

2018-2586  
2019-01-29

**. Container label**

**ARROW<sup>®</sup> 240 EC Herbicide**

<b>GROUP</b>	<b>1</b>	<b>HERBICIDE</b>
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POST-EMERGENCE HERBICIDE FOR CONTROL OF GRASSES IN, Highbush Blueberries, Cranberry, Canola (including imazethapyr-tolerant varieties), Flax (including low linolenic acid varieties), Field Peas, Lentils, Desi and Kabuli Chickpeas, Dry Onions, Potatoes, Mustard (oriental, brown, yellow) (condiment type only), Soybeans, Seedling Alfalfa, Sunflowers, Dry Beans (Pinto, Black, Great Northern, Red, Pink and Navy), Coriander, Fenugreek, Prairie Carnation and Spinach

**AGRICULTURAL**

EMULSIFIABLE CONCENTRATE

**ACTIVE INGREDIENT: CLETHODIM 240 g/L**

**REGISTRATION NO. 28224 PEST CONTROL PRODUCTS ACT**

**CAUTION: EYE AND SKIN IRRITANT**

**KEEP OUT OF REACH OF CHILDREN**

**READ THE LABEL AND BOOKLET BEFORE USING**

**For emergency medical help call PROSAR at 1.877.250.9291 (24 hours a day)**

**For spill, leak or fire call INFOTRAC at 1.800.535.5053 (24 hours a day)**

**NET CONTENTS: 1-1050 Litres**

**ADAMA Agricultural Solutions Canada, Ltd.** 300 – 191 Lombard Avenue  
Winnipeg, Manitoba  
R3B 0X1

1-855-264-6262

### **GENERAL INFORMATION:**

ARROW 240 EC is a selective post-emergence herbicide for control of a broad range of grasses in highbush blueberries, cranberry, canola (including imazethapyr-tolerant varieties), flax (including low linolenic acid varieties), field peas, lentils, Desi and Kabuli chickpeas, dry onions, potatoes, mustard (oriental, brown, yellow)(condiment type only), soybeans, seedling alfalfa, sunflowers, dry beans (Pinto, Black, Great Northern, Red, Pink and Navy), coriander, fenugreek, Prairie carnation and spinach. **ARROW 240 EC is to be used only with the adjuvant X-Act® or ADAMA Adjuvant 80.**

ARROW 240 EC is a systemic herbicide which is translocated from the treated foliage to the growing points of the leaves, shoots and roots. Uptake into the plant is primarily through its leaves. Thorough coverage of the foliage is important for consistent grass control. Susceptible grasses that are actively growing will undergo a burn-back and colour change after treatment. Leaf foliage will first change from green to yellowish, then purplish and finally brown colour. The time required for complete control is normally 7 to 21 days following treatment, depending on growing conditions and crop competition.

### **PRECAUTIONS:**

**KEEP OUT OF REACH OF CHILDREN.** May irritate skin and eyes. Avoid contact with skin, eyes and clothing. Wash concentrate from skin or eyes immediately. Do not inhale fumes. Avoid breathing vapours or spray mist. After use, wash hands and other exposed skin. When using, do not eat, drink or smoke. Remove and launder contaminated clothing separately from household laundry before reuse. As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests. **DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes. Store the container tightly closed and away from seeds, feeds, fertilizer, plants and foodstuffs. Observe appropriate provincial buffer zones around bodies of water and wetland areas.

When handling the concentrate, mixing, loading or during cleanup and repair, wear goggles or face shield, rubber apron, chemical-resistant gloves, rubber boots, long-sleeved shirt and long pants. Wear long-sleeved shirt and long pants during application. In addition, for hand-held application equipment, including backpack sprayer, wear chemical-resistant gloves during application.

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.

**DO NOT** enter or allow worker into treated areas for 12 hours following application.

### **ENVIRONMENTAL HAZARDS:**

. As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests. **DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

**TOXIC** to aquatic organisms and non-target terrestrial plants.

Observe buffer zones specified under **DIRECTIONS FOR USE.**

Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

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.

This product contains aromatic petroleum distillates that are toxic to aquatic organisms.

The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (for example, sandy soil) and/or the depth to the water table is shallow.

**FIRST AID:**

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

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

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

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

**TOXICOLOGICAL INFORMATION:** Treat the patient symptomatically. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.

**STORAGE:** To prevent contamination, store this product away from food or feed

**DISPOSAL:**

**RECYCLABLE CONTAINER 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.

**DISPOSAL OF UNUSED, UNWANTED PRODUCT:** 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 cleanup 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.

**Pamphlet label**

**ARROW<sup>®</sup> 240 EC Herbicide**

<b>GROUP</b>	<b>1</b>	<b>HERBICIDE</b>
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POST-EMERGENCE HERBICIDE FOR CONTROL OF GRASSES IN HIGHBUSH BLUEBERRIES, CRANBERRY, CANOLA (including imazethapyr-tolerant varieties), FLAX (including low linolenic acid varieties), FIELD PEAS, LENTILS, DESI and KABULI CHICKPEAS, DRY ONIONS, POTATOES, MUSTARD (oriental, brown, yellow) (condiment type only), SOYBEANS, SEEDLING ALFALFA, SUNFLOWERS, DRY BEANS (Pinto, Black, Great Northern, Red, Pink and Navy), CORIANDER, FENUGREEK, PRAIRIE CARNATION and SPINACH

**AGRICULTURAL**

EMULSIFIABLE CONCENTRATE

**ACTIVE INGREDIENT: CLETHODIM .....240 g/L**

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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.

