

2024-6791, 2025-01-31

Container Label

|       |    |           |
|-------|----|-----------|
| GROUP | 14 | HERBICIDE |
|-------|----|-----------|

# Heat<sup>®</sup> ADV

HERBICIDE

SUSPENSION CONCENTRATE

**COMMERCIAL (AGRICULTURAL)**

**ACTIVE INGREDIENT:** Saflufenacil .....21.4 g/L

Contains 2-bromo-2-nitropropane-1,3-diol at 0.036%, 1,2-benzisothiazolin-3-one at 0.080%,  
5-chloro-2-methyl-4-isothiazolin-3-one at 0.0017% and 2-methyl-4-isothiazolin-3-one  
at 0.00056%, as preservatives

Warning, contains the allergen soy

**REGISTRATION NO. 33378**

**PEST CONTROL PRODUCTS ACT**

CAUTION - EYE IRRITANT

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 – 1000 L, Bulk

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

HEAT is a registered trade-mark of BASF SE, 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, coveralls, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. In addition, wear goggles or face shield during mixing/loading. Gloves are not required during application within a closed cab and/or cockpit.

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 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.

## 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 non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

**STORAGE**

Protect from freezing. Store above -5 °C.

**DO NOT** ship or store the product near food, feed, seed or fertilizers.

Store in original container with the lid tightly closed, in a cool, 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 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 empty 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.

Last Approved Label under Sub. No. 2022-0975 (2022-03-04)  
Proposed Label Amendment: product name change, Dec. 17, 2024

Booklet

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# Heat<sup>®</sup> ADV

HERBICIDE

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**COMMERCIAL (AGRICULTURAL)**

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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, coveralls, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. In addition, wear goggles or face shield during mixing/loading. Gloves are not required during application within a closed cab and/or cockpit. 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 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.

## 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.

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## TOXICOLOGICAL INFORMATION

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**ENVIRONMENTAL PRECAUTIONS**

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

**STORAGE**

Protect from freezing. Store above -5 °C.

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**NOTICE TO USER**

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## DIRECTIONS FOR USE

**Heat ADV** is a water-based suspension concentrate herbicide for pre-harvest weed management and crop dry down. **Heat ADV** may be used to desiccate the crop and weeds to facilitate crop harvest.

**Heat ADV** does not control grass weeds. **Heat ADV** should always be tank mixed with glyphosate for broad spectrum weed control and improved crop dry down.

### 1.0 Registered Crops

**Heat ADV** is registered for use as a desiccant and for pre-harvest weed management in the following crops:

- Barley (including feed varieties) <sup>1</sup>
- Canola (all types)
- Chickpeas
- Dry common beans
- Faba beans
- Flax
- Lentils (red lentil varieties only)
- Mustard <sup>2</sup>
- Peas (dried field)
- Soybeans
- Sunflower
- Triticale <sup>1</sup>
- Wheat (including durum, spring and winter wheat) <sup>1</sup>

<sup>1</sup> Pre-harvest weed management only.

<sup>2</sup> All classes, including brown, oriental, canola quality *Brassica juncea*, *Brassica juncea* varieties with the **Clearfield®** trait, and yellow mustard.

## 2.0 Application Rates

Uniformly apply **Heat ADV** as a broadcast spray by air or ground. Use higher rates for dense crop stands and/or higher weed pressure. Refer to **Pre-Harvest Weed Management and Crop Desiccation** section for detailed use instructions, as well as recommendations on tank mixing with glyphosate.

| Crop                                                                                                                                                         | Heat ADV Rate (L/ha) | Water Volume L/ha                         | Pre-Harvest Treatment                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------|--------------------------------------------------|
| Canola (all types), chickpeas, dry common beans, faba beans, flax, lentils <sup>1</sup> , mustard <sup>2</sup> , peas (dried field), soybeans, and sunflower | 1.68 – 2.34          | 200 (ground)<br>minimum 50 (aerial)       | Crop desiccation and pre-harvest weed management |
| Wheat (including durum, spring, and winter wheat), barley and triticale                                                                                      | 1.17 – 2.34          | 100 – 200 (ground)<br>minimum 50 (aerial) | Pre-harvest weed management                      |

<sup>1</sup> Apply only to red lentil varieties.

