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2010-5070
2011-07-25

GROUP	14	15	HERBICIDE
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INTEGRITY™

HERBICIDE

For weed control in corn (field and sweet)

EMULSIFIABLE CONCENTRATE

COMMERCIAL (AGRICULTURAL)

GUARANTEE: Saflufenacil..... 68 g/L
Dimethenamid-P 600 g /L

REGISTRATION NO. 29371

PEST CONTROL PRODUCTS ACT

**WARNING - EYE AND SKIN IRRITANT
POTENTIAL SKIN SENSITIZER**

READ THE LABEL AND BOOKLET BEFORE USING

KEEP OUT OF REACH OF CHILDREN

**IN CASE OF EMERGENCY ENDANGERING LIFE OR PROPERTY
INVOLVING THIS PRODUCT, CALL DAY OR NIGHT
1-800-454-2673**

NET CONTENTS: 1 L - 1000 L, Bulk

BASF Canada Inc.
100 Milverton Drive
5th Floor
Mississauga, Ontario
L5R 4H1
1-877-371-2273

INTEGRITY™ is a trademark of BASF.

Table of Contents

GENERAL INFORMATION.....	2
SAFETY AND HANDLING	2
PRECAUTIONS.....	2
FIRST AID	3
TOXICOLOGICAL INFORMATION	3
ENVIRONMENTAL HAZARDS.....	3
STORAGE	4
DISPOSAL.....	4
NOTICE TO USER	4
DIRECTIONS FOR USE	5
WEEDS, RATES AND TIMING	5
TANK MIXES.....	6
LIQUID FERTILIZER.....	7
MIXING INSTRUCTIONS.....	7
SPRAYING INSTRUCTIONS.....	8
RECROPPING GUIDELINES	8
RESTRICTIONS AND LIMITATIONS	8
RESISTANCE-MANAGEMENT RECOMMENDATIONS	9

GENERAL INFORMATION

INTEGRITY will provide control of most annual grass and broadleaf weeds in corn (field and sweet). Reduced weed control may occur if adequate moisture is not received.

INTEGRITY can be applied as a pre-emergence, pre-plant surface or pre-plant incorporated treatment in corn (field and sweet) either alone or in tank-mix combination. **INTEGRITY** will provide most effective weed control when applied and subsequently incorporated into soil by rainfall or mechanical tillage prior to weed seedling emergence from soil.

INTEGRITY combines the two active ingredients: saflufenacil, a potent inhibitor of protoporphyrinogen-oxidase (PPO) belonging to herbicide mode of action Group 14, and dimethenamid-P, a chloroacetamide belonging to the herbicide mode of action Group 15. Saflufenacil is rapidly absorbed by roots and foliage with limited systemic activity. Under active growing conditions, susceptible emerged weeds usually develop chlorotic and necrotic injury symptoms within hours and die within a few days. Susceptible germinating weed seeds will usually die as they reach the soil surface or shortly after emergence. Dimethenamid-P is a root- and shoot-inhibitor that controls susceptible weed seedlings before or soon after they emerge from the soil.

SAFETY AND HANDLING

PRECAUTIONS

1. **KEEP OUT OF REACH OF CHILDREN.**
2. **DO NOT** take internally. Harmful if swallowed.
3. **DO NOT** get in eyes or on skin. Causes eye and skin irritation. Avoid inhalation of vapour or spray.
4. Wash exposed areas of skin thoroughly after handling and before eating, drinking or smoking or going to the washroom. Take a shower immediately after work.
5. Wear a long-sleeved shirt, long pants, chemical resistant gloves and shoes plus socks during mixing, loading, clean-up and repair. In addition, wear goggles or face shield during mixing/loading. Applicators must wear long-sleeved shirt, long pants and shoes plus socks.

Applicators performing mixing, loading, and application must wear chemical resistant coveralls over long-sleeved shirt, long pants, chemical resistant gloves, and additionally, goggle or a face shield during mixing and loading.

6. If clothing becomes contaminated, remove immediately and wash. Store and wash all protective clothing separately from household laundry. Wash in detergent and hot water before reuse. Wear freshly laundered clothes daily.

7. 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.
8. 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.

FIRST AID

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

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

If 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.

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

TOXICOLOGICAL INFORMATION

Treat symptomatically. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.

ENVIRONMENTAL HAZARDS

TOXIC to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under Restrictions and Limitations section. This product contains **a petroleum distillate** which is toxic to aquatic organisms. Do not contaminate these systems through direct application, disposal of waste or cleaning equipment.

