

Container

GROUP	2	14	HERBICIDE
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Smoulder®

HERBICIDE

WATER DISPERSIBLE GRANULES

COMMERCIAL (AGRICULTURAL)

FOR SALE FOR USE IN PRAIRIE PROVINCES AND INTERIOR OF BRITISH COLUMBIA
(INCLUDING THE PEACE RIVER REGION) ONLY

ACTIVE INGREDIENTS: Saflufenacil64.6%
Metsulfuron-methyl.....5.4%

REGISTRATION NO. 33943

PEST CONTROL PRODUCTS ACT

CAUTION - EYE IRRITANT

READ THE LABEL AND THE 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: 0.25 – 100 kg, Bulk

BASF Canada Inc.
5025 Creekbank Road
Building A, 2nd Floor
Mississauga, Ontario L4W 0B6
1-877-371-2273

SMOULDER is a registered trade-mark of BASF Agro B.V. Arnhem (NL), Zweigniederlassung
Freienbach, used under license by BASF Canada Inc.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN.

DO NOT take internally. Harmful if swallowed.

Avoid contact with skin, eyes or clothing. May irritate eyes.

Avoid inhalation of vapor or spray. Use with adequate ventilation.

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.

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. Gloves are not required during application within a closed cab. In addition, wear protective eyewear (goggles or face shield) during mixing, loading, clean-up and repair.

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.

Apply only to agricultural crops when the potential for drift to areas of human habitation and 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.

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

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 15-20 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.

ENVIRONMENTAL PRECAUTIONS

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

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.

This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

STORAGE

Store this product away from food and feed.

Store the product in original, tightly-closed container, in a cool, dry, secure, well-ventilated area.

DISPOSAL

For 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/territorial requirements.

For Returnable Containers

DO NOT reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

For containers that can be refilled for the user by the distributor/dealer

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.

Unused, unwanted product

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial regulatory agency in case of a spill, and for clean-up of spills.

NOTICE TO USER

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This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

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NOTICE TO USER

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DIRECTIONS FOR USE

Smoulder is a water dispersible granule herbicide for post-harvest or pre-seed application for control of broadleaf weeds in fields to be planted to barley, wheat (including durum, spring and winter wheat), oats, triticale and fall rye. **Smoulder** provides both post-emergence control (i.e. foliar contact burndown) of emerged weeds and residual pre-emergence control of secondary flushes of volunteer canola. For broad spectrum weed control including grass weeds, apply **Smoulder** in tank mix with glyphosate.

Smoulder is rapidly absorbed by foliar and root uptake. Under active growing conditions, susceptible emerged weeds develop injury symptoms within hours of application; plant death occurs within 3 to 5 days depending upon growing conditions. Susceptible emerging weed seedlings will usually die as they reach the soil surface or shortly after emergence. For best results, ensure thorough spray coverage of target weeds.

Limited or reduced residual control can be observed on high organic matter soils (> 8% soil organic matter).

Heavy rainfall or irrigation soon after application may result in visual crop injury or possible yield reduction. Conditions such as thin crop stand, sandy soil or low soil organic matter may increase the severity of injury. Do not use on highly variable soils that have large gravelly or sandy areas, eroded knolls or calcium deposits, or crop injury could result.

Application Rates

Uniformly apply **Smoulder** as a broadcast spray by ground equipment in a water volume of 50 - 100 L/ha. Fields treated with **Smoulder** can be seeded to wheat (spring, durum and winter), barley, oats, triticale and fall rye a minimum of 24 hours after application.

Smoulder should always be applied in tank mix with glyphosate for broad spectrum weed control. **Smoulder** is compatible with all liquid glyphosate formulations in which glyphosate is present as isopropylamine salt, di-ammonium salt or potassium salt. Use only glyphosate products registered for pre-seed application to cereal crops listed on this label. The recommended rate of glyphosate is 1.25 - 2.5 L/ha (360 g/L equivalent).

