



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

August 8, 2025

Lisa Ayn Setliff  
Regulatory Agent  
K-I Chemical U.S.A., Inc.  
c/o Landis International, Inc.  
PO Box 5126  
Valdosta, GA 31603-5126

Subject: PRIA Label Amendment – Adding additional food use crop group 14-12 & subgroup 13-07F

Product Name: **Pyroxasulfone 85WG Herbicide**  
EPA Registration Number: 63588-92  
Application Date: 8/7/2023  
Case Number: 00488372

Dear Ms. Setliff:

The application referred to above, submitted under the Federal Insecticide, Fungicide and Rodenticide Act, as amended is acceptable under FIFRA sec 3 (c)(5). You must submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process.

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Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Sayed Islam at 202-566-2796 or [islam.sayed@epa.gov](mailto:islam.sayed@epa.gov).

Sincerely,

A handwritten signature in dark ink, appearing to read "Nathan Mellor", is positioned above the typed name.

Nathan Mellor, Branch Chief  
Fungicide Herbicide Branch  
Registration Division  
Office of Pesticide Programs

Enclosure

[Optional text in brackets]

# Pyroxasulfone 85 WG Herbicide

For weed control in bearing and nonbearing tree nuts group 14-12; bearing and nonbearing grape subgroup 13-07F; bulb vegetables group 3-07; corn (field, pop, sweet); cotton (including cottonseed subgroup 20C); edamame; fallow; flax; leaf petiole vegetable subgroup 22B; mint(peppermint and spearmint tops); peanut; pea and bean, dried shelled, except soybean, subgroup 6C; perennial grass for seed; soybeans; sunflower subgroup 20B; tuberous and corm vegetables subgroup 1C and wheat

## Active Ingredient:

Pyroxasulfone: 3-[[[5-(difluoromethoxy)-1-methyl-3-(trifluoromethyl)-1*H*-pyrazol-4-yl]methyl]sulfonyl]-4,5-dihydro-5,5-dimethylisoxazole .....85.00%

**Other Ingredients:**.....15.00%

**Total:**.....100.00%

Contains 0.85 pound of pyroxasulfone per pound formulated as a water-dispersible granule (WG)

CAS No. 447399-55-5

EPA Reg. No.: 63588-92

EPA Establishment No.:

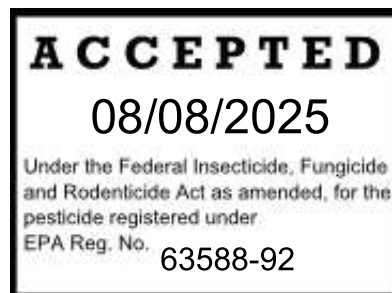
**KEEP OUT OF REACH OF CHILDREN  
CAUTION/PRECAUCION**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

**In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).**

Net Contents: 5 Pounds



| <b>FIRST AID</b>   |  |
|--|--|
| <b>If on Skin</b>  | <ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>  |
| <b>If Swallowed</b>  | <ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul> |
| <b>If in Eyes</b>  | <ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>  |
| <b>If Inhaled</b>  | <ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>  |
| <b>HOT LINE NUMBER</b>   |  |
| Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information on, call the National Pesticides Information Center at 1-800-858-7378 6:30 AM to 4:30 PM PACIFIC TIME (PT), seven days a week. During other times, call the poison control center 1-800-424-9300 |  |

*See back panel for additional precautionary statements and directions for use.*

## **PRECAUTIONARY STATEMENTS**

### **Hazards to Humans and Domestic Animals**

**CAUTION.** Harmful if absorbed through skin. Harmful if swallowed. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

When handlers use closed systems or enclosed cabs that meet the requirements listed in the Worker Protection Standards (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

### **Personal Protective Equipment (PPE)**

#### **Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material for example barrier laminate, butyl rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, natural rubber  $\geq 14$  mils, polyethylene, polyvinyl chloride  $\geq 14$  mils, or viton  $\geq 14$  mils.
- Shoes plus socks.

For aerial application, mixers and loaders must also wear a minimum of a NIOSH approved filtering face piece respirator with any N filter (TC-84A). You can also use other NIOSH approved particulate respirators that offer more protection, including a half face or full face respirator with any filter or a powered air purifying respirator with an HE filter. For more information about these options, see [www.epa.gov/pesticide-respirators](http://www.epa.gov/pesticide-respirators).