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**DIRECTIONS FOR USE:**

ARROW 240 EC is to be used only on highbush blueberries, cranberry, canola (including imazethapyr-tolerant varieties), flax (including low linolenic acid varieties), field peas, lentils,

Desi and Kabuli chickpeas, dry onions, potatoes, mustard (oriental, brown, yellow) (condiment type only), soybeans, seedling alfalfa, sunflowers, dry beans (Pinto, Black, Great Northern, Red, Pink and Navy), coriander, fenugreek, Prairie carnation and spinach.

Apply a maximum of one application per season on dry common beans (*Phaseolus vulgaris* varieties only).

**DO NOT APPLY BY AIR.**

Not for use in greenhouses.

A 30-day plant-back interval should be observed for all unlabelled crops

**Time of Application:**

Apply ARROW 240 EC when the annual grasses and volunteer cereals are in the 2 to 6 leaf stage as specified under APPLICATION RATES OF ARROW 240 EC. Most effective control is achieved when application is made prior to tillering when annual grasses are small and actively growing.

For suppression or control of quackgrass, apply ARROW 240 EC when the quackgrass is in the 2 to 6 leaf stage and 6 to 15 cm in height. Most effective results are achieved when application is made at the 3 to 5 leaf stage, when the canopy is uniform and actively growing.

ARROW 240 EC will be less effective when plants are stressed by lack of moisture, excessive moisture, low temperature and/or very low relative humidity. Regrowth by tillering may occur if application is made under any of the above stress conditions. In wide row crops, where the canopy may be slow to close, cultivation may be necessary to control grasses that emerge after treatment.

Highbush blueberries, cranberry, canola (including imazethapyr-tolerant varieties), flax (including low linolenic acid varieties), field peas, lentils, Desi and Kabuli chickpeas, dry onions, potatoes, mustard (oriental, brown, yellow) (condiment type only), soybeans, seedling alfalfa, sunflowers, dry beans (Pinto, Black, Great Northern, Red, Pink and Navy), coriander, fenugreek, Prairie carnation and spinach are tolerant to ARROW 240 EC at all stages of growth. However, the pre-harvest interval outlined in the Crop Recommendations table must be followed to avoid excessive crop residues.

For Desi and Kabuli chickpeas, apply ARROW 240 EC at a maximum of one application per season before the crop reaches the 9 node stage (18 cm height maximum) and when the annual grasses and volunteer cereals are in the 2 to 6 leaf stage.

Cranberry is tolerant to Arrow 240 EC at all stages of growth, however, do not apply Arrow 240 EC between the hook stage and full fruit set.

**Application Rates of ARROW 240 EC:**

Rates of use are given below to control various grass species. Refer to crop section for the maximum use rate on each crop.

Grass Species	Leaf Stage	Application Rate of ARROW 240 EC	Application Rate of Adjuvant X-ACT <sup>®</sup> or ADAMA Adjuvant 80
*Foxtail (green, yellow) Wild oats Volunteer cereals (wheat, barley, oats)	2-4	0.125 L/ha	X-Act Adjuvant: 0.5 % v/v  Or  ADAMA Adjuvant 80: 0.25% v/v
Barnyard Grass Witchgrass Fall panicum Proso millet Volunteer Corn Volunteer canary grass	2-6	0.125 L/ha	X-Act Adjuvant: 0.5 % v/v  Or  ADAMA Adjuvant 80: 0.25% v/v

Wild Oats Volunteer cereals (wheat, barley, oats) Foxtail (green, yellow) Persian darnel Crabgrass (smooth and large) Proso millet Witchgrass Fall panicum Barnyard grass Volunteer corn Volunteer canary grass Quackgrass suppression	2-6	0.19 L/ha	X-Act Adjuvant: 0.5 % v/v  Or  ADAMA Adjuvant 80: 0.25% v/v
Quackgrass control	2-6	0.38 L/ha	X-Act Adjuvant: 1.0 % v/v  Or  ADAMA Adjuvant 80: 0.5% v/v

\*ARROW 240 EC applied at 0.125 L/ha for the control of weeds listed in this section of the table should only be applied under the following conditions:

- Good crop stand
- Early application (as in above table, prior to tillering)



- Do not tank-mix with other pesticides
- Do not apply to volunteer winter cereals
- Light to moderate weed infestation
- Adequate moisture and fertility
- Absence of stress, good growing conditions

If any one of the above conditions is not present at the time of application, use 0.19 L/ha rate of ARROW 240 EC.

