

Booklet

GROUP	4	19	HERBICIDE
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OVERDRIVE® HERBICIDE

FOR NON-CROPLAND SITES, PASTURE AND RANGELAND

WETTABLE GRANULES

COMMERCIAL

GUARANTEE: Diflufenzopyr (present as sodium salt) - 20% a.e.
Dicamba (present as sodium salt) - 50% a.e.

WARNING, CONTAINS THE ALLERGEN SULFITES

REGISTRATION NO. 30065

PEST CONTROL PRODUCTS ACT

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



CAUTION

POISON

**CAUTION - EYE IRRITANT
POTENTIAL SKIN SENSITIZER**

NET CONTENTS: 1 kg - 100 kg

READ THE LABEL AND ATTACHED BROCHURE BEFORE USING

KEEP OUT OF REACH OF CHILDREN

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

OVERDRIVE is a registered trade-mark of BASF SE, used with permission by BASF Canada Inc.

GENERAL INFORMATION

OVERDRIVE is a selective post-emergence herbicide for the control of annual broadleaf weeds and many perennial weeds in non-cropland sites, pasture and rangeland grasses. Examples of non-cropland sites include, but are not limited to, railroad, utility, pipeline and highway rights-of-way, railroad crossings, roadside, utility plant sites, petroleum tank farms, pumping installations, non-agricultural fencerows, and airports.

Weeds treated with **OVERDRIVE** herbicide will display symptoms within several hours and be controlled within 3-7 days. Symptoms for broadleaf weeds will include twisting and crinkling. Grasses may display twisting, but will remain green and stunted.

PRECAUTIONS

1. **KEEP OUT OF REACH OF CHILDREN.**
2. Avoid contact with skin or clothing. Causes eye irritation. **DO NOT** get in eyes.
3. Harmful if swallowed.
4. Do not apply by air.
5. When mixing and loading or applying, wear a long-sleeved shirt, long pants, shoes and socks, and chemical resistant gloves. In addition, wear protective eyewear (face shield or safety glasses) while mixing and loading.
6. Non-cropland uses: Do not enter or allow worker entry into treated areas until sprays have dried. Pasture and rangeland: Do not enter or allow worker entry into treated areas within 12 hours after application.

ENVIRONMENTAL HAZARDS

Toxic to non-target terrestrial plants and aquatic organisms. Observe the buffer zones and precautionary measures specified under **DIRECTIONS FOR USE**.

Leaching

The use of this chemical may result in contamination of groundwater, particularly in areas where soils are permeable (e.g. sand, loamy sand and sandy loam soils) and/or the depth to the water table is shallow.

Surface Runoff

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.

FIRST AID

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 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 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.

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

TOXICOLOGICAL INFORMATION

Dicamba may cause mild irritation to the eyes, and irritation to the skin and mucous membranes. Symptoms of overexposure to dicamba may include dizziness, muscle weakness, loss of appetite, weight loss, vomiting, decreased heart rate, shortness of breath, excitement, tenseness, depression, incontinence, cyanosis, muscle spasms, exhaustion and loss of voice. Treat symptomatically.

GRAZING RESTRICTIONS

DO NOT permit lactating dairy animals to graze fields within 7 days after application.

DO NOT harvest forage or cut hay within 30 days after application.

Withdraw meat animals from treated fields at least 3 days before slaughter.

DIRECTIONS FOR USE

RESTRICTIONS AND LIMITATIONS

1. Do not apply **OVERDRIVE** herbicide on or near desirable trees or plants (see Spray Drift Precautions).
2. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

3. As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.
4. Do not treat areas where soil penetration or surface washing may bring **OVERDRIVE** herbicide into contact with the roots of desirable plants.
5. DO NOT use in residential areas, which are defined as sites where bystanders may be present during or after spraying, including homes, schools, parks, playgrounds, playing fields and public buildings.
6. DO NOT apply by air.

Apply **OVERDRIVE** herbicide as a single ground broadcast or spot spray application post-emergence to the weeds. Use ground application equipment that will provide good spray coverage of weed foliage. Best product performance is obtained when **OVERDRIVE** herbicide is applied to the active growth stage of broadleaf weeds. A non-ionic surfactant (NIS) in combination with liquid fertilizer must be used with **OVERDRIVE** herbicide to achieve consistent weed control. MERGE® Adjuvant may be substituted for NIS and liquid fertilizer.

Do not apply **OVERDRIVE** herbicide to small grains grown for pasture or to newly seeded grasses. Established grasses growing under environmental stresses can exhibit various injury symptoms that may be more pronounced if herbicides are applied. **OVERDRIVE** herbicide may injure bentgrass. **OVERDRIVE** herbicide will severely injure alfalfa, clovers, lespedeza, wild winter peas, vetch and other legumes.

Rainfall should not occur within 4 hours after treatment.

WEEDS CONTROLLED

OVERDRIVE herbicide alone controls the following weeds:

Annual Broadleaf Weeds

Common ragweed
 Kochia ¹
 Lady's-thumb
 Lamb's-quarters
 Redroot pigweed
 Tall waterhemp
 Velvetleaf
 Volunteer canola ²
 Wild buckwheat

Perennial/Biennial Weeds

Biennial wormwood
 Canada thistle (top growth control)
 Sweet clover (top growth control)
 Dandelion (top growth suppression)
 Leafy spurge (top growth suppression)
 Perennial sow-thistle (suppression) ³
 Vetch (top growth control)

¹ Includes Group 2 and 9 resistant biotypes. Apply at less than 15 cm high.

