

CONTAINER LABEL FOR BOTTLE

Group **2** Herbicide

**INFERNO™ DUO**

**Water Dispersible Granules**

**AGRICULTURAL**

**FOR PREPLANT AND PREEMERGENCE APPLICATIONS ON SPRING WHEAT  
(EXCLUDING DURUM WHEAT)**

**FOR SALE AND USE IN ALBERTA, MANITOBA, SASKATCHEWAN, AND  
PEACE RIVER REGION OF BRITISH COLUMBIA ONLY**

**GUARANTEE:**

**Flucarbazone, present as flucarbazone-sodium..... 45.0%**

**Tribenuron methyl..... 23.9%**

**REGISTRATION NUMBER 30663**

**PEST CONTROL PRODUCTS ACT**

**READ THE LABEL AND BOOKLET BEFORE USING**

**Warning, contains the allergens milk and sulfites.**

**CAUTION – SKIN IRRITANT**

**KEEP OUT OF REACH OF CHILDREN**

**STORE IN A COOL, DRY PLACE**

**NET CONTENTS: 300 GRAMS to 600 Kg**

**For product information call: 1-866-761-9397**

**Arysta LifeScience North America, LLC  
15401 Weston Parkway, Suite 150  
Cary, NC 27513**

## PRECAUTIONS

- **KEEP OUT OF REACH OF CHILDREN.**
- May irritate the skin. Avoid contact with skin.
- Wear goggles or face shield, coveralls, and suitable chemical resistant gloves during mixing and loading.
- Do not contaminate any body of water.
- When using, do not eat, drink or smoke. Wash skin thoroughly with soap and water after handling.
- Remove contaminated clothing immediately after use. Store and wash contaminated clothing separately from household laundry before re-use.
- Do not apply by air.
- Apply only when there is a low risk of drift to areas of human habitation or activity such as houses, cottages, schools and recreational areas. To determine the risk of drift, take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

**Note:** 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).

## PROTECTIVE CLOTHING

During mixing, loading, clean-up and repair workers must wear a long-sleeved shirt, long pants, chemical-resistant gloves, goggles or face shield, and shoes plus socks. During application workers must wear a long-sleeved shirt, long pants, goggles or face shield, and shoes plus socks.

## FIRST AID

**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 to 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 to 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.

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

## **TOXICOLOGICAL INFORMATION**

No specific antidote is available. Treat the patient symptomatically.

## **ENVIRONMENTAL HAZARDS**

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

## **STORAGE**

Store in cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, or feed. Store in original container and out of reach of children, preferably in a locked storage area. INFERNO DUO is not affected by freezing.

**SPILL CLEAN-UP:** Follow safety precautions as directed for handling the product. Sweep spilled product with a broom and shovel into tightly closable container. If on a floor or hard surface, wash the surface or floor with detergent and water, then rinse. If on soil, collect surface soil contaminated with the product. If the product is clean, it may be used; otherwise, follow the DISPOSAL instructions.

## **DISPOSAL**

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.
5. 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.

|  |
|--|
| <p><b>In case of emergency involving a major spill, fire or poisoning<br/>Call CHEMTREC 24-hours at 1-800-424-9300 or (703) 527-3887</b></p> |
|--|

## **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.

INFERNO is a trademark of Arysta LifeScience North America, LLC. Arysta LifeScience and the Arysta LifeScience logo are registered trademarks of Arysta LifeScience Corporation.

® All other products are registered trademarks of their respective companies.

™ All other products are trademarks of their respective companies.