### CROP RECOMMENDATIONS:

Crops	Maximum Application Rate of ARROW 240 EC	Pre-Harvest Interval
Highbush blueberries <sup>1,2,5</sup>	0.38 L/ha	14 days
Cranberry <sup>1, 5,6</sup>	0.38 L/ha	30 days
Canola	0.38 L/ha	60 days
Flax (including low linolenic acid varieties)	0.38 L/ha	60 days
Field Peas	0.38 L/ha	75 days
Lentils	0.38 L/ha	60 days
Desi and Kabuli Chickpeas	0.19 L/ha	60 days
Dry Onions <sup>1, 5</sup>	0.38 L/ha	45 days
Potatoes	0.38 L/ha	60 days
Mustard (oriental, brown, yellow), (condiment type only)	0.38 L/ha	60 days
Soybeans	0.38 L/ha	75 days
Seedling Alfalfa	0.38 L/ha	30 days
Sunflowers	0.38 L/ha	72 days
Dry Beans (Pinto, Black, Great Northern, Red, Pink and Navy) <sup>1,6</sup>	0.19 L/ha	60 days
Coriander <sup>1, 3, 5</sup>	0.38 L/ha	60 days
Fenugreek <sup>1, 3, 5</sup>	0.38 L/ha	30 days
Prairie Carnation <sup>1, 3, 5</sup>	0.19 L/ha	N/A
Spinach <sup>4, 5</sup>	0.19 L/ha	14 days

1. Apply a maximum of one application per year.
2. Apply Arrow 240 EC as a broadcast spray directed to the ground.
3. Do not harvest treated prairie carnations or greens of treated fenugreek as a vegetable or leaves of treated coriander (cilantro) for human consumption.
4. Apply a maximum of two applications per year
5. Refer to section "MINOR USES" in this label for additional use instructions.
6. NOTE: Varieties of this crop may vary in their tolerance to herbicides, including ARROW 240 EC. Since not all crop varieties have been tested for tolerance to ARROW 240 EC, first use of ARROW 240 EC should be limited to a small area of each variety to confirm tolerance prior to adoption as a general field practice. Additionally, consult your supplier for information on the tolerance of specific varieties to ARROW 240 EC.

## TANK-MIXES

### ARROW 240 EC AND BADGE:

**Flax (including low linolenic acid varieties):** ARROW 240 EC may be tank-mixed with **BADGE** for control of certain broadleaf and grassy weeds in flax (including low linolenic acid varieties) in one spray operation. Apply in 55 - 110 litres of water per hectare at a spray pressure of 275 kPa. DO NOT spray this tank-mix on plants under stress. DO NOT spray during periods of hot, humid weather. Follow all precautions, limitations and timing recommendations on the BADGE label. The most stringent label precautions for any individual pesticide product in a tank-mix should be used.

**Time of Application:** Flax (including low linolenic acid varieties), may be treated from 5 cm high to the early bud stage. For best results, apply when flax (including low linolenic acid varieties) is 5 cm to 10 cm high and weeds are in the seedling stage. If broadleaf weeds and grassy weeds are not in the recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ARROW 240 EC at 0.19 - 0.38 L/ha tank-mixed with BADGE at 1.25 L/ha and the adjuvant X-ACT at 0.5% - 1.0% v/v or ADAMA Adjuvant 80 at 0.25% - 0.5% v/v.

**Weeds Controlled:** As listed for ARROW 240 EC used alone, plus certain seedling broadleaf weeds. Refer to the BADGE label for the broadleaf weeds controlled.

### MIXING INSTRUCTIONS:

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. If tank-mixing ARROW 240 EC and BADGE for once-over grass and broadleaf weed control in flax (including low linolenic acid varieties) add the correct amount of BADGE. Continue to agitate.
4. Add the correct amount of ARROW 240 EC. Continue to agitate.
5. Add the correct amount of adjuvant X-ACT or ADAMA Adjuvant 80 along with the remaining amount of water necessary to fill the spray tank.

6. Continue to agitate or run the by-pass system.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight.
8. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

*For disposal of cleaning solution see section on DISPOSAL.*

#### **ARROW 240 EC AND MCPA ESTER:**

**Flax:** ARROW 240 EC may be tank-mixed with MCPA ESTER for control of certain broadleaf and grassy weeds in flax in one spray operation. Apply in a minimum of 100 L/ha spray volume at a pressure of 275 kPa.

**NOTE: THIS TANK-MIX MAY NOT BE APPLIED TO LOW LINOLENIC ACID VARIETIES OF FLAX.**

**Time of Application:** Flax may be treated from 5 cm tall to just before the bud stage. Do not apply after the early bud stage. Apply when the grassy weeds are in the 2 to 6 leaf stage and broadleaf weeds are in the seedling stage and actively growing. If broadleaf weeds and grassy weeds are not in the recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ARROW 240 EC at 0.19 - 0.38 L/ha tank-mixed with MCPA ESTER and the adjuvant X-ACT at 0.5% - 1.0% v/v or ADAMA Adjuvant 80 at 0.25% - 0.5% v/v.