² Apply at the cotyledon to 4-leaf stage of volunteer canola.

³ Apply at the 2-10 leaf stage of perennial sow thistle.

RATE

Apply 285 g of **OVERDRIVE** herbicide per hectare using water as the spray carrier. Select an appropriate water volume that ensures adequate coverage of the target weed species. Use higher water volumes when treating dense or tall vegetation.

Apply using a nonionic surfactant (NIS) at the rate of 0.25% (v/v) to the spray solution (i.e. 2.5 L of surfactant per 1000 L of spray solution). Liquid urea ammonium nitrate (UAN 28%) at 1.25% v/v (i.e. 12.5 litres per 1000 L of spray solution) must also be added. Spray grade ammonium sulfate may be substituted for liquid nitrogen fertilizer. A foam reducing agent may be added at the recommended label rate, if needed.

MERGE Adjuvant at the rate of 0.5 L/ha may be substituted for NIS and UAN 28%. If using greater than 200 L/ha of water in spray solution, MERGE Adjuvant should be added at the rate of 0.25% v/v (i.e. 2.5 L for each 1000 L of spray solution).

SPRAY DRIFT PRECAUTIONS

OVERDRIVE herbicide may cause injury to desirable trees and plants. Follow these precautions when spraying in the vicinity of non-target vegetation:

1. Do not spray **OVERDRIVE** herbicide if wind velocity exceeds 8 km/h. Leave an adequate buffer zone between spraying area and sensitive vegetation.
2. Use high-volume sprays under low pressure. Use coarse sprays since they are less likely to drift than fine sprays. Keep spray pressure below 150 kPa and the spray volume above 220 L/ha unless otherwise required by the nozzle manufacturer.
3. Do not spray **OVERDRIVE** herbicide when temperatures are expected to exceed 27°C.
4. Do not spray in high humidity or fog.

SPRAY DRIFT MANAGEMENT

Field Sprayer Application

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) coarse classification. Boom height must be 60 cm or less above the crop or ground.

DO NOT apply by air.

Buffer Zones

Use of the following spray methods or equipment DO NOT require a buffer zone: hand-held or backpack sprayer and spot treatment.

For application to rights-of-way, buffer zones for protection of sensitive terrestrial habitats are not required; however, the best available application strategies which minimize off-site drift, including meteorological conditions (e.g. wind direction, low wind speed) and spray equipment

(e.g. coarse droplet sizes, minimizing height above canopy), should be used. Applicators must, however, observe the specified buffer zones for protection of sensitive aquatic habitats.

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	Use	Buffer zone (metres) required for the protection of:		
		Freshwater habitat	Estuarine/ Marine habitat	Terrestrial habitat
Field sprayer*	Non-cropland sites, pasture and rangeland	15	15	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 labelled 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 labelled buffer zone can be reduced by 30%.

** Buffer zones for protection of terrestrial habitats are not required for use on rights-of-way, including railroad ballast, rail and hydro rights-of-way, utility easements and roads, and training grounds and firing ranges on military bases.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, **OVERDRIVE** herbicide is both a Group 4 and Group 19 herbicide. Any weed population may contain or develop plants naturally resistant to **OVERDRIVE** herbicide and other Group 4 and Group 19 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 **OVERDRIVE** herbicide or other Group 4 and Group 19 herbicides within a growing season (sequence) or among growing seasons 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. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.
- Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical control methods), cultural (for example, higher crop seeding

rates; precision fertilizer application method and timing to favour the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.

- Monitor weed populations after herbicide application for signs of resistance development (for example, only one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by an alternative herbicide from a different group. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between the fields, and planting clean seed.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.
- 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.

MIXING INSTRUCTIONS

1. Fill the spray tank one-half full of clean water and start agitation.
2. Add the correct amount of **OVERDRIVE** herbicide to the spray tank and continue agitation until completely dissolved and product is fully dispersed.
3. Add the recommended amount of non-ionic surfactant followed by the recommended amount of UAN (28% N). Alternatively, add the recommended amount of MERGE Adjuvant.
4. Continue agitation while adding the remaining amount of water.

SPRAY EQUIPMENT CLEANING

1. Thoroughly hose down the inside and outside of equipment surfaces while filling the spray tank half-full with water. Flush by operating the sprayer until the system is purged of the rinse water.
2. Fill the tank with water, adding 1 L of household ammonia for every 100 L of water. Operate the spray pump to circulate the ammonia solution through the spray system for 15-20 minutes and discharge a small amount of the ammonia solution throughout the spray boom and nozzles. Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.
4. Remove the nozzles and screens and flush the system with two tanks full of water.

STORAGE

1. Store **OVERDRIVE** herbicide in original container only.
2. Store **OVERDRIVE** herbicide in a cool, dry place.
3. To prevent contamination, store this product away from food or feed.

DISPOSAL

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.

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.

MERGE is a registered trade-mark of BASF Canada Inc.

Container

GROUP

4

19

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