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Remove and wash contaminated

clothing before reuse. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

### User Safety Recommendations

#### Users should:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### Environmental Hazards

**DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

**Ground Water Advisory:** This chemical has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

**Surface Water Advisory:** **DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. **DO NOT** contaminate water when disposing of equipment wash waters or rinsate.

The product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features for example ponds, streams, and springs will reduce potential loading of pyoxasulfone and its degradation product, [5-(difluoromethoxy)-1-methyl-3-(trifluoromethyl)-1H-pyrazol-4-yl]methanesulfonic acid (M1), from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

**Point source contamination:** To prevent point source contamination **DO NOT** mix or load this or any other pesticide within 50 feet of wells (including abandoned wells and drainage wells, sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs). This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or dike mixing/loading areas as described below.

Mixing, loading, rinsing, or washing operations performed within 50 feet of a well are allowed only when conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be on or move across the pad. The pad must be self contained to prevent surface water flow over or from the pad. The pad capacity must be maintained at 110% of that of the largest pesticide container or application equipment used on the pad and have sufficient capacity to contain all product spills, equipment or container leaks, equipment washwaters and rainwater that may fall on the pad. The containment capacity does not apply to vehicles delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

Care must be taken when using this product to prevent back siphoning into wells, spills, or improper disposal of excess pesticide, spray mixes, or rinsates. Check valves or anti-siphoning devices must be used on all mixing equipment.

### Endangered Species Protection Requirements

This product may have effects on federally listed threatened or endangered plant species or their critical habitat. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for

the county or parish in which you are applying the pesticide. To determine whether your county or parish has a Bulletin, and to obtain that Bulletin, consult <http://www.epa.gov/espp/>, or call 1-800-447-3813 no more than 6 months before using this product. Applicators must use Bulletins that are in effect in the month in which the pesticide will be applied. New Bulletins will generally be available from the above sources 6 months prior to their effective dates

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## DIRECTIONS FOR USE

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**It is a violation of Federal law to use this product in a manner inconsistent with its labeling.**

**READ ENTIRE LABEL, USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

**DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**Failure to follow directions and precautions on this label may result in crop injury, poor weed control, and/or illegal residues.**

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses and handlers of agricultural insecticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil or water is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material for example barrier laminate, butyl rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, natural rubber  $\geq 14$  mils, polyethylene, polyvinyl chloride  $\geq 14$  mils, or viton  $\geq 14$  mils.
- Shoes plus socks

### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

**Pesticide Storage:** **DO NOT** use or store near heat or open flame. Store in original container only, in cool, dry, and well-ventilated area, separately from fertilizer, feed, or foodstuffs and away from other pesticides. **DO NOT** store this product under wet conditions. Avoid cross-contamination with other pesticides.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Container Handling:**

**Nonrefillable Container [plastic]: DO NOT** reuse or refill this container. Triple rinse or pressure rinse container

(or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**Triple rinse containers small enough to shake (capacity  $\leq$  50 pounds) as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

### In Case of Emergency

In case of large-scale spillage regarding this product, call:

- CHEMTREC 1-800-424-9300
- 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- 1-800-832-HELP (4357)

### Steps to be taken in case material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

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## PRODUCT INFORMATION

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**Pyroxasulfone 85 WG** is a selective rate-dependent preemergence herbicide for control of annual grassweeds, sedges and annual broadleaf weeds, including biotypes resistant to ACCase inhibitors, ALS inhibitors and glyphosate, that infest bearing and nonbearing tree nuts group 14-12; bearing and nonbearing grape subgroup 13-07F; bulb vegetables group 3-07; corn (field, pop, sweet); cotton (including cottonseed subgroup 20C); edamame; fallow; flax; leaf petiole vegetable subgroup 22B; mint (peppermint and spearmint tops); peanut; pea and bean, dried shelled, except soybean, subgroup 6C; perennial grass for seed; soybean; and sunflower subgroup 20B; tuberous and corm vegetables subgroup 1C, listed in **Table 1** and wheat listed in **Table 2**. Refer to **Crop-specific Information** section for use directions specific to each labeled crop.

Periods of dry weather following applications of **Pyroxasulfone 85 WG** may reduce herbicidal effectiveness.

**Pyroxasulfone 85WG** must be activated by at least ½ inch of rainfall or irrigation before weed germination and emergence. When **Pyroxasulfone 85 WG** is not activated and weeds emerge, a labeled postemergence herbicide or shallow cultivation may be needed to control weed escapes. **Pyroxasulfone 85WG** does not control emerged weeds.