<sup>2</sup> All classes, including brown, oriental, canola quality *Brassica juncea*, *Brassica juncea* varieties with the **Clearfield** trait, and yellow mustard.

## 3.0 Pre-Harvest Weed Management and Crop Desiccation

This section provides use directions for **Heat ADV** in specific crops.

**Heat ADV** may be applied in tank mix with glyphosate for additional pre-harvest weed control and improved crop dry down. Consult the label of the tank mix partner product for further use instructions, precautions and restrictions. The most restrictive labelling applies to tank mixes.

### Pre-harvest Weed Management

**Heat ADV** may be applied as a pre-harvest treatment in select crops to improve dry down of volunteer canola (all types including Roundup Ready), cleavers, common ragweed, Canada fleabane, Canada thistle, lamb's-quarters, redroot pigweed and wild buckwheat, and to facilitate direct combining. Early application may result in yield and/or seed quality loss.

### Crop Desiccation

**Heat ADV** may be used as a harvest aid in select crops to accelerate the rate of crop dry down and improve crop uniformity to facilitate direct combining. Early application may result in yield and/or seed quality loss.

The dry down of crops will be best under favorable environmental conditions like warm temperatures, good moisture conditions and low humidity.

Harvesting of crops can be done when plant material is dry and seed moisture level allows efficient harvesting. Under ideal conditions, harvest can normally commence within 7-14 days after

desiccation when applied at the appropriate crop stage recommendation. Adverse weather conditions such as rainfall, cool temperatures, shorter day length and high humidity may slow the plant desiccation and keep seed moisture levels high which can delay commencement of harvest after the **Heat ADV** application. Consult your BASF representative for further information on the timing of harvest after a pre-harvest application.

### **Aerial Application - Prairie Provinces and Interior of British Columbia (including the Peace River Region) Only**

**Heat ADV** may be applied as an aerial application in the Prairie Provinces and interior of British Columbia when used as a desiccant or for pre-harvest weed management in registered crops.

**Heat ADV** may only be applied in tank mix with glyphosate by aerial application in the Prairie Provinces (including Peace River Region of B.C.). **This is a Restricted Use. Read and follow all restrictions noted on the glyphosate label for aerial application of glyphosate as a pre-harvest treatment.**

Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 16 km/h at flying height at the site of application. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length MUST NOT exceed 65% of the wing- or rotor-span.

Ensure thorough coverage of foliage. Consult nozzle manufacturer's recommendation for spray pressures for specific nozzles.

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Do not apply during periods of dead calm.

Observe buffer zones specified under section 8.0, **Restrictions and Limitations**.

### **Use Precautions**

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the National Aerial Pesticide Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

### **Operator Precautions**

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, a long-sleeved shirt, long pants, coveralls, shoes plus socks, and goggles or face shield during mixing/loading, cleanup and repair. Applicators must wear long-sleeved shirt, long pants, and shoes plus socks. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

### 3.1 Crop Specific Recommendations

#### 3.1.1 Pre-Harvest Weed Management and Crop Desiccation

If indicated in the crop-specific table below, **Heat ADV** may be applied in tank mix with glyphosate for additional pre-harvest weed control and improved crop dry down. Consult the label of the tank mix partner product for further use instructions, precautions and restrictions. The most restrictive labelling applies to tank mixes.

#### Dry Common Beans<sup>1</sup> and Soybeans

|                          |                                                                                                                                                                                                                                                                              |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate                     | 1.68 – 2.34 L/ha of <b>Heat ADV</b>                                                                                                                                                                                                                                          |
| Water Volume             | 200 L/ha ground (100 – 200 L/ha with glyphosate); 50 L/ha aerial                                                                                                                                                                                                             |
| Application Timing       | Apply when stems are green to brown in colour and pods are mature (yellow – brown) and 80 – 90% of the original leaves have dropped.                                                                                                                                         |
| Weeds Controlled         | Improved dry down of volunteer canola (all types including Roundup Ready), cleavers, common ragweed, Canada fleabane, Canada thistle, lamb's-quarters, redroot pigweed and wild buckwheat.                                                                                   |
| Ground Application       | Apply using a standard boom sprayer.                                                                                                                                                                                                                                         |
| Aerial Application       | Use a minimum water volume of 50 L/ha. Refer to <b>Aerial Application</b> section above for aerial application use and operator precautions. Only apply <b>Heat ADV</b> by air in the Prairie Provinces and Interior of British Columbia (including the Peace River Region). |
| Remarks                  | Do not graze or feed treated hay or straw to livestock.                                                                                                                                                                                                                      |
| Tank mix with Glyphosate | <b>Heat ADV</b> may be applied in tank mix with 2.5 L/ha of glyphosate (360 g/L equivalent) for additional pre-harvest weed control.                                                                                                                                         |