STORAGE

1. Store the product in original, tightly-closed container and do not allow water to be introduced into this container.
2. **DO NOT** ship or store the product near food, feed, seed or fertilizers.
3. Store the product in a cool, dry, locked, well-ventilated area without floor drain.
4. Herbicides should be shipped or stored separately from other pesticides to avoid cross-contamination.

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.

Returnable-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.

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.

DIRECTIONS FOR USE

WEEDS, RATES AND TIMING

INTEGRITY may be applied as a pre-plant surface¹, pre-plant incorporated or pre-emergent treatment at a rate of 1.1 L/ha for season long control of weeds as listed below:

- Barnyard grass
- Common ragweed
- Crabgrass (smooth, large)
- Eastern black nightshade²
- Fall panicum
- Foxtail (green, yellow, giant)
- Lamb's-quarters
- Redroot pigweed
- Nutsedge, yellow²
- Old witchgrass
- Velvetleaf
- Wild buckwheat
- Wild mustard

¹ Apply in tank mix with glyphosate

² PPI application only

INTEGRITY may be applied as a pre-emergent treatment at a reduced rate of 0.73 L/ha for early season control of the following weeds, when an in-crop application of another registered herbicide is planned.

- Common ragweed
- Crabgrass (smooth, large)
- Fall panicum
- Foxtail (green, yellow, giant)
- Lamb's-quarters
- Redroot pigweed
- Velvetleaf
- Wild buckwheat
- Wild mustard

Use Rate

Use Rate (L/ha)	Application Timing	Remark
0.73 – 1.1	Pre-emergent	The 0.73 L/ha use rate will only provide early season control and should be used in a program where an in-crop application of another registered herbicide is planned. DO NOT apply INTEGRITY at the 1.1 L/ha use rate to sweet corn grown on coarse soils as injury may occur.
1.1	Pre-plant incorporated	Do not incorporate INTEGRITY greater than 3 cm deep. DO NOT apply to sweet corn grown on coarse soils as injury may occur.
1.1	Pre-plant surface	Apply in tank mix with glyphosate.

Some sweet corn hybrids may be more sensitive to the combination of saflufenacil and dimethenamid-p and injury might occur.

Apply **INTEGRITY** in a water volume of 100 to 200 L/ha. A nitrogen solution or complete liquid fertilizer carrier may be used as a replacement for water for use in pre-plant incorporated or pre-emergent applications. Refer to Liquid Fertilizer section for additional details.

TANK MIXES

INTEGRITY + Atrazine

INTEGRITY may be tank mixed with atrazine at 750 g ai/ha and applied as a pre-emergent or pre-plant incorporated treatment.

Timing	Pre-emergent or Pre-plant Incorporated
Rate	1.1 L/ha INTEGRITY + 1.56 L/ha Aatrex® Liquid 480*
Water Volume	100 to 200 L/ha
Weeds Controlled	Refer to the atrazine label for weeds controlled in addition to those controlled by INTEGRITY applied alone.
Remarks	Do not incorporate INTEGRITY greater than 3 cm deep. DO NOT apply this tank mix to sweet corn grown on coarse soils as injury may occur. Read and follow the label of the tank mix partner product for further use instructions, precautions and restrictions.

* For atrazine with a different concentration, adjust the rate accordingly.

INTEGRITY + Glyphosate

For burndown and season long residual control of weeds labeled for **INTEGRITY** alone treatment in no-till and reduced-till corn, **INTEGRITY** may be tank mixed at a rate of 1.1 L/ha with glyphosate and applied as an early pre-plant surface application. Consult the glyphosate label for weeds controlled by glyphosate, as well as for further recommendations, precautions and restrictions. **INTEGRITY** is compatible with all liquid glyphosate formulations registered for use as a pre-plant treatment prior to corn in which glyphosate is present as an isopropylamine salt, di-ammonium salt or potassium salt.

Timing	Pre-plant Surface Application
Rate	1.1 L/ha INTEGRITY + 2.5 L/ha of glyphosate (360 g/L equivalent)
Water Volume	100 to 200 L/ha
Weeds Controlled	Refer to the glyphosate label for weeds controlled in addition to those controlled by INTEGRITY applied alone.
Remarks	Read and follow the label of the tank mix partner product for further use instructions, precautions and restrictions.

