# Trifluralin 10G Free Flow

GROUP 3 HERBICIDE

Granular Herbicide COMMERCIAL

GUARANTEE: Trifluralin ......10%

# READ THE LABEL BEFORE USING KEEP OUT OF REACH OF CHILDREN

For Pre-Emergence control of Grass and Broadleaf Weeds in a Number of Field Crops

POTENTIAL SKIN SENSITIZER

DANGER: EYE IRRITANT

REGISTRATION NO. 21522 PEST CONTROL PRODUCTS ACT

# ADAMA Agricultural Solutions Canada Ltd.

300 – 191 Lombard Avenue Winnipeg, MB R3B 0X1 1-855-264-6262

Distributed By:

United Agri-Products RR 2 Dorchester, ON NOL 1G5

**Net Contents:** 

For emergency medical help and health/safety inquires call ProPharma at 1-877-250-9291 (24 hours a day)
For spill, leak or fire call INFOTRAC at 1-800-535-5053 (24 hours a day)

# **PRECAUTIONS**

**KEEP OUT OF THE REACH OF CHILDREN. POTENTIAL SKIN SENSITIZER.** Do not come in contact with eyes, avoid contact with skin and clothing. Wash hands and arms thoroughly after application. Avoid contamination of feed and foodstuffs. Do not contaminate any body of water. Keep in original bag during storage.

All handlers must wear a long-sleeved shirt and long pants. In addition, wear chemical resistant gloves, during mixing/loading, repair and clean-up activities.

This product contains a petroleum distillate that is moderately to highly toxic to aquatic organisms. Avoid contamination of aquatic systems during application. Do not contaminate these systems through direct application, disposal of waste or cleaning equipment.

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

# **ENVIRONMENTAL HAZARDS:**

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application of the product when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

# FIRST AID

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

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

**IF 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.

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

# TOXICOLOGICAL INFORMATION

This product contains a small amount of petroleum distillate. The decision on whether to induce vomiting or not should be made by an attending physician. If lavage is performed, endotrachael and/or esophagael control is suggested. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. There is no specific antidote. Supportive care is recommended. Treatment is based on the judgement of the physician in response to reactions of the patient.

# **STORAGE**

Do not store in direct sunlight. Store under cool conditions. Do not store in granular applicators for prolonged periods of time (maximum 24 hours).

#### DISPOSAL

Empty the bag thoroughly, into granular applicator. Follow provincial instructions for any required additional cleaning of the bag prior to disposal. Make the empty bag unsuitable for further use. Dispose of the bag 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.

**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.

# GENERAL INFORMATION

#### **REGISTERED CROPS:**

# RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, Trifluralin 10G is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to Trifluralin 10G and other Group 3 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 Trifluralin 10G or other Group 3 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 ADAMA Agricultural Solutions Canada Ltd. at 1-855-264-6262.

TRIFLURALIN 10G is a selective herbicide for the control of certain annual grass and broadleaved weeds in Rapeseed (Canola), Barley (Fall Application Only), Flax (do not use on low linolenic acid varieties) (Summer and Fall Application Only), Sunflowers, Mustard, Peas (Field and Canning), Lentils (Fall Application Only), Fababeans and Triazine Tolerant Rapeseed (Canola).

# DO NOT USE TRIFLURALIN 10G ON ANY CROP FOR WHICH IT IS NOT REGISTERED.

CAUTION: Do not graze the treated crops or cut for hay; there are not sufficient data available to support such use.

Carefully read all directions before applying TRIFLURALIN 10G.

FAILURE TO FOLLOW LABEL INSTRUCTIONS MAY RESULT IN ERRATIC WEED CONTROL OR CROP DAMAGE.

# DIRECTIONS FOR USE IN ALL CROPS

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. Discard clothing or other absorbent materials that have been heavily contaminated with this product. DO NOT reuse them.

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

DO NOT apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries or marine habitats.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

To minimize the release of trifluralin into the environment due to volatilization, trifluralin should only be applied on cool mornings and evenings when air temperatures are 15°C or lower. To further reduce volatilization to the atmosphere, incorporation into the soil should occur concurrently with application.

- -Do not apply to soils which contain more than 15% organic matter such as peat or muck soils (maximum 10% organic matter on Barley).
- -Do not apply to wet soils that are subject to flooding.
- -Do not apply to soils that are extremely cloddy, lumpy or in poor working condition
- -Follow label directions at all times for maximum weed control and crop tolerance. Read all directions before applying TRIFLURALIN 10G.