Herbicidal activity of **Pyroxasulfone 85 WG** may be reduced if trash on the soil surface from the previous crop covers more than 25% of the application area. Manage trash levels if needed with combine straw shredder/spreaders, earlier burndown of emerged weeds, or light tillage.

**Table 1. Weeds Controlled with a Residual Application of Pyroxasulfone 85 WG in Bearing and nonbearing tree nuts group 14-12; Bearing and nonbearing grape subgroup 13-07F; Bulb vegetables group 3-07; Corn (field, pop, sweet); Cotton (including cottonseed subgroup 20C); Edamame; Fallow; Flax; Leaf petiole vegetable subgroup 22B; Mint (peppermint and spearmint tops); Peanut; Pea and Bean, dried shelled, except soybean, subgroup 6C; Perennial grass for seed; Soybean and Sunflower subgroup 20B and Tuberous and corm vegetables subgroup 1C.**

| Common Name                           | Genus and Species Name                |
|---------------------------------------|---------------------------------------|
| <b>ANNUAL GRASSES</b>                 |                                       |
| Barley, hare                          | <i>Hordeum murinum ssp. leporinum</i> |
| Barnyardgrass                         | <i>Echinochloa crus-galli</i>         |
| Brome, downy <sup>1</sup>             | <i>Bromus tectorum</i>                |
| Brome, Japanese <sup>1</sup>          | <i>Bromus japonicus</i>               |
| Bluegrass, annual                     | <i>Poa annua</i>                      |
| Bluegrass, roughstalk <sup>1</sup>    | <i>Poa trivialis</i>                  |
| Canarygrass                           | <i>Phalaris canariensis</i>           |
| Cheat <sup>1</sup>                    | <i>Bromus secalinus</i>               |
| Crabgrass, smooth                     | <i>Digitaria ischaemum</i>            |
| Crabgrass, large                      | <i>Digitaria sanguinalis</i>          |
| Crowfoot grass                        | <i>Dactyloctenium aegyptium</i>       |
| Cupgrass, southwestern                | <i>Eriochloa gracilis</i>             |
| Cupgrass, woolly <sup>1</sup>         | <i>Eriochloa villosa</i>              |
| Foxtail, giant                        | <i>Setaria faberi</i>                 |
| Foxtail, green                        | <i>Setaria viridis</i>                |
| Foxtail, yellow                       | <i>Setaria glauca</i>                 |
| Goosegrass                            | <i>Eleusine indica</i>                |
| Johnsongrass (seedling)               | <i>Sorghum halepense</i>              |
| Millet, wild proso <sup>1</sup>       | <i>Panicum miliaceum</i>              |
| Oat, Wild <sup>1</sup>                | <i>Avena fatua</i>                    |
| Panicum, fall                         | <i>Panicum dichotomiflorum</i>        |
| Panicum, Texas <sup>1</sup>           | <i>Panicum texanum</i>                |
| Red Rice                              | <i>Oryza sativa</i>                   |
| Ryegrass, Italian                     | <i>Lolium multiflorum</i>             |
| Ryegrass, rigid                       | <i>Lolium rigidum</i>                 |
| Sandbur, longspine <sup>1</sup>       | <i>Cenchrus longispinus</i>           |
| Shattercane <sup>1</sup>              | <i>Sorghum vulgare</i>                |
| Signalgrass, broadleaf                | <i>Brachiaria platyphylla</i>         |
| <b>SEDGES</b>                         |                                       |
| Nutsedge, yellow <sup>1</sup>         | <i>Cyperus esculentus</i>             |
| <b>ANNUAL BROADLEAF WEEDS</b>         |                                       |
| Amaranth, Palmer                      | <i>Amaranthus palmeri</i>             |
| Amaranth, Powell                      | <i>Amaranthus powellii</i>            |
| Buckwheat, wild <sup>1</sup>          | <i>Polygonum convolvulus</i>          |
| Carpetweed                            | <i>Mollugo verticillata</i>           |
| Chickweed, common <sup>1</sup>        | <i>Stellaria media</i>                |
| Fleabane, hairy <sup>1</sup>          | <i>Conyza bonariensis</i>             |
| Groundsel, common <sup>1</sup>        | <i>Senecio vulgaris</i>               |
| Henbit <sup>1</sup>                   | <i>Lamium amplexicaule</i>            |
| Horseweed (maretail) <sup>1</sup>     | <i>Conyza canadensis</i>              |
| Jimsonweed <sup>1</sup>               | <i>Datura stramonium</i>              |
| Kochia <sup>1</sup>                   | <i>Kochia scoparia</i>                |
| Lambsquarters, common <sup>1</sup>    | <i>Chenopodium album</i>              |
| Morningglory, entireleaf <sup>1</sup> | <i>Ipomoea hederacea</i>              |
| Morningglory, pitted <sup>1</sup>     | <i>Ipomoea lacunosa</i>               |
| Nightshade, black                     | <i>Solanum sarrachoides</i>           |
| Nightshade, Eastern black             | <i>Solanum ptychanthum</i>            |