For all **Smoulder** applications, including tank mix applications with glyphosate, use MERGE® Adjuvant at a rate of 0.5 - 1 L/ha. The higher rate of MERGE Adjuvant is recommended for higher weed densities and when environmental conditions at the time of herbicide application may negatively impact herbicide uptake.

Crop	Smoulder Rate(g/ha)	Water Volume L/ha	MERGE Adjuvant L/ha
Barley, (including durum, spring and winter wheat), oats, triticale and fall rye	28	50 – 100	0.5 – 1.0
Post-harvest	28	50 – 100	0.5 – 1.0

Weeds Controlled

Smoulder can be applied pre-seed to the crop or as a post-harvest application for rapid burndown control of the weeds listed below. Apply in combination with glyphosate for broad spectrum weed control including grass weeds.

Smoulder applied at 28 g/ha will provide control of secondary flushes of volunteer canola (including Roundup Ready® and LibertyLink®).

Weed	Maximum Weed Stage
Kochia (including group 9, 4 and 2 resistant biotypes)	15 cm
Canada fleabane	8 leaf
Cleavers	4-whorl stage
Lamb's-quarters	8 leaf
Narrow-leaved hawk's beard	8 cm
Redroot pigweed	8 leaf
Round-leaved mallow	8 leaf
Stinkweed	8 leaf
Volunteer canola (all types) ¹	8 leaf
Wild buckwheat	8 leaf
Wild mustard	8 leaf

¹ **Smoulder** provides control of secondary flushes of volunteer canola (including Roundup Ready and LibertyLink) in addition to burndown control of volunteer canola (all types).

Tank Mix Weeds Controlled

For broad spectrum weed control, **Smoulder** should always be tank mixed with glyphosate. **Smoulder** is compatible with all liquid glyphosate formulations in which glyphosate is present as isopropylamine salt, di-ammonium salt or potassium salt.

Tank mixing **Smoulder** with glyphosate will provide control of all weeds controlled by glyphosate in addition to the broadleaf weeds listed on the **Smoulder** label. Consult the glyphosate label for a complete list of weeds controlled by glyphosate. Tank mixing is a recognized strategy to delay herbicide resistance as well as improve the weed spectrum controlled.

Smoulder when tank mixed with glyphosate will provide rapid burndown control of the following weeds in addition to those weeds listed under **Smoulder** applied alone.

Weed	Maximum Weed Stage
Dandelion	15 cm
Canada Thistle (season-long top growth control)	15 cm
Flixweed	8 leaf

Mixing Instructions

1. When using **Smoulder**, always start with a clean sprayer.
2. Fill clean spray tank half-full of clean water. Start agitation system.
3. Add the required amount of **Smoulder** and continue agitation until completely dissolved and product is fully dispersed.
4. Add in glyphosate.
5. Add the correct amount of MERGE Adjuvant.
6. Continue agitation while filling the remainder of the tank with water necessary to fill the spray tank.
7. Continue to agitate or run the by-pass system.
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 overnight in the tank.
9. If a white residue 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 following the **Sprayer Cleanout Instructions** on this label to avoid damage to the next crop sprayed.

Dispose of rinsate in accordance with provincial regulations.

Spraying Instructions

Improved coverage of the product results in more consistent weed control. Using higher water volumes and higher pressures can aid to increase the overall coverage. The use of 50 mesh screens are recommended to prevent buildup of particles on the screens causing possible pressure loss or nozzle stoppage.

Livestock Feeding and Pre-harvest Intervals

Pre-harvest Interval (PHI)

There is no required preharvest interval between a pre-seed application of **Smoulder** and the harvest of barley, wheat (spring, winter and durum), oats, triticale and fall rye.

Livestock Feeding After an Application of Smoulder

Wheat, barley, oats, triticale and fall rye forage may be used as feed (hay or silage) or grazed 30 or more days after application.

Recropping Intervals

Fields treated with **Smoulder** may be seeded to wheat (durum, spring and winter), barley, oats, triticale and fall rye a minimum of 24 hours after application.