**Weeds Controlled:** As listed for ARROW 240 EC used alone, plus certain seedling broadleaf weeds. Refer to the MCPA ESTER label for the rates and broadleaf weeds controlled and specific information on flax.

#### **MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Add the correct amount of MCPA ESTER. Continue to agitate.
4. Add the correct amount of ARROW 240 EC. Continue to agitate.
5. Add the correct amount of adjuvant X-ACT or ADAMA Adjuvant 80 along with the remaining amount of water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight.
8. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

### **ARROW 240 EC AND LONTREL® 360:**

**Flax:** ARROW 240 EC may be tank-mixed with LONTREL 360 for control of certain broadleaf and grass weeds in flax in one spray operation. Apply in a minimum of 100 L/ha spray volume at a pressure of 275 kPa.

**NOTE: THIS TANK-MIX MAY NOT BE APPLIED TO LOW LINOLENIC ACID VARIETIES OF FLAX.**

Follow all precautions, limitations and timing recommendations on the LONTREL 360 label.

**Time of Application:** Flax may be treated from 5 cm to 10 cm in height. Apply when the grassy weeds are in the 2 to 6 leaf stage and the broadleaf weeds are actively growing.

Application to Canada thistle should be made when Canada thistle is in the rosette to pre-bud stage of growth. If broadleaf weeds and grass weeds are not in recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ARROW 240 EC at 0.19 L/ha tank-mixed with LONTREL 360 at 0.56 to 0.83 L/ha and with the adjuvant X-ACT at 0.5% v/v or ADAMA Adjuvant 80 at 0.25% v/v.

**Weeds Controlled:** Wild oats, green foxtail, volunteer barley, volunteer wheat, volunteer oats, wild buckwheat.

Canada thistle	0.56 L LONTREL 360/ha	Season-long control
	0.83 L LONTREL 360/ha	Control extended into following year

**MIXING INSTRUCTIONS:** For mixing instructions, refer to ARROW 240 EC AND LONTREL 360 tank-mix on canola.

**Canola:** ARROW 240 EC may be tank-mixed with LONTREL 360 for control of certain broadleaf and grass weeds in canola in one spray operation. Apply in a minimum of 100 L/ha spray volume at a pressure of 275 kPa. Follow all precautions, limitations and timing recommendations on the LONTREL 360 label.

**Time of Application:** Canola may be treated from the 2 to 6 leaf stage. Apply when the grassy weeds are in the 2 to 6 leaf stage and the broadleaf weeds are actively growing. Application to Canada thistle should be made when Canada thistle is in the rosette to pre-bud stage of growth. If broadleaf weeds and grass weeds are not in recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ARROW 240 EC at 0.19 L/ha tank-mixed with LONTREL 360 at 0.42 to 0.83 L/ha and with the adjuvant X-ACT at 0.5% v/v or ADAMA Adjuvant 80 at 0.25% v/v.

**Weeds Controlled:** Wild oats, green foxtail, volunteer barley, volunteer wheat, volunteer oats.

Wild Buckwheat	0.56 L LONTREL 360/ha	Season-long control
Canada thistle	0.42 L LONTREL 360/ha	Top growth control to 6 - 8 weeks

0.56 L LONTREL 360/ha	Season-long control
0.83 L LONTREL 360/ha	Control into following year

**MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Add the required amount of LONTREL 360 to the tank. Continue to agitate.
4. Add the correct amount of ARROW 240 EC. Continue to agitate.
5. Add the correct amount of adjuvant X-ACT or ADAMA Adjuvant 80 along with the remaining amount of water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight. In the case of tank mixtures with broadleaf herbicides, settling will occur if agitation is not continuous.
8. If an oil film starts to build up in the tank, drain it and clean tank with strong detergent solution.
9. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

**ARROW 240 EC AND PURSUIT®:**

**Field Peas:** ARROW 240 EC may be tank-mixed with PURSUIT for control of certain broadleaf and grassy weeds in field peas in one spray operation. Apply in a minimum of 100 litres of water per hectare at a spray pressure of 275 kPa. Follow all precautions, limitations and timing recommendations on the PURSUIT label.

**Time of Application:** Field peas may be treated up to the sixth (6th) trifoliolate leaf stage. Apply when volunteer wheat, volunteer barley, wild oats and green foxtail are in the 2 to 6 leaf stage. Apply up to the 4 leaf stage for control of broadleaf weeds. If broadleaf weeds and grassy weeds are not in the recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ARROW 240 EC at 0.19 L/ha tank-mixed with PURSUIT at 210 mL/ha and the adjuvant X-ACT at 0.5% v/v or ADAMA Adjuvant 80 at 0.25% v/v.

**Weeds Controlled:** Wild oats, green foxtail, volunteer barley, volunteer wheat plus the weeds as listed on the PURSUIT label.

**MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. If tank-mixing ARROW 240 EC and PURSUIT for once over grass and broadleaf weed control in field peas, add the correct amount of PURSUIT. Continue to agitate.
4. Add the required amount of ARROW 240 EC to the tank. Continue to agitate.
5. Add the correct amount of adjuvant X-ACT or ADAMA Adjuvant 80 along with the remaining amount of water necessary to fill the spray tank.