<sup>1</sup> When tank mixing with glyphosate, consult the glyphosate label or BASF representative for information on the use on specific varieties of dry common beans.

**Chickpeas**

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate                     | 1.68 – 2.34 L/ha of <b>Heat ADV</b>                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Water Volume             | 200 L/ha ground (100 – 200 L/ha with glyphosate); 50 L/ha aerial                                                                                                                                                                                                                                                                                                                                                                                                  |
| Application Timing       | For Desi type, apply at the time swathing would normally commence, when the majority of plants are yellow and most pods are mature and seeds have turned from green to yellow or brown. Upper part of plant may still be green.<br><br>For Kabuli type, apply when the majority of plants and pods are ripe and dry with seeds turned from green to white or tan, and detached from the pods. Dry down is less complete in Kabuli type due to its thick pod wall. |
| Weeds Controlled         | Improved dry down of volunteer canola (all types including Roundup Ready), cleavers, common ragweed, Canada fleabane, Canada thistle, lamb's-quarters, redroot pigweed and wild buckwheat.                                                                                                                                                                                                                                                                        |
| Ground Application       | Apply using a standard boom sprayer.                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Aerial Application       | Use a minimum water volume of 50 L/ha. Refer to <b>Aerial Application</b> section above for aerial application use and operator precautions. Only apply <b>Heat ADV</b> by air in the Prairie Provinces and Interior of British Columbia (including the Peace River Region).                                                                                                                                                                                      |
| Remarks                  | Do not graze or feed treated hay or straw to livestock.                                                                                                                                                                                                                                                                                                                                                                                                           |
| Tank mix with Glyphosate | <b>Heat ADV</b> may be applied in tank mix with 2.5 L/ha of glyphosate (360 g/L equivalent) for additional pre-harvest weed control.                                                                                                                                                                                                                                                                                                                              |

**Faba Beans**

|                    |                                                                                                                                                                                                                                                                              |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate               | 1.68 – 2.34 L/ha of <b>Heat ADV</b>                                                                                                                                                                                                                                          |
| Water Volume       | 200 L/ha ground (100 – 200 L/ha with glyphosate); 50 L/ha aerial                                                                                                                                                                                                             |
| Application Timing | Apply when 80% of lower pods have turned black, middle pods have turned yellow/tan, and top green pods have firm seed.                                                                                                                                                       |
| Weeds Controlled   | Improved dry down of volunteer canola (all types including Roundup Ready), cleavers, common ragweed, Canada fleabane, Canada thistle, lamb's-quarters, redroot pigweed and wild buckwheat.                                                                                   |
| Ground Application | Apply using a standard boom sprayer.                                                                                                                                                                                                                                         |
| Aerial Application | Use a minimum water volume of 50 L/ha. Refer to <b>Aerial Application</b> section above for aerial application use and operator precautions. Only apply <b>Heat ADV</b> by air in the Prairie Provinces and Interior of British Columbia (including the Peace River Region). |
| Remarks            | Do not graze or feed treated hay or straw to livestock.                                                                                                                                                                                                                      |

|                          |                                                                                                                                      |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Tank mix with Glyphosate | <b>Heat ADV</b> may be applied in tank mix with 2.5 L/ha of glyphosate (360 g/L equivalent) for additional pre-harvest weed control. |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------|