# FALL APPLICATION OF PRE-EMERGENCE HERBICIDES

Fall application of TRIFLURALIN 10G is not recommended for soils which are subject to erosion by wind, water, or other factors which are contrary to good soil conservation practices. Fall application to summer fallow under certain conditions is not recommended as this may predispose the field to wind and/or water erosion.

# **CAUTION**

Populations of green foxtail tolerant to trifluralin have developed in a number of fields in Western Canada which have had a long history of repeated trifluralin use. Trifluralin- or ethalfluralin-containing products (i.e., HERITAGE, RIVAL, TREFLAN, TRIFLUREX, TRIFLURALIN, FORTRESS, and EDGE) will not control trifluralin tolerant green foxtail. To delay selection or reduce the spread of trifluralin tolerant green foxtail, avoid use of these products repeatedly in the same field, or use a separate herbicide application for control of trifluralin-tolerant green foxtail.

TRIFLURALIN 10G application to soils that are subject to flooding (standing water for more than 3-5 days) may result in reduced weed control. This reduction in weed control may occur if the soils are flooded between the time of application and crop maturity (harvest). No weed control at all may result if the soils are flooded for a considerable period of time (3 weeks or more).

TRIFLURALIN 10G will not damage the treated crop when used according to label directions. Factors such as deep planting, seedling disease, cold temperatures, excessive moisture, poor soil fertility, drought and saline soils may increase the risk of damage from TRIFLURALIN 10G resulting in delay in crop maturity and/or reduced yields.

The following highly sensitive crops should not be grown in rotation the year following TRIFLURALIN 10G application: tame oats, sugarbeets and small seeded annual grasses (Timothy, Canary Grass and Creeping Red Fescue).

# SPECIAL INSTRUCTIONS FOR CROP ROTATIONS

- -The breakdown rate of TRIFLURALIN 10G is influenced by environmental factors which occur during the year of control and those of the following spring; i.e., May 1-May 1. Below normal precipitation during this period will increase the level of carryover into the following growing season.
- -Injury may result to rotational crops (e.g., wheat) if grown in the second year of a crop rotation following dry soil conditions during the first crop year after TRIFLURALIN 10G application. Seed the rotational crops shallowly into a warm, moist seedbed to reduce injury.

# DIRECTIONS FOR USE IN OILSEED CROPS, BARLEY AND SPECIAL CROPS

#### SUSCEPTIBLE WEEDS:

ANNUAL GRASS WEEDS: Wild Oats, Green and Yellow Foxtail (Wild Millet), Barnyard Grass, Persian Darnel, Annual Bluegrass, Crabgrass, Stinkgrass, Bromegrass, Cheat and Goosegrass.

ANNUAL BROADLEAVED WEEDS: Pigweed, Russian Thistle, Lamb's Quarters, Chickweed, Carpetweed, Knotweed, Purslane, Cow Cockle and Wild Buckwheat.

TRIFLURALIN 10G will control the above weeds when applied at recommended rates and used as directed. Ensure that all incorporation directions are followed. Crop competition will effectively suppress some wild oats and wild buckwheat which may escape the TRIFLURALIN 10G herbicidal action so that little or no competition results with the crop.

# TIME OF APPLICATION

Apply TRIFLURALIN 10G before the crop is planted and before weed emergence. Thorough incorporation into the soil is needed to provide herbicidal action that will control all susceptible weeds. TRIFLURALIN 10G does not control susceptible weeds that have already emerged through the soil at the time of application. It only controls susceptible weeds as they germinate.

# LAND PREPARATION

Ensure that all emerged and existing weeds have been eliminated through discing, cultivation or by chemical control before applying TRIFLURALIN 10G. The granules can be applied to stubble or trashy soils. In order to allow product penetration into the soil surface, heavy trash soils should be thoroughly disced prior to TRIFLURALIN 10G application. All large soil clods should be broken up before TRIFLURALIN 10G application.

If manure has been applied to the field, ensure that it is thoroughly mixed into the soil with at least two tillage operations prior to TRIFLURALIN 10G application.

If the field has been burned in order to remove previous crop residue (straw, trash, etc.), ensure that the field is tilled at least once prior to TRIFLURALIN 10G application.

