials out of water sources, away from crops, and away from access by people, animals and birds. Store this product in original containers only in a well-ventilated, cool, dry, secure area. Store this product away from heat, sparks and flame. Do not expose containers to temperatures above 40°C. Store this product separate from other products to prevent cross-contamination.

Safety Data Sheet

Marengo[®] Herbicide

®Marengo is a registered trademark of Viterra Inc.

In case of emergency Call CANUTEC at 613 996 6666

8. Exposure Controls, Personal Protection and Exposure Limits:

Exposure limits:

Tralkoxydim: Not available. Manufacturer recommends an occupational exposure limit (OEL) of 0.3 mg/m³.

Other ingredients: Not available

Engineering controls: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Breathing: Atmospheric levels should be maintained below the exposure guidelines. When respiratory protection is required for certain operations, use an approved air-purifying or positive-pressure supplied-air respirator, depending on the potential airborne concentration.

Protective clothing: For brief contact during manufacture, warehousing and transport, wear clean body-covering clothing. During operations where exposure to the concentrated product may occur, use protective clothing impervious to this product. Use of items made of heavy-duty neoprene or nitrile rubber is suggested. Selection of specific items such as face shield, respirator, boots, gloves, apron or full body suit will depend on the operation being carried out. Applicators and other field handlers, including persons repairing or cleaning application equipment, must wear chemically resistant (nitrile) gloves, boots and coveralls when mixing, loading, and during clean up or when adjusting or repairing sprayer.

Eyes: Use chemical workers' goggles.

Other protection: None stated

9. Physical and Chemical Properties:

Boiling point: Not available

Vapor pressure: 4 X 10⁻¹⁰ mm Hg at 22°C (for tralkoxydim)

Volatility: Not available

pH: 7.0 to 8.0 (neat)

Appearance: Beige liquid

Odor: None

Coefficient of water/oil distribution: 2.1 at 20°C (for tralkoxydim technical)

Specific gravity: 1.16 at 20°C

Evaporation rate: Not available

Solubility in water: 7 mg/L (for tralkoxydim technical)

Viscosity: 840 cPs at 20°C

Odor threshold: Not applicable

Freezing point: -18°C

10. Stability and Reactivity:

Stability: This product is stable under normal use and storage conditions,

Incompatibility: None known.

Hazardous decomposition products: During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Hazardous polymerization: Will not occur

Safety Data Sheet

Marengo[®] Herbicide

®Marengo is a registered trademark of Viterra Inc.

In case of emergency Call CANUTEC at 613 996 6666

11. Toxicological Information:

Skin absorption: Acute dermal LD50 (rat) is >5000 mg/kg.

Ingestion: Acute oral LD50 (rat) is 2950 mg/kg.

Inhalation: The maximum concentration in the tests (9.52 mg/L for four hours) produced no ill effects in the test animals.

Sensitization: This product was not a dermal sensitizer when tested in guinea pig.

Chronic effects: For tralkoxydim, animal studies have shown effects on the liver and the retina, and the abnormal increase in Leydig cell development of testicular and benign tumours at a dose of 2500 ppm. Lifetime hamster studies showed a decreased lymphocyte level and increased liver pigment at doses 2500 ppm and above. A 90-day dog study showed signs of minor liver toxicity at 5 mg/kg/day (increased liver weights and enzyme changes).

Cancer: For tralkoxydim, there was no evidence of carcinogenic effects in hamster studies. However, the EPA has classified tralkoxydim as a likely human carcinogen based on incomplete data and one study showing abnormalities in a test animal through a mechanism not present in man.

Birth defects: Tralkoxydim did not cause any reproductive effects in laboratory studies.

Reproductive effects: Tralkoxydim did not cause any reproductive effects in laboratory studies.

Mutagenicity: Tralkoxydim did not cause a mutagenic effect in laboratory studies.

12. Ecological Information:

For tralcoxydim:

Aquatics:

Tralcoxydim is practically non-toxic to aquatic organisms on an acute basis (96-hour LC50 or EC50 is >100 mg/L in the most sensitive species)

Avian:

Tralcoxydim is practically non-toxic to birds on an acute basis (Acute LD50 is >2000 mg/kg in the most sensitive species).

Tralcoxydim is practically non-toxic to birds on a dietary basis (LC50 is >5000 ppm in the most sensitive species).

Bees

Tralcoxydim is practically non-toxic to bees. (LD50 (contact and oral) >100µg/bee).

Bioconcentration potential for tralcoxydim is low.

Degradation and Metabolism:

In soil: Tralkoxydim degrades rapidly in soil, with a half-life of about 3 days under aerobic conditions at 20°C. The half-life of tralkoxydim in flooded soil is about 25 days.

In water: Not available

In plants: Tralkoxydim degrades rapidly in crops. At a limit of detection of 0.02 mg/kg, no residues of tralkoxydim or its metabolites have been found in wheat or barley at harvest, after application at up to twice the recommended use rates.

In animals: Not available

13. Disposal Considerations:

Unused unwanted product: Contact Viterra Inc. or your provincial regulatory agency for disposal information.

Container disposal: Refer to the product label for instructions regarding cleaning and disposal of empty pesticide containers. If these instructions are missing or not understood, contact Viterra Inc. at 1-866-569-4411 or your provincial regulatory agency for direction.

Safety Data Sheet

Marengo[®] Herbicide

®Marengo is a registered trademark of Viterra Inc.

In case of emergency Call CANUTEC at 613 996 6666

14. Transport Information:

This product is classified as "**Not Regulated**" under regulations of the Transportation of Dangerous Goods Act.

15. Regulatory Information:

Pest Control Products Act registration number: 29289

For information phone: 1-866-569-4411

16. Other information:

National Fire Code classification: Not regulated

NFPA ratings: Health: 2; Flammability: 1; Reactivity: 0.

Notice: The information contained in this Safety Data Sheet ("SDS") is current as of the effective date shown in Section 1 of this SDS and may be subject to amendment by Viterra Inc. at any time. Viterra Inc. accepts no liability whatsoever that results in any way from the use of SDS, which are not published by Viterra Inc., or have been amended without Viterra Inc. express written authorization. Users of this SDS must satisfy themselves that they have the most recent and authorized version of this SDS and shall bear all responsibility and liability with respect thereto. Any conflict or inconsistencies as to the contents of this SDS shall be resolved in favor of Viterra Inc. by the most recent version of the SDS published by Viterra Inc.

SDS Revisions: 15. Regulatory Information

Replaces: February 24, 2009