Canola (all types), imidazolinone-tolerant chickpeas (varieties designated as imidazolinone-tolerant), faba beans, field corn, **Clearfield®** Lentils, peas and soybeans may be seeded 11 months after a **Smoulder** application.

Research studies have shown that flax may be safely planted 11 months following a **Smoulder** application in all regions of Western Canada except the brown soil zone. In the brown soil zone, observe a minimum 22-month recropping interval.

Fields treated in the fall with a post-harvest application of **Smoulder** may be seeded in the spring to wheat (spring, durum and winter), spring barley, oats, triticale and fall rye.

Restrictions and Limitations

1. **DO NOT** apply by air.
2. Carefully observe **Sprayer Cleanout Instructions** on this label to avoid damage to the next crop sprayed.
3. **DO NOT** apply more than once per year. **DO NOT** apply any other products containing metsulfuron in the same season.
4. **DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
5. As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests.
6. This product may be tank mixed with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact BASF Canada Inc. at 1-877-371-2273 or www.agsolutions.ca for information before applying any tank mix that is not specifically recommended on this label.

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 S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

Spray Buffer Zones

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

Method of application	Crop	Spray Buffer Zones (metres) Required for the Protection of:		
		Freshwater Habitat of Depths:		Terrestrial Habitat:
		Less than 1 m	Greater than 1 m	
Field sprayer	Barley and wheat (including durum, spring and winter wheat), oats, triticale and fall rye	1	1	3

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The spray buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca web site.

Sprayer Cleanout Instructions

To avoid injury to desirable crops, thoroughly clean spray equipment immediately after spraying and prior to spraying other crops. This is especially important prior to application of post-emergent herbicides on sensitive broadleaf crops such as canola or pulse crops.

1. Immediately after spraying, completely drain the sprayer tank. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.

2. First rinse:
 - Spray the inside of tank with clean water and fill the sprayer with at least one tenth of the spray tank volume.
 - Agitate and circulate for 15 minutes; flush through booms and hoses.
 - Remove end caps or open ball valves on the ends of each boom section, and flush solution through the boom ends to ensure there is no spray solution trapped between the boom end and the nozzles.
 - Drain tank completely.
3. Second rinse:
 - Fill the tank with clean water.
 - Add a commercial grade tank cleaner (e.g. All Clear), or 1 L of household ammonia (containing a minimum of 3% ammonia) per 100 L of water, or similar tank cleaning agent as per manufacturer's recommendations while filling the tank with clean water. The tank cleaner utilized should increase the pH of the solution in order to help solubilize the herbicides remaining in the tank.
 - Agitate and then flush the boom and hoses with the cleaning solution. Top up with water making sure the tank is completely full. Allow to stand for 15 minutes with agitation. Flush the solution out of the spray tank through the spray booms. Remove end caps or open ball valves on the ends of each boom section, and flush solution through the boom ends to ensure there is no spray solution trapped between the boom end and the nozzles.
 - If possible, let the solution stand in the sprayer tank and booms for an extended period of time (overnight or for several hours if possible).
 - After flushing the boom and hoses, drain tank completely.
 - Remove nozzles and screens and clean separately with a cleaning agent or an ammonia solution (100 mL in 10 L water).
4. Third rinse:
 - Rinse the tank with clean water and flush through the boom and hoses using at least one tenth of the spray tank volume.
 - Remove end caps or open ball valves on the ends of each boom section, and flush solution through the boom ends to ensure there is no spray solution trapped between the boom end and the nozzles.
 - Drain tank completely.

RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, **Smoulder** is both a Group 2 and Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to **Smoulder** and other Group 2 and 14 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 **Smoulder** or other Group 2 and 14 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 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 or at www.agsolutions.ca.

Clearfield is a registered trade-mark of BASF Agrochemical Products B.V. and LibertyLink is a registered trade-mark of BASF Agricultural Solutions Seed US LLC, used under license by BASF Canada Inc.

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