### Red Lentil Varieties

|                          |                                                                                                                                                                                                                                                                              |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate                     | 1.68 – 2.34 L/ha of <b>Heat ADV</b>                                                                                                                                                                                                                                          |
| Water Volume             | 200 L/ha ground (100 – 200 L/ha with glyphosate); 50 L/ha aerial                                                                                                                                                                                                             |
| Application Timing       | Apply when lowermost pods (bottom 15%) are brown and rattle when shaken.                                                                                                                                                                                                     |
| Weeds Controlled         | Improved dry down of volunteer canola (all types including Roundup Ready), cleavers, common ragweed, Canada fleabane, Canada thistle, lamb's-quarters, redroot pigweed and wild buckwheat.                                                                                   |
| Ground Application       | Apply using a standard boom sprayer.                                                                                                                                                                                                                                         |
| Aerial Application       | Use a minimum water volume of 50 L/ha. Refer to <b>Aerial Application</b> section above for aerial application use and operator precautions. Only apply <b>Heat ADV</b> by air in the Prairie Provinces and Interior of British Columbia (including the Peace River Region). |
| Remarks                  | Apply only to red lentil varieties. Do not graze or feed treated hay or straw to livestock.                                                                                                                                                                                  |
| Tank mix with Glyphosate | <b>Heat ADV</b> may be applied in tank mix with 2.5 L/ha of glyphosate (360 g/L equivalent) for additional pre-harvest weed control.                                                                                                                                         |

**Field Peas**

|                          |                                                                                                                                                                                                                                                                              |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate                     | 1.68 – 2.34 L/ha of <b>Heat ADV</b>                                                                                                                                                                                                                                          |
| Water Volume             | 200 L/ha ground (100 – 200 L/ha with glyphosate); 50 L/ha aerial                                                                                                                                                                                                             |
| Application Timing       | Apply when the majority of pods are brown (70 – 80%).                                                                                                                                                                                                                        |
| Weeds Controlled         | Improved dry down of volunteer canola (all types including Roundup Ready), cleavers, common ragweed, Canada fleabane, Canada thistle, lamb's-quarters, redroot pigweed and wild buckwheat.                                                                                   |
| Ground Application       | Apply using a standard boom sprayer.                                                                                                                                                                                                                                         |
| Aerial Application       | Use a minimum water volume of 50 L/ha. Refer to <b>Aerial Application</b> section above for aerial application use and operator precautions. Only apply <b>Heat ADV</b> by air in the Prairie Provinces and Interior of British Columbia (including the Peace River Region). |
| Remarks                  | Treated pea straw may be grazed or fed to livestock.                                                                                                                                                                                                                         |
| Tank mix with Glyphosate | <b>Heat ADV</b> may be applied in tank mix with 2.5 L/ha of glyphosate (360 g/L equivalent) for additional pre-harvest weed control.                                                                                                                                         |

**Sunflower**

|                    |                                                                                                                                                                                                                                                                              |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate               | 1.68 – 2.34 L/ha of <b>Heat ADV</b>                                                                                                                                                                                                                                          |
| Water Volume       | 200 L/ha ground; 50 L/ha aerial                                                                                                                                                                                                                                              |
| Application Timing | Apply when the backs of the heads and bracts are turning yellow, and seed moisture is 20 – 30%.                                                                                                                                                                              |
| Weeds Controlled   | Improved dry down of volunteer canola (all types including Roundup Ready), cleavers, common ragweed, Canada fleabane, Canada thistle, lamb's-quarters, redroot pigweed and wild buckwheat.                                                                                   |
| Ground Application | Apply using a standard boom sprayer.                                                                                                                                                                                                                                         |
| Aerial Application | Use a minimum water volume of 50 L/ha. Refer to <b>Aerial Application</b> section above for aerial application use and operator precautions. Only apply <b>Heat ADV</b> by air in the Prairie Provinces and Interior of British Columbia (including the Peace River Region). |
| Remarks            | Do not apply a tank mix with glyphosate to sunflower. Glyphosate is not registered for this use.                                                                                                                                                                             |