NOTE: DO NOT PLOW (MOLDBOARD) LAND PRIOR TO TRIFLURALIN 10G APPLICATION.

# METHOD OF APPLICATION

Use a properly calibrated granular applicator to apply TRIFLURALIN 10G uniformly to the soil surface. Adjust the granular applicator to provide the required amount of TRIFLURALIN 10G. Each applicator should be checked frequently to ensure that the correct rate of TRIFLURALIN 10G is being applied. Ensure that the TRIFLURALIN 10G is applied uniformly to the entire soil surface. Avoid concentration of granules in narrow bands, etc. Incorporate TRIFLURALIN 10G within 24 hours of application and in the

same direction as the application. Break all soil clods and lumps during incorporation. Susceptible crops in rotation will not be damaged if Trifluralin 10G is applied uniformly. Avoid over-lapping application.

# NOTE: DO NOT APPLY TRIFLURALIN 10G BY AIRCRAFT.

# **INCORPORATION**

Incorporate only with disc implements or cultivators. Deep tillage cultivators are not recommended. A tandem disc is recommended for the first incorporation. TRIFLURALIN 10G should be incorporated within 24 hours after application. Both incorporations should be to the depth of 8-10 cm (3-4 inches). The second incorporation must be at right angles to the first. Disc implements should be operated at 6-10 km/h (4-6 mph) and cultivators at 10-13 km/h (6-8 mph).

# NOTE:

- -For maximum weed control and crop tolerance incorporate TRIFLURALIN 10G to a depth of 8-10 cm (3-4 inches) only.
- -Use a disc implement when incorporating TRIFLURALIN 10G on stubble or trashy soils. -Cultivators should be used for TRIFLURALIN 10G incorporation when soils are in good working condition.
- -Delay the second incorporation at least 5 days to allow greater release of TRIFLURALIN 10G and more effective weed control.

# INSTRUCTIONS FOR SPRING APPLICATION

A TRIFLURALIN 10G spring pre-plant incorporated application for weed control during the crop year is recommended in Manitoba only. Apply Spring rates and follow incorporation instructions. Ensure good seedbed preparation through proper tillage. Do not apply TRIFLURALIN 10G to Barley, Flax or Lentils in the Spring.

#### INSTRUCTIONS FOR SUMMER APPLICATION

Apply TRIFLURALIN 10G to summerfallow between June 1 and September 1 using the summer rate for weed control in flax, rapeseed (canola), triazine tolerant rapeseed (canola) or fababeans in the following year. Incorporate TRIFLURALIN 10G within 24 hours after application. All subsequent incorporations may be done whenever resistant weed growth occurs for the remainder of the fallow season. A shallow tillage is required once the soil has warmed prior to planting the following Spring. This is best done with a vibrashank cultivator or disc implement cutting to a depth of 5-8 cm (2-3 inches) and is required for seedbed preparation.

# INSTRUCTIONS FOR FALL APPLICATION

Apply TRIFLURALIN 10G in the Fall between September 1 and soil freeze-up for weed control in the following year. Use Fall rates and follow incorporation instructions. Do not delay initial incorporation more than 24 hours after application. The second incorporation to the recommended depth may be done in the Spring at the time of seedbed preparation. A shallow tillage prior to seeding is required the following Spring if both incorporations are done in the fall. This shallow tillage is best done with a vibrashank cultivator or disc implement cutting to a depth of 5-8 cm (2-3 inches). Both incorporations done in the Fall is preferred. For application of TRIFLURALIN 10G to Barley and to Lentils and Flax refer to the special sections on these crops.

# NOTE:

Ensure a Spring tillage operation is completed to a depth of 5-8 cm (2-3 inches) with either a disc implement or vibrashank cultivator following Summer or Fall application of TRIFLURALIN 10G and prior to seeding. This should be done when the soil is warm enough to promote germination. Ensure weed seedlings are destroyed and not transplanted during the operation. Seed into a well prepared seedbed which is weed free.

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RIVAL is a registered trademark of Aventis FORTRESS is a registered trademark of Monsanto.