6. Continue to agitate or run the by-pass system.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight.
8. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

**Imazethapyr Tolerant Canola (e.g. canola varieties with the SMART trait):** ARROW 240 EC may be tank-mixed with PURSUIT for control of certain broadleaf and grassy weeds in imazethapyr-tolerant canola varieties in one spray operation. Apply in a minimum of 100 litres of water per hectare at a spray pressure of 275 kPa. Follow all precautions, limitations and timing recommendations on the PURSUIT label.

**Time of Application:** Imazethapyr-tolerant canola varieties may be treated after the crop has developed one (1) fully expanded leaf. Apply when grassy weeds are in the 2 to 6 leaf stage. Apply up to the 4 leaf stage for control of broadleaf weeds.

**Application Rate:** ARROW 240 EC at 0.19L/ha tank-mixed with PURSUIT at 0.105 or 0.21 L/ha and the adjuvant X-ACT at 0.5% v/v or ADAMA Adjuvant 80 at 0.25% v/v.

**Weeds Controlled:** As listed for ARROW 240 EC plus the following additional weeds. PURSUIT at 0.105 L/ha for control of chickweed, hempnettle, redroot pigweed\*, stinkweed, volunteer canola (not imazethapyr-tolerant), wild mustard and wild buckwheat\*, in the 1 to 4 leaf stage.

\*For the control of light infestations only. For heavy infestations use the 0.21 L/ha rate of PURSUIT.

PURSUIT at 0.21 L/ha for control of weeds as listed on the PURSUIT label.

**MIXING INSTRUCTIONS:** For mixing instructions, refer to ARROW 240 EC AND PURSUIT tank-mix on field peas.

#### **ARROW 240 EC AND MUSTER®:**

**Canola:** ARROW 240 EC may be tank-mixed with MUSTER for control of certain broadleaf and grassy weeds in canola in one spray operation. Apply in a minimum of 100 litres of water per hectare at a spray pressure of 275 kPa. Follow all precautions, limitations and timing recommendations on the MUSTER label.

**Time of Application:** Canola may be treated from the 2 leaf stage to the beginning of bolting. Apply when the grassy weeds are in the 2 to 6 leaf stage and when the broadleaf weeds are in the cotyledon to 6 leaf stage. If broadleaf weeds and grassy weeds are not in the recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ARROW 240 EC at 0.19 L/ha tank-mixed with MUSTER at 20 or 30 g/ha and the adjuvant X-ACT at 0.5% v/v or ADAMA Adjuvant 80 at 0.25% v/v.

**Weeds Controlled:** MUSTER at 20 or 30 g/ha: Wild oats, green foxtail, volunteer barley, volunteer oats, volunteer wheat, hempnettle, wild mustard, green smartweed, flixweed (spring seedlings), stinkweed\*, and redroot pigweed.

\* *Stinkweed suppression at the lower rate. Apply to stinkweed in the 1 to 4 leaf stage.*

#### **MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Add the required amount of MUSTER to the tank. Continue to agitate.
4. Once MUSTER is in suspension, add the required amount of ARROW 240 EC. Continue to agitate.
5. Add the correct amount of adjuvant X-ACT or ADAMA Adjuvant 80 along with the remaining amount of water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system.
7. On repeat tankloads, prepare a MUSTER/water slurry and add to required water volume in the spray tank prior to adding ARROW 240 EC and the adjuvant X-ACT or ADAMA Adjuvant 80.
8. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight.
9. Immediately after use, refer to MUSTER label for appropriate tank cleanout instructions.

#### **ARROW 240 EC AND LIBERTY®:**

**Canola: For use on Glufosinate Ammonium tolerant canola varieties only (e.g. varieties or hybrids labelled LIBERTY LINK).** ARROW 240 EC may be tank-mixed with LIBERTY for control of certain broadleaf and grass weeds in Glufosinate Ammonium tolerant canola varieties in one spray operation. Apply in a minimum of 110 L/ha spray volume at a pressure of 275 kPa. Follow all precautions, limitations and timing recommendations on the LIBERTY label.

**Time of Application:** Glufosinate Ammonium tolerant canola varieties may be treated from the cotyledon stage up to the early bolting stage. Apply when the wild oats, volunteer wheat, volunteer oats and green foxtail are in the 1 to 5 leaf stage. Refer to LIBERTY label for application timing on all remaining grass and broadleaf weeds for 2.7 or 3.3 L/ha.

**Application Rate:** ARROW 240 EC at 0.06 L/ha tank-mixed with LIBERTY at 2.7 to 3.3 L/ha and with the adjuvant X-ACT at 0.5% v/v or ADAMA Adjuvant 80 at 0.25% v/v.

**Weeds Controlled:** Wild oats, green foxtail, volunteer barley, volunteer wheat, volunteer oats plus all remaining grass weeds and broadleaf weeds listed on the LIBERTY label at the application rates of 2.7 and 3.3 L/ha.

