



Tandem™ A Herbicide

GROUP	2	HERBICIDE
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FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND PEACE RIVER REGION OF BRITISH COLUMBIA ONLY

AGRICULTURAL

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN

ACTIVE INGREDIENT: pyroxsulam 30 g/L
Suspension
Warning: contains the allergen soy

REGISTRATION NO. 29985 PEST CONTROL PRODUCTS ACT

WARNING  **POISON**

**EYE AND SKIN IRRITANT
POTENTIAL DERMAL SENSITIZER**

NET CONTENTS: 8 L - bulk

Corteva Agriscience Canada Company
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Calgary, Alberta
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PRECAUTIONS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

KEEP OUT OF REACH OF CHILDREN

EYE AND SKIN IRRITANT

POTENTIAL DERMAL SENSITIZER

Harmful if swallowed. Causes eye and skin irritation. Harmful if inhaled. Do not get in eyes or on skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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

At all times: Wear clean clothing with full length sleeves and pants.

Wear coveralls over long sleeved shirt and long pants, chemical-resistant gloves, socks and chemical resistant footwear during mixing, loading, application, clean-up and repair. Wear goggles or face shield during mixing/loading. For closed cab or aerial application, coveralls and gloves are not necessary.

Apply only when there is a very low risk of drift to areas of human habitation or activity, such as houses, cottages, schools and recreational areas. To determine the risk of drift, take into consideration wind speed, wind direction, temperature, application equipment and sprayer settings.

At completion of spraying or end of the day: Take a shower immediately. Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing at the end of the work session and store and wash separately from household laundry using detergents and hot water before reuse.

FIRST AID

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

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

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

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

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

TOXICOLOGICAL INFORMATION

No specific antidote. Employ supportive care. Treatment should be based on judgment of the physician in response to reactions of the patient. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.

AGRICULTURAL CHEMICAL

Do not ship or store with food, feeds, drugs or clothing.

ENVIRONMENTAL HAZARDS

TOXIC to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE. To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. 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. The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g., sandy soil) and/or the depth to the water table is shallow. This product contains an active ingredient and aromatic petroleum distillates, which are toxic to aquatic organisms.

STORAGE

Store in original container in a secure, dry, heated storage. This product will freeze at 14°F/-10°C. Do not store below 15°F/-9°C. Allow product to warm above 45°F/7°C before using and thoroughly mix the product prior to use. Do not allow contamination of seeds, plants, fertilizers or other pesticides. Do not contaminate food, feedstuffs or domestic water supplies. To prevent contamination, store this product away from food or feed.

DISPOSAL

Recyclable Containers

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

Refillable Containers

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

Returnable Containers

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

For 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.

GENERAL INFORMATION

Tandem A Herbicide is a selective postemergence herbicide for the control of wild oats and certain broadleaved weeds in spring wheat, durum wheat and winter wheat not underseeded with legumes. Tandem A Herbicide is mixed with water and applied as a uniform broadcast spray. It is non-corrosive, nonflammable, and nonvolatile.

Tandem A Herbicide must be applied early postemergence, to the main flush of actively growing wild oats and broadleaved weeds. Conditions favouring active weed growth enhance the activity of Tandem A Herbicide by allowing maximum foliar uptake and contact activity. Weeds hardened off by cold weather or drought stress may not be adequately controlled or suppressed and re-growth may occur. For best results, ensure thorough spray coverage of target weeds. See "DIRECTIONS FOR USE" section of this label for complete use details.

Tandem A Herbicide stops growth of susceptible weeds rapidly. However, typical symptoms (discolouration) of dying weeds may not be noticeable for 1 to 3 weeks after application, depending upon growing conditions and weed susceptibility. Degree of control and duration of effect are dependent on weed sensitivity, weed size, crop competition, growing conditions at and following treatment, and spray coverage.

MODE OF ACTION

Tandem A Herbicide inhibits the production of the ALS enzyme in plants. This enzyme is essential for the production of certain amino acids which are essential for plant growth. Tandem A Herbicide is a Group 2 mode of action herbicide.

GENERAL USE PRECAUTIONS

Non-Target Sites

Do not apply where proximity of susceptible crops (e.g. canola and legumes) or other desirable plants is likely to result in exposure to spray or spray drift. See Environmental Hazards section of the label.