**BOOKLET LABEL FOR BOTTLE**

|              |          |                  |
|--------------|----------|------------------|
| <b>Group</b> | <b>2</b> | <b>Herbicide</b> |
|--------------|----------|------------------|

**INFERNO™ DUO**

**Water Dispersible Granules**

**AGRICULTURAL**

**FOR PREPLANT AND PREEMERGENCE APPLICATIONS ON SPRING WHEAT  
(EXCLUDING DURUM WHEAT)**

**FOR SALE AND USE IN ALBERTA, MANITOBA, SASKATCHEWAN, AND  
PEACE RIVER REGION OF BRITISH COLUMBIA ONLY**

**GUARANTEE:**

**Flucarbazone, present as flucarbazone-sodium..... 45.0%**

**Tribenuron methyl..... 23.9%**

**REGISTRATION NUMBER 30663**

**PEST CONTROL PRODUCTS ACT**

**READ THE LABEL AND BOOKLET BEFORE USING**

**Warning, contains the allergens milk and sulfites.**

**CAUTION – SKIN IRRITANT**

**KEEP OUT OF REACH OF CHILDREN**

**STORE IN A COOL, DRY PLACE**

**NET CONTENTS: 300 GRAMS to 600 Kg**

**For product information call: 1-866-761-9397**

**Arysta LifeScience North America, LLC  
15401 Weston Parkway, Suite 150  
Cary, NC 27513**

## PRODUCT INFORMATION

INFERNO DUO is a selective herbicide for use as a pre-plant, or post-plant pre-emergence timing in spring wheat (hard red spring, Canada Prairie spring, soft white spring, and extra strong or utility).

INFERNO DUO is absorbed by foliage and roots of the labeled weed species. These weeds cease growth soon after application, removing the competitive effects of susceptible weeds. However, complete weed control may not be seen for one to two weeks.

INFERNO DUO will control grass weed biotypes which have developed target site resistance to ACCase inhibitors (Group 1), dinitroanilines (Group 3), and triallates (Group 8). See "*RESISTANCE MANAGEMENT RECOMMENDATIONS*" section for additional information.

## PRECAUTIONS

- **KEEP OUT OF REACH OF CHILDREN.**
- May irritate the skin. Avoid contact with skin.
- Wear goggles or face shield, coveralls, and suitable chemical resistant gloves during mixing and loading.
- Do not contaminate any body of water.
- When using, do not eat, drink or smoke. Wash skin thoroughly with soap and water after handling.
- Remove contaminated clothing immediately after use. Store and wash contaminated clothing separately from household laundry before re-use.
- Do not apply by air.
- Apply only when there is a low risk of drift to areas of human habitation or activity such as houses, cottages, schools and recreational areas. To determine the risk of drift, take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

**Note:** 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).

## PROTECTIVE CLOTHING

During mixing, loading, clean-up and repair workers must wear a long-sleeved shirt, long pants, chemical-resistant gloves, goggles or face shield, and shoes plus socks. During application workers must wear a long-sleeved shirt, long pants, goggles or face shield, and shoes plus socks.

## FIRST AID

**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 to 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 to 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.

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

## TOXICOLOGICAL INFORMATION

No specific antidote is available. Treat the patient symptomatically.

## ENVIRONMENTAL HAZARDS

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

## STORAGE

Store in cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, or feed. Store in original container and out of reach of children, preferably in a locked storage area. INFERNO DUO is not affected by freezing.

**SPILL CLEAN-UP:** Follow safety precautions as directed for handling the product. Sweep spilled product with a broom and shovel into tightly closable container. If on a floor or hard surface, wash the surface or floor with detergent and water, then rinse. If on soil, collect surface soil contaminated with the product. If the product is clean, it may be used; otherwise, follow the *DISPOSAL* instructions.

## DISPOSAL

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.
5. 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.

**In case of emergency involving a major spill, fire or poisoning  
Call CHEMTREC 24-hours at 1-800-424-9300 or (703) 527-3887**

## **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.

## **DIRECTIONS FOR USE**

Read the entire DIRECTIONS FOR USE before using INFERNO DUO.