Trifluralin 10% Granules for Barley

Fall Application Only

Recommended Rates (Product) in Kilograms/Hectare (Pounds/Acre)

Hectares (Acres) per Bag

Season and Crop	Soil texture, soil organic matter and Soil Zone			Remarks
Light				
All soils with 2 to 4 % organic matter	All soils with 4 to 6 % organic matter	Sand and Sandy loam with 6 to 10% organic matter	Loam, Silt Loam, Silt, Silty Clay Loam, Clay Loam, Sandy clay Loam, Silty Clay and Clay with 6 to 10% organic matter	
Brown, Dark Brown, Black and Grey Wooded Soil Zones	Brown, Dark Brown, Black and Grey Wooded Soil Zones	Brown, Dark Brown, Black Soil Zones	Black and Deep Black soil Zones	
Barley 8.5 Kg (7.5lbs), 2.7 hectares/bag (6.7 acres/bag)	11.0 Kg (10.0 lbs) 2.1 hectares/bag (5 acres/bag)	11.0 Kg (10.0 lbs) 2.1 hectares/bag (5 acres/bag)	14.0 Kg (12.5 lbs) 1.6 hectares/bag (4 acres/bag)	Apply Trifluralin 10G between Sept.1 and freezeup. Incorporate within 24 hours of application.

# SPECIAL INSTRUCTIONS FOR BARLEY

- Application of TRIFLURALIN 10G to barley is recommended as a fall treatment only.
- Barley is a fast-emerging, fast-growing cereal that has great natural competitive ability once established. DO NOT USE BARLEY RATES OF APPLICATION IN OTHER REGISTERED CROPS. SEE THE RATE OF APPLICATION SECTIONS FOR OILSEED AND SPECIAL CROPS AND FOR LENTILS AND FLAX WHEN USING TRIFLURALIN 10G ON THESE CROPS RESPECTIVELY.
- Initial incorporation must be within 24 hours of TRIFLURALIN 10G application and to a depth of 8-10 cm (3-4 inches). The second incorporation should also be done in the fall at right angles to the first. For maximum effectiveness delay the second incorporation for 5 days.
- When using the lower rate of TRIFLURALIN 10G some wild oats and wild buckwheat may escape the herbicidal action. Lower areas of fields with high wild oat populations should be tilled prior to seeding the barley in order to reduce the wild oat density.
- Use the higher rate of TRIFLURALIN 10G on all soils with 6-10% organic matter except sand and sandy loam.
- Do not apply TRIFLURALIN 10G for barley on land treated with TRIFLUREX, TREFLAN, EDGE, TRIFLURALIN, HERITAGE or RIVAL since June 1 of the previous year.
- Do not apply to soils containing less than 2% organic matter.
- Seeding should be done with drills and into a moist, warm seedbed. Do not seed when soil conditions are cold. If seeding with a discer or air seeder avoid variable seeding depth and ensure a firm seedbed by packing after seeding.
- Do not seed early when soil conditions are cold.
- Some early season effects may be noticed on the barley, however these effects are only temporary and the crop will recover to full yield potential.
- Application to severely eroded knolls may result in reduced crop stand.

- Application to fields with wide variances in soil organic matter or soil texture can result in reduced crop tolerance and variable weed control.
- See the above chart for correct application rates of TRIFLURALIN 10G on barley.
- EDGE, TREFLAN and HERITAGE are registered trademarks of Dow AgroSciences.
- RIVAL is a registered trademark of Aventis

Trifluralin 10% Granules All crops except Barley, Flax and Lentils Recommended Rates (Products) in Kilograms/Hectare (Pounds/Acre) Hectares (Acres) per Bag