### **MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Add the required amount of the adjuvant X-ACT or ADAMA Adjuvant 80 to the tank. Continue to agitate until thoroughly mixed.
4. STOP agitation. Add the correct amount of LIBERTY to the spray tank. Start agitation system.
5. Add the correct amount of ARROW 240 EC along with the remaining amount of water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system and spray out immediately.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight. In the case of tank mixtures with broadleaf herbicides, settling will occur if agitation is not continuous.
8. If an oil film starts to build up in the tank, drain it and clean tank with strong detergent solution.
9. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

### **ARROW 240 EC AND CURTAIL® M**

**Flax (including low linolenic acid varieties):** ARROW 240 EC may be tank-mixed with CURTAIL M for control of certain broadleaf and grass weeds in flax in one spray operation. Apply in a minimum of 100 L/ha spray volume at a pressure of 275 kPa. Follow all precautions, limitations, restrictions and timing recommendations on the CURTAIL M label.

**Time of Application:** Flax may be treated from 5 to 15 cm in height. Apply when the grassy weeds are in the 2-6 leaf stage and the broadleaf weeds are actively growing. Application to Canada thistle should be made when Canada thistle is between 10 cm and up to the pre-bud stage. If broadleaf weeds and grass weeds are not in recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ARROW 240 EC at 0.19 L/ha tank-mixed with CURTAIL M at 1.5 to 2.0 L/ha and with the surfactant X-ACT at 0.5% v/v or ADAMA Adjuvant 80 at 0.25% v/v.

**Weeds Controlled:** Weed claims listed on the ARROW 240 EC Herbicide label plus weed claims listed on CURTAIL M label. Refer to the CURTAIL M label for the broadleaf weeds controlled.

**Grazing Interval:** Do not cut treated crops for feed or graze until 60 days after application.

### **MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Add the required amount of CURTAIL M to the tank. Continue to agitate.
4. Add the correct amount of ARROW 240 EC. Continue to agitate.



5. Add the correct amount of X-ACT or ADAMA Adjuvant 80 along with the remaining amount of water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight. In the case of tank mixtures with broadleaf herbicides, settling will occur if agitation is not continuous.
8. If an oil film starts to build up in the tank, drain it and clean tank with strong detergent solution.
9. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

**FOR USE ON DRY BEANS (PINTO, BLACK, GREAT NORTHERN, RED, PINK AND NAVY):**

For control of weeds listed on the ARROW 240 EC label.

**Time of application:** Apply a maximum of one application per year, post-emergent by ground application. Apply ARROW 240 EC at 0.125 to 0.19 L/ha with the adjuvant X-ACT at 0.5% v/v or ADAMA Adjuvant 80 at 0.25% v/v when grassy weeds are in the 2 to 6 leaf stage.

**ARROW 240 EC AND GLYPHOSATE TOLERANT SOYBEANS:**

ARROW 240 EC may be tank-mixed with Roundup Original or Roundup-Weathermax (or other liquid glyphosate products registered for use on glyphosate tolerant soybeans) for control of volunteer glyphosate tolerant corn and other weeds listed on the product labels.

All weeds listed on each label can be controlled in one spray operation. Apply in a minimum of 100L/ha spray volume at a pressure of 275 kPa.

Follow all precautions, limitations, restrictions and timing recommendations on the Glyphosate brand labels.

**Time of application:** Glyphosate tolerant soybeans may be treated from 1st trifoliolate through to flowering, observing the 75 day PHI. Apply when the grassy weeds are in the 2-6 leaf stage and the broadleaf weeds are actively growing.

**Application Rate:** ARROW 240 EC at 0.19 L/ha tank-mixed with 900 to 1800 g a.e./ha of a liquid glyphosate product that is registered for use on glyphosate tolerant soybeans (equivalent to 1.67 to 3.33 L/ha of Roundup Weathermax, a 540 g/L product, or 2.5 to 5.0 L/ha of Roundup Original, a 360 g/L product) plus X-ACT surfactant at 0.5% v/v or ADAMA Adjuvant 80 at 0.25% v/v.

**Weeds Controlled:** Weed claims listed on the ARROW 240 EC Herbicide label (volunteer glyphosate tolerant corn in particular) plus weed claims listed on the glyphosate product label. Refer to the glyphosate product label for the broadleaf weeds controlled.

**Grazing Interval:** Do not cut treated crops for feed or graze until 60 days after application.

### **MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Add the correct amount of ARROW 240 EC. Continue to agitate.
4. Add the correct amount of X-ACT or ADAMA Adjuvant 80. Continue to agitate.
5. Add the required amount of Glyphosate brand to the tank along with the remaining amount of water necessary to fill the spray tank. .
6. Continue to agitate or run the by-pass system.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight. In the case of tank mixtures with broadleaf herbicides, settling will occur if agitation is not continuous.
8. If an oil film starts to build up in the tank, drain it and clean tank with strong detergent solution.
9. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

### **MINOR USES:**

**NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR USE ON THE FOLLOWING MINOR USE CROPS**

**The DIRECTIONS FOR USE for this product for the uses described below were developed for use by persons other than ADAMA Agricultural Solutions Canada Ltd. (ADAMA) and accepted for registration by the Pest Management Regulatory Agency under the User Requested Minor Use Label Expansion Program. ADAMA itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the uses described below. Accordingly, the User assumes all liability arising, and agree to hold ADAMA harmless from any claims based on efficacy and/or phytotoxicity in connection with the use on the uses described below.**

### **PRODUCT FOR USE ON DRY ONIONS:**

#### **DIRECTIONS FOR USE:**

#### **FOR USE ON DRY ONIONS**

For suppression of annual bluegrass and control of other annual weeds listed on the ARROW 240 EC label.