| Common Name                  | Genus and Species Name         |
|------------------------------|--------------------------------|
| Pigweed                      | <i>Amaranthus spp.</i>         |
| Pigweed, redroot             | <i>Amaranthus retroflexus</i>  |
| Pigweed, smooth              | <i>Amaranthus hybridus</i>     |
| Pigweed, tumble              | <i>Amaranthus albus</i>        |
| Purslane, common             | <i>Portulaca oleracea</i>      |
| Pusley, Florida              | <i>Richardia scabra</i>        |
| Ragweed, common <sup>1</sup> | <i>Ambrosia artemisiifolia</i> |
| Shepherdspurse <sup>1</sup>  | <i>Capsella bursa-pastoris</i> |
| Sida, prickly (teaweed)      | <i>Sida spinosa</i>            |
| Velvetleaf <sup>1</sup>      | <i>Abutilon theophrasti</i>    |
| Waterhemp,                   | <i>Amaranthus tuberculatus</i> |

<sup>1</sup> Partial control or suppression only. To provide additional control of noted weeds **Pyroxasulfone 85 WG** may be used in tank mixes or sequential applications with other labeled herbicides.

**Table 2. Weeds Controlled<sup>1</sup> or Suppressed<sup>2</sup> with a Residual Application of Pyroxasulfone 85 WG herbicide in Wheat.**

| Common Name   | Genus and Species Name                        | C = controlled only at the maximum application rate per soil texture.<br>S = suppression<br><br>(See <b>Crop-specific Information</b> section for specific rates) |
|---|---|---|
| <b>Annual Grass Weeds</b>   |   |   |
| Barley, hare  | <i>Hordeum murinum</i> spp. <i>leporinum</i>  | S   |
| Barnyardgrass   | <i>Echinochloa crus-galli</i>                 | S   |
| Bluegrass, annual   | <i>Poa annua</i>                              | C   |
| Brome, downy  | <i>Bromus tectorum</i>                        | S   |
| Brome, Japanese   | <i>Bromus japonicus</i>                       | S   |
| Canarygrass   | <i>Phalaris canariensis</i>                   | C   |
| Cheat   | <i>Bromus secalinus</i>                       | S   |
| Foxtail, giant  | <i>Setaria faberi</i>                         | S   |
| Foxtail, green  | <i>Setaria viridis</i>                        | S   |
| Foxtail, yellow   | <i>Setaria pumila</i>                         | S   |
| Oats, wild  | <i>Avena fatua</i>                            | S   |
| Ryegrass, Italian   | <i>Lolium perenne</i> spp. <i>multiflorum</i> | C   |
| Ryegrass, rigid   | <i>Lolium rigidum</i>                         | S   |
| <b>Annual Broadleaf Weeds</b>   |   |   |
| Buckwheat, wild   | <i>Polygonum convolvulus</i>                  | S   |
| Carpetweed  | <i>Mollugo verticillata</i>                   | S   |
| Chickweed, common   | <i>Stellaria media</i>                        | S   |
| Flixweed  |   | S   |
| Horseweed (maretail)  | <i>Conyza canadensis</i>                      | S   |
| Groundsel, common   | <i>Senecio vulgaris</i>                       | S   |
| Henbit  | <i>Lamium amplexicaule</i>                    | S   |
| Kochia  | <i>Kochia scoparia</i>                        | S   |
| Lambsquarters, common   | <i>Chenopodium album</i>                      | S   |
| Mustard, wild   |   | S   |
| Pigweed spp.  | <i>Amaranthus</i> spp.                        | S   |
| Ragweed, common   | <i>Ambrosia artemisiifolia</i>                | S   |
| Shepherdspurse  | <i>Capsella bursa-pastoris</i>                | S   |
| <sup>1</sup> Weeds for example annual bluegrass and Italian ryegrass have the ability to adapt to several different herbicide sites of action. Even though <b>Pyroxasulfone 85 WG</b> will control these species, some weed escapes are possible. Multiple herbicides with multiple different effective sites of action <b>MUST</b> be used in tank mixtures <b>or</b> sequentially to limit these weed escapes to prevent or delay the onset of herbicide resistant weed biotypes. |   |   |
| <sup>2</sup> For control of these weeds, a tank mix partner or a sequentially applied herbicide partner is needed.  |   |   |