Crop Rotation

Fields previously treated with Tandem A Herbicide can be seeded 11 months following an application of Tandem A Herbicide, with the following crops: barley, brown mustard, canola, dry bean (of the species *Phaseolus vulgaris*), flax, canola quality Brassica juncea, lentils, oats, field peas, chickpea, spring wheat, soybean and yellow mustard or fields can be summerfallowed. Fields previously treated with Tandem A can be seeded 10 months following an application of Tandem A with the following crops: sunflower and potatoes.

Tank Mixtures

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 Corteva Agriscience Canada Company at 1-800-667-3852 or www.corteva.ca for information before mixing any pesticide or fertilizer that is not specifically recommended on this label. The user assumes the risk of losses that result from the use of tank mixes that do not appear on this label or that are not specifically recommended by Corteva Agriscience Canada Company.

Spray Equipment Precaution

Do not apply through any type of irrigation system.

Sprayer Clean-Out Instructions

To avoid injury to desirable plants, thoroughly clean equipment used to apply this product before re-use or using it to apply other chemicals.

1. Immediately after spraying, completely drain the sprayer tank. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.
2. First rinse:
 - Spray the inside of tank with clean water and fill the sprayer with at least one tenth of the spray tank volume.
 - Agitate and circulate for 15 minutes, and flush through booms and hoses.
 - Remove end caps or open ball valves on the ends of each boom section, and flush solution through the boom ends to ensure there is no spray solution trapped between the boom end and the nozzles.
 - Drain tank completely.
3. Second rinse:
 - Fill the tank with clean water.
 - Add All Clear Spray Tank Decontaminator as per manufacturer's recommendations while filling the tank with clean water.
 - Agitate and then flush the boom and hoses with the cleaning solution. Top up with water making sure the tank is completely full. Allow to stand for 15 minutes with agitation. Flush the solution out of the spray tank through the spray booms. Remove end caps or open ball valves on the ends of each boom section, and flush solution through the boom ends to ensure there is no spray solution trapped between the boom end and the nozzles.
 - If possible, let the solution stand in the sprayer tank and booms for an extended period of time, overnight if possible.
 - After flushing the boom and hoses, drain tank completely.
 - Remove nozzles and screens and clean separately with a cleaning agent or an ammonia solution (100 mL in 10 L water).

4. Third rinse:
- Rinse the tank with clean water and flush through the boom and hoses using at least one tenth of the spray tank volume.
 - Remove end caps or open ball valves on the ends of each boom section, and flush solution through the boom ends to ensure there is no spray solution trapped between the boom end and the nozzles.
 - Drain tank completely.

DIRECTIONS FOR USE

FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND PEACE RIVER REGION OF BRITISH COLUMBIA ONLY

READ THE ENTIRE LABEL BEFORE USE. FAILURE TO FOLLOW LABEL INSTRUCTIONS MAY RESULT IN ERRATIC WEED CONTROL OR CROP DAMAGE. DO NOT APPLY TO CROPS UNDERSEEDED WITH LEGUMES.

As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests.

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification. Boom height must be 60 cm or less above the crop or ground.

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) coarse 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 rotorspan.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

TANDEM A APPLIED ALONE

Application Directions - Spring Wheat, Durum wheat

Apply Tandem A Herbicide at a rate of 500 mL per hectare. Add non-ionic surfactant (Agral 90, AgSurf or Surf 92) at 0.25 v/v (0.25 L per 100 L of spray solution). Apply using aerial equipment or ground equipment that will assure uniform coverage. See table below for weeds species controlled. Tandem A Herbicide will control only emerged weeds. Weeds that germinate after application will not be controlled.