**Time of Application:** Apply ARROW 240 EC post-emergent when the crop is in the 1 to 4 leaf stage. Apply by ground application. One application per year. Observe a PHI of 45 days.

<b>Grass Species</b>	<b>Leaf Stage</b>	<b>Application Rate of ARROW 240 EC</b>	<b>Application Rate of Adjuvant X-ACT® or ADAMA Adjuvant 80</b>
Suppression of annual bluegrass	2-6	0.38 L/ha	X-Act Adjuvant: 0.5% v/v  Or  ADAMA Adjuvant 80: 0.25% v/v

<b>Crop</b>	<b>Weeds Controlled</b>	<b>Application Rate of Arrow 240 EC</b>	<b>Application Rate of Adjuvant X-Act or ADAMA Adjuvant 80</b>	<b>Time of Application</b>
<b>PRAIRIE CARNATION</b>	Annual weeds listed on Arrow 240 EC label. Refer to weed/rate chart in this label.	0.19 L/ha	X-Act Adjuvant: 0.5 % v/v  Or  ADAMA Adjuvant 80: 0.25% v/v	<p><b>TIME OF APPLICATION:</b> Apply Arrow 240 EC post-emergence of weeds and crop.</p> <p>Apply a maximum of one application per year using ground equipment.</p> <p>Apply in a minimum spray volume of 110 L/ha.</p> <p>Do not harvest treated prairie carnations for human consumption.</p> <p><b>Ground application only.</b></p>

<b>Crop</b>	<b>Weeds Controlled</b>	<b>Application Rate of Arrow 240 EC</b>	<b>Application Rate of Adjuvant X-Act or ADAMA Adjuvant 80</b>	<b>Time of Application</b>
<b>HIGHBUSH BLUEBERRY</b>	Arrow 240 EC labelled grassy weeds. Refer to weed/rate chart in this label.	0.19-0.38 L/ha	X-Act Adjuvant: 0.5 – 1.0% v/v  Or  ADAMA Adjuvant 80: 0.25 - 0.5% v/v	<p><b>TIME OF APPLICATION:</b> Apply Arrow 240 EC post-emergence of weeds and crop.</p> <p>Apply a maximum of one application per year, post-emergent by ground equipment.</p> <p>Apply as a broadcast spray directed to the ground.</p> <p>Apply in a minimum spray volume of 100 L/ha.</p> <p>Observe a PHI of 14 days.</p> <p><b>Ground application only</b></p>

<b>Crop</b>	<b>Weeds Controlled</b>	<b>Application Rate of Arrow 240 EC</b>	<b>Application Rate of Adjuvant X-Act or ADAMA Adjuvant 80</b>	<b>Time of Application</b>
<b>CORIANDER</b>	Annual weeds listed on Arrow 240 EC label	Refer to Arrow 240 EC + Adjuvant X-Act or ADAMA Adjuvant 80 weed/rate chart in this label.	Refer to Arrow 240 EC + Adjuvant X-Act or ADAMA Adjuvant 80 weed/rate chart in this label.	<p><b>TIME OF APPLICATION:</b> Apply Arrow 240 EC post-emergent when coriander is in the 2 to 5 leaf stage.</p> <p>Apply a maximum of one application per year, using ground equipment.</p> <p>Observe a PHI of 60 days. Do not harvest leaves of treated coriander (cilantro) for human consumption.</p> <p><b>Ground application only.</b></p>

<b>Crop</b>	<b>Weeds Controlled</b>	<b>Application Rate of Arrow 240 EC</b>	<b>Application Rate of Adjuvant X-Act or ADAMA Adjuvant 80</b>	<b>Time of Application</b>
<b>FENUGREEK</b>	Annual weeds listed on the Arrow 240 EC label	Refer to  Arrow 240 EC+ Adjuvant X-Act or ADAMA Adjuvant 80 weed/rate chart in this label.	Refer to  Arrow 240 EC + Adjuvant X-Act or ADAMA Adjuvant 80 weed/rate chart in this label.	<p><b>TIME OF APPLICATION:</b> Apply Arrow 240 EC post-emergent when fenugreek is in the 3 to 5 leaf stage. Apply a maximum of one application per season, using ground equipment.</p> <p>Observe a PHI of 30 days. Do not graze or feed Arrow 240 EC-treated fenugreek forage to livestock.</p> <p>Do not use the greens of treated fenugreek as a vegetable for human consumption.</p> <p><b>Ground application only.</b></p>