- **Ground Application only. DO NOT APPLY BY AIR.**
- Do not mix, load or clean spray equipment within 10 metres of well-heads or aquatic systems, including marshes, ponds, ditches, streams, lakes, etc.
- Buffer Zones: Overspray or drift to sensitive habitats should be avoided. A buffer zone of 20 metres is required between the downwind edge of the boom and the closest edge of sensitive terrestrial habitats including forested areas, shelter belts, woodlots, hedgerows, and shrublands. A buffer zone of 35 metres is required between the downwind edge of the boom and the closest edge of sensitive aquatic habitats including sloughs, coulees, ponds, prairie potholes, lakes, rivers, streams, wetlands, and wildlife habitat at the edge of these bodies of water. Do not contaminate these habitats when cleaning and rinsing spray equipment or containers.
- Consult the label of the tank mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture.
- Do not apply during periods of dead calm, when winds are gusty or when wind speed is greater than 15 km/hr at 2 metres high above ground at the site of application.
- **Do not apply treatments if it is raining or if rainfall is expected within one (1) hour after application.**
- Do not graze treated fields or use green crop for feed. Wheat grain or straw from harvested treated fields may be fed to livestock.
- Do not allow this chemical to drift on to other crops, especially canola, tame oats, or other non target crops.
- Observe minimum interval to harvest of 80 days after treatment.
- Do not treat wheat underseeded to legumes.
- Apply registered rates of glyphosate when tank mixed with INFERNO DUO for pre-plant or pre-emergence application for control of label weeds.
- **Entire bag of INFERNO DUO needs to be added to the spray tank.**

## TIMING OF APPLICATION

INFERNO DUO can be applied up to 1 week prior to planting, or immediately after planting prior to crop emergence in spring wheat (excluding durum wheat).

Use of INFERNO DUO as a preplant or postplant preemergence application allows for early weed removal and reduced weed competition with wheat.

Do not apply more than 15 g ai/ha of flucarbazone sodium herbicide, the equivalent of one application, or 31.5 g/ha of INFERNO DUO, pre-plant or post-plant pre-emergence per growing season.

Apply to young, emerged, actively growing weeds that are less than 10 cm tall or across.

509 grams of INFERNO DUO treats 16 hectares or 40 acres.

1018 grams of INFERNO DUO treats 32 hectares or 80 acres.

For best results apply to wheat and weeds that are actively growing in the stages listed. Wheat exposed to water-logged or saturated soils, temperature extremes such as hot or cold, drought, low fertility, or plant disease immediately prior to or after application could result in unacceptable injury symptoms. Weed control may also be reduced by these same conditions, or if heavy weed infestations exist, or when applications are made outside the application recommendations.

| PRODUCT RATES AND WEEDS CONTROLLED                                   |                                   |  |
|--|-----------------------------------|--|
| Product  | Rate                              | Weeds Controlled and Suppressed  |
| INFERNO DUO  | 31.5 g/ha                         | <b>Controlled:</b> Canola (volunteer), Shepherd's purse, Narrow-leaved hawk's beard.<br><b>Suppressed:</b> Wild oat, Dandelion,.   |
| INFERNO DUO + Glyphosate present as isopropylamine or potassium salt | 31.5 g/ha + 450 gae/ha glyphosate | <b>Controlled:</b> Barley (volunteer), Canada fleabane, canola (volunteer), cow cockle, common ragweed, dandelion <sup>1</sup> , downy brome, flax (volunteer), flixweed, foxtail barley <sup>2,3</sup> , giant foxtail, green foxtail, hemp-nettle, kochia, lady's-thumb, lamb's-quarters, narrow-leaved hawk's-beard, redroot pigweed, Russian thistle, Shepherd's purse, stinkweed, wheat (volunteer), wild buckwheat, wild mustard, wild oat.<br><b>Suppressed:</b> Canada thistle |

<sup>1</sup> top growth control only.

<sup>2</sup> Prior to seed head emergence and senescence of older leaves.

<sup>3</sup> Apply with 900 gae/ha of glyphosate when foxtail barley is greater than 10 cm, or if



heavy infestations exist, or if plants are stressed. Apply prior to seed head emergence and senescence of older leaves.

When applied as a tank-mix combination, read and observe all label directions, including rates, restrictions, and grazing limitations for each product used in the tank-mix. Follow the more stringent label precautionary measures for mixing, loading and applying stated on both product labels.