Weeds Controlled or Suppressed with Tandem A Herbicide

Weeds Controlled:

barnyard grass (1-5 leaf)	hemp nettle (1-8 leaf)
brome, Japanese (1-6 leaf)	oats, wild (up to 4 leaf, 2 tiller)
canola, volunteer† (1-6 leaf)	pigweed, red-root (1-8 leaf)
chickweed, common (up to 10 cm)	round-leaved mallow (up to 6 leaf stage, <10 cm in size)
cleavers (up to 6 whorl)	smartweed (lady's-thumb, 1-5 leaf)
corn spurry (up to 2 whorl stage, <10 cm in height)	shepherd's purse (up to 30 cm tall)
cow cockle (up to 8 leaf)	stinkweed (up to 30 cm tall)
flixweed (up to 10 cm)	
foxtail, yellow (1-5 leaf)	

†will not control volunteer Imidazolinone-tolerant canola

Weeds Suppressed:

brome, downy (2-6 leaf, 4 tillers)	foxtail, green (1-5 leaf)
dandelion (seedlings and over-wintered)	wild buckwheat (1-4 leaf)
rosettes less than or equal to 20 cm)	Canada thistle (up to 30 cm tall, prebud)
	Russian thistle (up to 10 cm tall)

Application Timing

Apply to actively growing wheat from the 3 leaf stage to before the flag leaf stage. Apply when weeds are actively growing: grass weeds up to the 4 leaf, 2 tiller stage and broadleaved weeds as indicated in the table above. Only weeds emerged at the time of treatment will be controlled. Best results are obtained from applications made to seedling weeds. Extreme growing conditions such as drought or near freezing temperature prior to, at or following time of application may reduce weed control and increase the risk of crop injury at all stages of growth. Under conditions of low crop and high weed density, control may be reduced.

Application Directions - Winter Wheat (Fall or Spring Application) for Downy Brome

Tandem A Herbicide applied in the fall will provide control of downy brome while a spring application will provide suppression. Apply Tandem A Herbicide at a rate of 500 mL per hectare. Add BASF Assist Oil Concentrate at 0.8% v/v (0.8 L/100 L of spray mixture) or Merge Adjuvant at 0.5% v/v (0.5 L/100 L of spray mixture; spring application only). Apply using aerial equipment or ground equipment that will assure uniform coverage. In addition to suppression of downy brome when applied in the spring Tandem A Herbicide will also control/suppress weeds listed in Table. Tandem A Herbicide will control only emerged weeds. Weeds that germinate after application will not be controlled.

Application Timing

Apply in the fall when winter wheat is in the 1-3 leaf stage or in the spring when winter wheat is in the 2-7 leaf, 4 tiller stage. For fall applications, apply when downy brome is actively growing at the 1 to 3 leaf stage; for spring applications, apply when weeds are actively growing at the stages indicated in Table. Only weeds emerged at the time of treatment will be controlled. Best results are obtained from applications made to seedling weeds. Extreme growing conditions such as drought or near freezing temperature prior to, at or following time of application may reduce weed control and increase the risk of crop injury at all stages of growth. Under conditions of low crop and high weed density, control may be reduced.

Occasionally slight yellowing or height reduction may be observed in the treated crop. These transient symptoms disappear within 14 days with no reduction to yield. Do not apply to crops suffering from drought, nutrient deficiency or exposed to frost or other agronomic factors affecting plant growth.

If foliage is wet at the time of application control may be decreased. Applications of Tandem A Herbicide are rainfast within 2 hours after application.

Mixing Instructions

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add the required amount of Tandem A Herbicide
4. Fill the sprayer tank with sufficient water to spray 50-100 L of spray mixture per hectare.
5. Add non-ionic surfactant.
6. Follow sprayer directions and precautions as outlined above, especially when applying next to sensitive crops (e.g. canola and legumes).
7. Follow sprayer clean-up directions.

Pre-harvest/Grazing Intervals

Livestock may be grazed on treated crops 7 days following application. Do not harvest the treated crop within 60 days after application.

TANK MIX COMBINATIONS – FOR USE IN SPRING WHEAT AND DURUM WHEAT ONLY

Tandem A Herbicide can be tank mixed with herbicides and/or fungicides as indicated in the table below. When a tank mixture is used, consult the labels of the tank-mix partners for additional instructions, precautions, and weeds controlled. **Do not use non-ionic surfactant with Tandem A Herbicide when tank mixing with registered broadleaved herbicide or fungicide tank-mix partners.**

Tank-Mix Combinations with Tandem A Herbicide at 500 mL/ha in Spring Wheat and Durum Wheat