<b>Crop</b>	<b>Weeds Controlled</b>	<b>Application Rate of Arrow 240 EC</b>	<b>Application Rate of Adjuvant X-Act or ADAMA Adjuvant 80</b>	<b>Time of Application</b>
<b>SPINACH</b>	Annual Weeds listed on the Arrow 240 EC label	Refer to Arrow 240 EC + Adjuvant X-Act or ADAMA Adjuvant 80 weed/rate chart in this label.	Refer to Arrow 240 EC + Adjuvant X-Act or ADAMA Adjuvant 80 weed/rate chart in this label.	<p>Apply a maximum of two applications per year with 14 days between applications, post emergent by ground application when grassy weeds are in the 2 to 6 leaf stage.</p> <p>Observe a PHI of 14 days.</p> <p><b>Ground application only.</b></p>

<b>Crop</b>	<b>Weeds Controlled</b>	<b>Application Rate of Arrow 240 EC</b>	<b>Application Rate of Adjuvant X-Act or ADAMA Adjuvant 80</b>	<b>Time of Application</b>
<b>CRANBERRY</b>	Labelled grassy weeds. Refer to weed/rate chart in this label.	0.19-0.38 L/ha	X-Act Adjuvant: 0.5-1.0% v/v  Or  ADAMA Adjuvant 80: 0.25 - 0.5% v/v	<p><b>TIME OF APPLICATION:</b> Apply Arrow 240 EC post emergence of weeds and crop. Do not apply between the hook stage and full fruit set. Apply a maximum of one application per year using ground equipment. Apply in a minimum spray volume of 110 L of water/ha.</p> <p>Observe a PHI of 30 days.</p> <p><b>Ground application only.</b></p>

**SPRAYING INSTRUCTIONS:**

**DO NOT APPLY BY AIR**

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

**Water volume and spray pressure:**

For Ground Application, use sprayers equipped with standard flat fan nozzles. For optimum spray coverage use nozzles tilted 45° forward.

The use of flood jet or hollow cone nozzles is not recommended, because of uneven and inadequate spray coverage. Thorough and uniform spray coverage over the entire leaf area of the



target weeds is necessary for optimum weed control.

Thoroughly clean all screens to prevent nozzle clogging, especially when water volumes of 55 to 110 L/ha are used.

In general, use water volumes of 55 to 225 L/ha and a minimum of 275 kPa pressure. For applications to dense weed infestations or to dense crop canopies, use a minimum of 110 litres of water per hectare at pressures of 275 to 425 kPa. In any situation, ensure the proper rate of adjuvant X-ACT or ADAMA Adjuvant 80 is maintained as listed on the label under APPLICATION RATES OF ARROW 240 EC.

**RESTRICTIONS AND LIMITATIONS:**

1. Use only for crops listed on the label.
2. Thorough pre-plant tillage operations are required to fields where sod or forage grass crops may have grown in the previous year.
3. Take necessary precautions to avoid sprayer overlaps.
4. Rainfall within one hour of application may reduce the effectiveness of the spray.
5. Do not mix or apply ARROW 240 EC with any other additive, pesticide or with fertilizer except as specifically recommended on the label.
6. Allow 4 days between application of ARROW 240 EC and any other chemical not recommended as a tank-mix combination on the label.
7. Do not apply more than 0.38 L/ha (90 grams a.i./ha) per season.
8. Do not use crops for grazing of livestock or green feed following application of ARROW 240 EC until after the appropriate interval as specified in the crop recommendations table has been observed. Do not cut treated crops for forage until the appropriate interval as specified in the crop recommendations table has been observed.
9. DO NOT APPLY BY AIR. Use ground equipment only.
10. Overspray or drift to important wildlife habitats such as shelter belts, wetlands, sloughs or dry slough borders, woodlots, vegetated ditchbanks and other cover on the edges of fields should be avoided. Leave a 15 meter buffer zone between the last spray swath and the edge of any of these habitats.

**Buffer zones:**

Spot treatments using hand-held equipment **DO NOT** require a buffer zone.

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

Method of application	Crop	Buffer Zones (metres) Required for the Protection of:		
		Freshwater Habitat of Depths:		Terrestrial habitat
		Less than 1 m	Greater than 1 m	
Field Sprayer	All Crops	1	1	1

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.

The buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

**HERBICIDE RESISTANCE MANAGEMENT RECOMMENDATIONS:**

For resistance management, ARROW 240 EC is a Group 1 herbicide. Any weed population may contain or develop plants naturally resistant to ARROW 240 EC and other Group 1 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 ARROW 240 EC or other Group 1 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 ADAMA at 1-855-264-6262 or [www.adama.com](http://www.adama.com)

**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.

LIBERTY<sup>®</sup> is a registered trademark of Bayer.

ARROW is a registered trademark of ADAMA Group Companies

BADGE is a registered trademark of ADAMA Group Companies LONTREL<sup>®</sup> 360 and

CURTAIN M<sup>®</sup> are registered trademarks of Dow AgroSciences Canada Inc.

MUSTER<sup>®</sup> is a registered trademark of E.I. DuPont Canada Company.

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