### **GLYPHOSATE TANK MIXTURE**

INFERNO DUO may be tank mixed with glyphosate present as isopropylamine or potassium salt when applied pre-plant or post-plant pre-emergence. Refer to the appropriate product label for use directions.

### **MIXING INSTRUCTIONS**

Ensure the spray tank is clean. In-line strainers and nozzle screens should be clean and 50-mesh or coarser.

1. Fill the spray tank 1/3 to 1/2 full with clean water and begin agitation or bypass.
2. Add the appropriate INFERNO DUO rate directly to the spray tank. Vigorous agitation is required to dissolve the INFERNO DUO. Maintain sufficient agitation during both mixing and application.
3. Add the glyphosate herbicide.
4. Complete filling tank with balance of water needed.

### **SPRAYING INSTRUCTIONS**

Apply in a spray volume of 50 to 100 L/ha (22.5 to 45 L/acre or 5 to 10 gallons/acre) at 207 to 345 kPa (30 to 50 PSI) pressure to ensure proper weed coverage.

Flat fan nozzles of 80° or 110° are recommended for optimum coverage. Do not use floodjet nozzle or control droplet application equipment. Nozzles may be oriented 45° forward to give better weed coverage.

### **SPRAYER CLEAN-UP**

1. Drain the tank and thoroughly rinse spray tank, boom and hoses with clean water. Pay particular attention to flushing out any visible deposits.
2. Fill the tank with clean water and 1 % v/v (1 L/100L) household ammonia. Flush the hoses, boom and nozzles with the cleaning solution. Circulate for at least 15 minutes. Flush hoses, boom and nozzles once more, then drain the tank;
3. Clean nozzles and screens in a separate container using the ammonia and water;
4. Repeat #2;
5. Rinse tank, boom and hoses with clean water.
  - Do not clean sprayer near desirable vegetation, wells, or other water sources;
  - Dispose of all rinsings in accordance with provincial regulations;
  - Check tank mix partner label for any additional clean-up procedures.

## ROTATIONAL CROPS

The following crops may be planted 11 months after an application of INFERNO DUO.

| Soil Zones and Rotational Crops                 |  |  |              |
|---|--|--|--------------|
| Gray-Wooded                                     | Black  | Dark Brown   | Brown        |
| Spring wheat<br>Barley<br>Canola<br>Field peas* | Spring wheat<br>Barley<br>Canola<br>Field peas*<br>Field bean<br>Flax<br>Durum wheat | Spring wheat<br>Barley<br>Canola<br>Field peas*<br>Flax<br>Durum wheat | Spring wheat |

\* Field peas can be successfully grown the year following INFERNO DUO application providing the following three criteria are all met.

1. Soil pH must be below 7.5
2. Organic matter content must be above 4 %.
3. Precipitation must be equal to or above the 10 year average (minimum 100 mm within 60 days of application in year of application).

Or, fields can be summer fallowed.

As INFERNO DUO is degraded by soil microbes, environmental conditions that decrease microbial activity must be considered when making rotational cropping decisions. These environmental conditions include prolonged drought and/or cold temperatures within the following cropping season, as well as soils with both low organic matter (less than 2 %) and high pH (greater than 7.5). If these conditions exist, a soil bioassay may be necessary to ensure rotational crop safety.

Do not plant crops other than those listed above in the year following application of INFERNO DUO on wheat.

## RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, INFERNO DUO is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to INFERNO DUO and other Group 2 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 INFERNO DUO or other Group 2 wild oat 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 Arysta LifeScience North America, LLC at 1-866-761-9397.
- DO NOT enter or allow worker entry into treated areas for 12 hours following application.

INFERNO is a trademark of Arysta LifeScience North America, LLC.

Arysta LifeScience and the Arysta LifeScience logo are registered trademarks of Arysta LifeScience Corporation.

<sup>®</sup> All other products are registered trademarks of their respective companies.

<sup>™</sup> All other products are trademarks of their respective companies.