Herbicide Tank-Mix Partner	Fungicide Tank-Mix Partner	Rate of herbicide TM partner (Product /ha)	Additional Pests Controlled
Tandem A Herbicide alone	Tilt 250 E or Stratego 250 EC	500 mL/ha Consult fungicide tank-mix partner label for fungicide rates.	consult fungicide tank-mix partner label for diseases controlled
Tandem B Herbicide		310 mL/ha	consult label
Curtail™ M Herbicide		1.5 L/ha	annual sowthistle (1-5 leaf) consult label
MCPA LV500		0.7-1.1 L/ha	stork's-bill (1-8 leaf) †† wild buckwheat†+ weeds labelled for this rate range of MCPA
2,4-D Ester		280 g ae/ha (e.g., 425 mL/ha of 2,4-D ester 700)	volunteer canola (1-6 leaf stage)* lamb's quarters (1-6 leaf stage) *Including Imidazolinone-tolerant volunteer canola
MCPA Ester		280 g ae/ha (e.g., 465 mL/ha of MCPA ester 600)	volunteer canola (1-6 leaf stage)* lamb's quarters (1-6 leaf stage) *Including Imidazolinone-tolerant volunteer canola

†for larger weeds or heavy infestations use MCPA at 1.1 L/ha

††Use the 1.1 L/ha rate for control of stork's-bill

Tank-Mix Combinations with Tandem A Herbicide at 375 mL/ha* in Spring Wheat and Durum Wheat

Herbicide Tank-Mix Partner	Rate of herbicide TM partner (Product /ha)	Additional Pests Controlled
Tandem B Herbicide	210 - 310 mL/ha	consult label

*Under Low Wild Oat Populations (<75 plants/m²)

Mixing Instructions

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add the required amount of Tandem A Herbicide
4. Add the correct amount of tank-mix partner and continue to agitate.
5. Fill the sprayer tank with the remaining amount of water required.

Notes: Add only the adjuvant recommended. Follow tank-mix partner label for order of mixing.

APPLICATION INSTRUCTIONS (GROUND AND AERIAL APPLICATIONS)

(1) Ground Application (Tandem A Herbicide applied alone and with all tank-mix partners)

Using ground equipment, apply Tandem A alone or with tank-mix partners as a broadcast treatment. Apply Tandem A Herbicide alone at the recommended rates in a spray volume of 50-100 L water / ha. When tank mixing refer to the label of the tank-mix partner label for additional instructions, water volumes, precautions and weeds controlled.

(2) Aerial Application

Directions for Use

Do not use human flaggers.

Use Tandem A Herbicide alone or in tank-mix with MCPA Ester as a broadcast treatment by air. Apply the recommended rates of Tandem A Herbicide and MCPA Ester as indicated above. Apply in a minimum spray volume of 30 L water / ha. Refer to the tank-mix partner label for additional instructions, precautions and weeds controlled.

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 swath marking devices.

Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even coverage. Apply only under conditions of good practice specific to aerial application as outlined in the National Aerial Pesticide Application 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, coveralls and goggles or face shield during mixing/loading, cleanup and repair. 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 should be laundered regularly.

Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-800-667-3852 or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

- The interaction of many equipment-and-weather-related factors determine the potential for spray drift. Users are responsible for considering all these factors when making decisions.
- The following drift management requirement must be followed to avoid off-target drift movement from aerial applications:
Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

BUFFER ZONES

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), 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	Terrestrial Habitat
Field sprayer	Spring wheat, durum wheat, winter wheat		1	2
Aerial	Spring wheat, durum wheat, winter wheat	Fixed wing	1	65
		Rotary wing	1	55

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.

NOTE: Applicators may recalculate a site-specific buffer zone by combining information on current weather conditions and spray configuration for the following applications: all airblast applications, and for field and aerial applications which specify the following droplet size category wording on the product label: 'DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) [Fine or Medium or Coarse] classification.' To access the Buffer Zone Calculator, please visit the Pest Management Regulatory Agency web site.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, Tandem A Herbicide is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to Tandem A Herbicide and other Group 2 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 Tandem A Herbicide or other Group 2 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 Corteva Agriscience Canada Company at 1-800-667-3852.

NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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All other products listed are registered trademarks of their respective companies.

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Replaces: CN-29985-007-E

Specimen Notes:

Legal Entity change from DAS to Corteva