**Canola (all types) and Mustard <sup>1</sup>**

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate                        | 1.68 – 2.34 L/ha of <b>Heat ADV</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Water Volume                | 200 L/ha ground (100 – 200 L/ha with glyphosate); 50 L/ha aerial                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Application Timing          | Apply when 65 – 80% of seeds have changed colour.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Weeds Controlled            | Improved dry down of volunteer canola (all types including Roundup Ready), cleavers, common ragweed, Canada fleabane, Canada thistle, lamb's-quarters, redroot pigweed and wild buckwheat.                                                                                                                                                                                                                                                                                                                                                               |
| Directions for Use – Ground | Apply using a standard boom sprayer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Directions for Use – Aerial | Use a minimum water volume of 50 L/ha. Refer to <b>Aerial Application</b> section above for aerial application use and operator precautions. Only apply <b>Heat ADV</b> by air in the Prairie Provinces and Interior of British Columbia (including the Peace River Region).                                                                                                                                                                                                                                                                             |
| Remarks                     | It is recommended that the application of <b>Heat ADV</b> as a desiccant in canola and mustard be made to shatter resistant varieties.<br><br>Under ideal conditions, harvest can normally commence within 14-21 days after desiccation when applied at the appropriate crop stage recommendation. Adverse weather conditions such as rainfall, cool temperatures, shorter day length and high humidity may slow the plant desiccation and keep seed moisture levels high which can delay commencement of harvest after the <b>Heat ADV</b> application. |
| Tank mix with Glyphosate    | <b>Heat ADV</b> may be applied in tank mix with 2.5 L/ha of glyphosate (360 g/L equivalent) for additional pre-harvest weed control.                                                                                                                                                                                                                                                                                                                                                                                                                     |

<sup>1</sup> All classes, including brown, oriental, canola quality *Brassica juncea*, *Brassica juncea* varieties with the **Clearfield** trait, and yellow mustard.

**Flax**

|                    |                                                                                                                                                                                                                                                                              |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate               | 1.68 – 2.34 L/ha of <b>Heat ADV</b>                                                                                                                                                                                                                                          |
| Water Volume       | 200 L/ha ground (100 – 200 L/ha with glyphosate); 50 L/ha aerial                                                                                                                                                                                                             |
| Application Timing | Apply when 75% of bolls have turned colour.                                                                                                                                                                                                                                  |
| Weeds Controlled   | Improved dry down of volunteer canola (all types including Roundup Ready), cleavers, common ragweed, Canada fleabane, Canada thistle, lamb's-quarters, redroot pigweed and wild buckwheat.                                                                                   |
| Ground Application | Apply using a standard boom sprayer.                                                                                                                                                                                                                                         |
| Aerial Application | Use a minimum water volume of 50 L/ha. Refer to <b>Aerial Application</b> section above for aerial application use and operator precautions. Only apply <b>Heat ADV</b> by air in the Prairie Provinces and Interior of British Columbia (including the Peace River Region). |

|                          |                                                                                                                                      |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Tank mix with Glyphosate | <b>Heat ADV</b> may be applied in tank mix with 2.5 L/ha of glyphosate (360 g/L equivalent) for additional pre-harvest weed control. |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------|

### 3.1.2 Pre-Harvest Weed Management

#### Wheat, Barley and Triticale

|                          |                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate                     | 1.17 – 2.34 L/ha of <b>Heat ADV</b>                                                                                                                                                                                                                                                                                                                                               |
| Water Volume             | 100 – 200 L/ha ground; minimum 50 L/ha aerial                                                                                                                                                                                                                                                                                                                                     |
| Application Timing       | Hard dough stage; a thumbnail impression remains on seed; less than 30% moisture.                                                                                                                                                                                                                                                                                                 |
| Weeds Controlled         | Improved dry down of volunteer canola (all types including Roundup Ready), cleavers, common ragweed, Canada fleabane, Canada thistle, lamb's-quarters, redroot pigweed and wild buckwheat.                                                                                                                                                                                        |
| Ground Application       | Apply using a standard boom sprayer.                                                                                                                                                                                                                                                                                                                                              |
| Aerial Application       | Use a minimum water volume of 50 L/ha. Refer to <b>Aerial Application</b> section above for aerial application use and operator precautions. Only apply <b>Heat ADV</b> by air in the Prairie Provinces and Interior of British Columbia (including the Peace River Region).                                                                                                      |
| Remarks                  | Treated barley, wheat and triticale straw may be grazed or fed to livestock. Use higher water volume for dense crop stands and higher weed pressure.                                                                                                                                                                                                                              |
| Tank mix with Glyphosate | Tank mixing <b>Heat ADV</b> with 2.5 L/ha of glyphosate (360 g/L equivalent) will provide additional pre-harvest weed management to the crop dry down provided by glyphosate. Tank mixing with glyphosate is not recommended when harvested grain is to be used for seed.<br><br>Do not apply a tank mix with glyphosate to triticale. Glyphosate is not registered for this use. |

### 4.0 Mixing Instructions

1. When using **Heat ADV**, 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. Start agitation system.
3. Add **Heat ADV** first and continue to agitate until thoroughly mixed.
4. When tank mixing, add tank-mix partner and continue agitation.