Season and Crop	Soil Texture, Soil Organic Matter and Soil Zone			Remarks
Light		Medium or Heavy		
Sand, Sandy Loam		Loam, Silt Loam, Silt, Sandy Clay Loam, Silty Clay Loam, Silty Clay, Clay		
2-6% O.M	6-15% O.M.	2-6% O.M.	6-15% O.M.	
Brown, Dark Brown Black and Grey Wooded Soil Zones	Dark Brown, Black, Deep Black Soil Zones	Brown, Dark Brown, Black and Grey Wooded Soil Zones	Black, Deep Black Soil Zones	
Spring Application				
Rapeseed 8.5Kg (7.5lbs) (Canola) 2.7 hectares/bag Mustard, (6.7 acres/bag) Sunflowers, Peas (Field and Canning), Triazine Tolerant, Rapeseed (Canola), Fababeans RECOMMENDED IN MANITOBA ONLY	11.0 Kg (10.0 lbs) 2.1 hectares/bag (5 acres/bag)	11.0 Kg (10.0 lbs) 2.1 hectares/bag (5 acres/bag)	11.0 - 14.0 Kg (10.0 - 12.5 lbs) 1.6 - 2.1 hectares/bag (4 -5 acres/bag) Use the higher rate for heavy wild oat infestations.	Trifluralin 10G may be applied and incorporated from 3 weeks before planting up to the time of planting. The first incorporation must be within 24 hours of application.
<b>Summer Application</b>				
Rapeseed 17.0 Kg (15.0 lbs) (Canola) 1.3 hectares/bag Triazine (3.3 acres/bag) Tolerant, Rapeseed (Canola), Fababeans	17.0 Kg (15.0 lbs) 1.3 hectares/bag (3.3 acres/bag)	17.0 Kg (15.0 lbs) 1.3 hectares/bag (3.3 acres/bag)	17.0 Kg (15.0 lbs) 1.3 hectares/bag (3.3 acres/bag)	Apply Trifluralin 10G between June 1 and September 1. The first incorporation must be within 24 hours of application.
Fall Application				
Rapeseed 11.0 Kg (10.0 lbs) (Canola) 2.1 hectares/bag Triazine (5 acres/bag) Tolerant, Peas (Field and Processing) Mustard, Sunflowers, and Fababeans	14.0 Kg (12.5 lbs) 1.6 hectares/bag (4 acres/bag)	14.0 Kg (12.5 lbs) 1.6 hectares/bag (4 acres/bag)	14.0 - 17.0 Kg (12.5 - 15.0 lbs) (1.3 - 1.6 hectare/bag) (3.3 - 4.0 acres/bag) Use the higher rate for heavy wild oat infestations.	Apply Trifluralin 10G between September 1 and up to freeze up. The first incorporation must be within 24 hours of application.

# SPECIAL INSTRUCTIONS FOR FLAX (Do Not Use On Linolenic Acid Varieties) AND LENTILS

Application of Trifluralin 10G to flax may be made in summer or fall. Apply to lentils in fall only. Both incorporations should be done in the fall (summer) prior to seeding flax or lentils in the spring. To ensure a firm seedbed and maintain a constant depth of planting, a shallow tillage and a packed seedbed in the spring is recommended. Seed with a drill to a depth of 2-4 cm (¾ - 1½ inches) into a moist and firm seedbed.

Seed flax and lentils when soil temperatures are warm and greater than  $6^{\circ}$  C ( $42^{\circ}$  F). This is usually after mid-May. Environmental factors that are referred to in the "DIRECTIONS FOR USE IN ALL CROPS" section may cause crop injury and reduced yields.

Trifluralin 10% Granules for Flax (Do Not Use On Linolenic Acid Varieties) and Lentils Summer and Fall Application Only Hectares (Acres)  per Bag							
Season and Crop	Soil Texts	Soil Texture, Soil Organic Matter and Soil Zone					
Light		Medium or Heavy					
Sand, Sandy Loam		Loam. Silt Loam, Silt, Sandy Clay Loam, Silty Clay Loam, Silty Clay, Clay, Clay Loam					
2-6% O.M.	6-15% O.M.	2-6% O.M.	6-15% O.M.				
Brown, Dark Brown Black and Grey Wooded Soil Zones	Dark Brown, Black, Deep Black Soil Zones	Brown, Dark Brown, Black and Grey Wooded Soil Zones	Black, Deep Black Soil Zones				
Summer Application			•				
Flax only not use on 1.3 hectares/bag low linolenic (3.3 acres/bag) acid varieties)	1.3 hectares/bag	17.0 Kg (15.0 lbs) 1.3 hectares/bag (3.3 acres/bag)	17.0 kg (15.0 lbs) 1.3 hectares/bag 3.3 acres/bag)	Apply Trifluralin 10G between June 1 and September 1. The first incorporation must be within 24 hours of application.			
Fall Application			•				
Flax 11.0 Kg (10.0 lbs) ( not 2.1 hectares/bag use low (5 acres/bag) linolenic acid varieties) and lentils		11.0 Kg (10.0 lbs) 2.1 hectares/bag (5 acres/bag)	14.0 - 17.0 kg (12.5 - 15.0 lbs) 1.3-1.6 hectares/bag (3.3 - 4.0 acres/bag) Use the higher rate for heavy wild oat infestations.	Apply Trifluralin 10G between September 1 and up to freeze up. The first incorporation must be within 24 hours of application.			