LIQUID FERTILIZER

INTEGRITY may be applied in a nitrogen solution or complete liquid fertilizer carrier as a replacement for water for use in pre-plant incorporated or pre-emergent applications. Follow the tank mix partner product label for instructions regarding application in liquid fertilizers. Compatibility of **INTEGRITY** with the liquid fertilizer should be determined by mixing a small quantity of herbicide with a proportional quantity of liquid fertilizer in a jar test prior to loading the spray tank.

MIXING INSTRUCTIONS

1. When applying **INTEGRITY**, always start with a clean sprayer. Thoroughly clean the sprayer by flushing the system with water containing detergent. Refer to previously applied product labels for specific cleaning instructions.
2. Fill clean spray tank half full with clean water or liquid fertilizer and start agitation system. Prior to mixing **INTEGRITY** or **INTEGRITY** tank mixtures in liquid fertilizer, refer to appropriate label sections for recommended uses in liquid fertilizer, application instructions and compatibility determinations. For applications in liquid fertilizer, ensure that the mixture is applied within 24 hours of mixing.
3. If using a wettable powder or water dispersible granule tank mix partner, add correct amount to tank and continue agitation until thoroughly dispersed. Do not add a wettable powder or water dispersible granule to liquid fertilizer.
4. Add the correct amount of **INTEGRITY**. Continue to agitate.
5. If required, add the correct amount of the liquid tank mix partner while continuing agitation.

6. Continue agitation while filling the spray tank with the remaining amount of water or liquid fertilizer.
7. Maintain continuous and constant agitation throughout application until spraying is complete.
8. After any break in spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to remix the spray materials. Do not allow the mixture to sit over night.
9. If an oil film starts to build up in the tank, drain it and clean the tank with strong detergent solution.
10. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

Dispose of all rinsings in accordance with provincial regulations.

SPRAYING INSTRUCTIONS

Select proper nozzle to avoid spraying fine mist. For best results, use sprayers equipped with flat fan or similar nozzles to ensure coverage. Apply in a spray volume of 100 to 200 L/ha and at a pressure of 275 kPa. For applications to dense weed infestations and thick canopies, use the higher spray volume. Better coverage of the product results in enhanced control of weeds.

Keep bypass line on or near bottom of tank to minimize foaming. Use 16-mesh suction screens, 50-mesh screens elsewhere on sprayer.

RECROPPING GUIDELINES

Anytime: corn (field and sweet)
100 days: cereals other than corn
11 months: all other crops

RESTRICTIONS AND LIMITATIONS

1. Clean sprayer thoroughly after use to avoid damage to the next crop sprayed.
2. DO NOT apply to field corn within 100 days of harvest.
3. DO NOT apply to sweet corn within 60 days of harvest.
4. DO NOT apply **INTEGRITY** at the 1.1 L/ha use rate to sweet corn grown on coarse soils as injury may occur.
5. DO NOT APPLY BY AIR.

6. DO NOT graze or feed the treated immature corn to livestock prior to 40 days after application of **INTEGRITY**.
7. DO NOT enter or allow worker entry into treated areas for 12 hours after application.
8. DO NOT apply directly to water. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
9. 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 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.
10. As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.
11. DO NOT apply during periods of dead calm. Avoid application when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. Boom height must be 60 cm or less above the crop or ground.

Buffer zones

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), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of application	Crop	Buffer zones (metres) required for the protection of:	
		Aquatic habitats	Terrestrial habitats
Field sprayer*	Corn	1	10

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

RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, **INTEGRITY** is both a Group 14 and a Group 15 herbicide. Any weed population may contain or develop plants naturally resistant to **INTEGRITY** and other Group 14 and 15 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 **INTEGRITY** or other Group 14 and 15 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 BASF at 1-877-371-2273 or at www.agsolutions.ca.

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TOXICOLOGICAL INFORMATION

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ENVIRONMENTAL HAZARDS

TOXIC to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under Restrictions and Limitations. This product contains a petroleum distillate which is toxic to aquatic organisms. Do not contaminate these systems through direct application, disposal of waste or cleaning equipment.

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This label transcript service is offered by the Pest Management Regulatory Agency to provide efficient searching for label information. This service and this information do not replace the official hard-copy label. The PMRA does not provide any guarantee or assurance that the information obtained through this service is accurate, current or correct, and is therefore not liable for any loss resulting, directly or indirectly, from reliance upon this service.