5. Continue agitation while filling the remainder of the tank with water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system.
7. 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.
8. If a white residue starts to build up in the tank, drain it and clean the tank with strong detergent solution.
9. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

Dispose of rinsate in accordance with provincial regulations.

## 5.0 Pre-Harvest Interval (PHI)

The following pre-harvest intervals should be observed for respective crops when **Heat ADV** is used as a harvest aid or a pre-harvest treatment for weed management.

| <b>Crop</b>        | <b>PHI (days)</b> |
|--------------------|-------------------|
| Barley             | 3                 |
| Canola             | 3                 |
| Chickpeas          | 2                 |
| Dry common beans   | 2                 |
| Faba beans         | 2                 |
| Flax               | 3                 |
| Lentils            | 3                 |
| Mustard            | 3                 |
| Peas (dried field) | 3                 |
| Soybeans           | 3                 |
| Sunflower          | 7                 |
| Triticale          | 3                 |
| Wheat              | 3                 |

## 6.0 Follow Cropping

The crops listed below can be safely grown after a fall application of **Heat ADV**.

| Rotational crops that can be planted in the following season after application                                                                                                                 | Rotational crops that can be planted in the second season after application |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Barley (spring, winter, malting)<br>Canary seed<br>Canola<br>Chickpeas<br>Corn (field and sweet)<br>Flax<br>Lentils<br>Oats<br>Dry field peas<br>Soybeans<br>Wheat (spring, winter, and durum) | All crops                                                                   |

## 7.0 Spraying Instructions

### Conventional ground application

Improved coverage of the product results in more consistent crop and weed dry down. Using higher water volumes, smaller nozzle droplet size 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.

## 8.0 Restrictions and Limitations

1. Wash sprayer thoroughly after use to avoid damage to the next crop sprayed.
2. DO NOT enter or allow worker entry into treated areas for 12 hours after application.
3. Treated pea vines may be grazed or fed to livestock.
4. Soybeans, chickpeas and dry common beans: Do not graze or feed treated hay or straw to livestock.
5. Pre-harvest treated barley, wheat and triticale straw may be grazed or fed to livestock.
6. Only apply **Heat ADV** by air in the Prairie Provinces and Interior of British Columbia.
7. 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.

8. 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.
9. As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests.
10. In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user should contact BASF at 1-877-371-2273 or [www.agsolutions.ca](http://www.agsolutions.ca) for information before mixing any pesticide or fertilizer that is not specifically recommended on this label.

### Buffer zones

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

**Aerial application:** **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 16 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotor-span.

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

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).

| Method of application | Crop                                                                                                                                                | Buffer zones (metres) required for the protection of terrestrial habitats |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Field sprayer*        | Dry common beans, soybeans, chickpeas, faba beans, lentils (red varieties), field peas, sunflowers, canola, mustard, flax, wheat, barley, triticale | 10                                                                        |

| Method of application | Crop                                                                                                                                                |             | Buffer zones (metres) required for the protection of terrestrial habitats |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------|
| Aerial                | Dry common beans, soybeans, chickpeas, faba beans, lentils (red varieties), field peas, sunflowers, canola, mustard, flax, wheat, barley, triticale | Fixed wing  | 175                                                                       |
|                       |                                                                                                                                                     | Rotary wing | 150                                                                       |

\*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%.

For tank mixes, consult the labels of the tank-mix partners and observe the largest (most restrictive) 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.

## 9.0 Resistance-Management Recommendations

For resistance management, **Heat ADV** is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to **Heat ADV** and other Group 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 **Heat ADV** or other Group 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](http://www.agsolutions.ca).

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