## Mode of Action

**Pyroxasulfone 85WG** acts to inhibit very long chain fatty acid synthesis as a **Group 15 (WSSA)/Group K<sub>3</sub> (HRAC)**, herbicide. It is a root and shoot growth inhibitor that controls susceptible germinating seedlings before or soon after they emerge from the soil.

## Resistance-Management Recommendations

|               |       |    |           |
|---------------|-------|----|-----------|
| PYROXASULFONE | GROUP | 15 | HERBICIDE |
|---------------|-------|----|-----------|

For resistance management, **Pyroxasulfone 85 WG** is a **Group 15/Group K<sub>3</sub>** herbicide. Any weed population may contain or develop plants naturally resistant to **Pyroxasulfone 85 WG** and other **Group 15** herbicides. Weed species with resistance to **Group 15** may eventually dominate the weed population if **Group 15** herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by **Pyroxasulfone 85 WG** or other **Group 15** herbicides.

To delay herbicide resistance consider:

- Avoiding the consecutive use of **Pyroxasulfone 85 WG** or other target site of action Group 15 herbicides that have a similar target site of action, on the same weed species.
- Using tank-mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive IPM (Integrated Pest Management) program including cultural and mechanical methods.
- Monitoring treated weed populations for loss of field efficacy, and control of escapes with effective alternative herbicides or mechanical methods.
- Identify weeds present in the field through scouting and field history and understand their biology. The weed-control program should consider all of the weeds present.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- Fields should be scouted after application to verify the treatment was effective.
- Suspected herbicide-resistance weeds may be identified by these indicators:
  1. Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  2. A spreading patch of non-controlled plants of a particular weed species; and
  3. Surviving plants mixed with controlled individuals of the same species.
- If resistance is suspected, treat weed escapes with an herbicide with a different MOA and/or use non-chemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Report any incidence of non-performance of this product against a particular weed species to your K-I Chemical U.S.A. Inc. retailer, representative or call 914-682-8934.
- Contacting your local extension specialist, certified crop advisors, and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

## Crop Response

No crop injury is expected when **Pyroxasulfone 85 WG** is applied according to label directions and under normal environmental conditions. Applications to crops under stress because of inadequate or excess of moisture for normal crop development, cool and hot temperatures, sodic soils, poorly drained soils, hail damage, flooding, pesticide injury, mechanical injury or widely fluctuating temperatures may result in crop injury.

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## APPLICATION INSTRUCTIONS

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Application rates of **Pyroxasulfone 85 WG** may vary depending on soil texture. Refer to **Table 3** for soil texture groups used in this label, unless a specific soil texture is mentioned. When use rates are in ranges, apply the lower

rate for soils with coarser texture or lower organic matter, and apply the higher rates for finer soil textures, higher organic matter, heavy soil surface plant residue or heavy weed pressure.

**Table 3. Soil Texture Groups**

| <b>Coarse</b>                    | <b>Medium</b>                                | <b>Fine</b>  |
|----------------------------------|--|--|
| Sand<br>Loamy sand<br>Sandy loam | Loam<br>Silt loam<br>Silt<br>Sandy clay loam | Sandy clay<br>Silty clay loam<br>Silty clay<br>Clay loam<br>Clay |

**DO NOT** use on peat or muck soils or mineral soils with 10% or more organic matter content unless described within the **Crop-specific Information** section for a particular crop.

Refer to the particular **Crop-specific Information** sections for specific application rates, timings, and the restrictions and limitations by crop and use pattern.

**Table 4. Pyroxasulfone Use Rates Equivalency Table**

|   |       |       |       |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| Pyroxasulfone 85WG<br>(ozs/A)                 | 0.7   | 0.75  | 1.0   | 1.25  | 1.5   | 1.87  | 2.0   | 2.1   |
| Pyroxasulfone active ingredient<br>(lb ai /A) | 0.037 | 0.039 | 0.053 | 0.066 | 0.079 | 0.099 | 0.106 | 0.112 |

|   |       |       |       |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| Pyroxasulfone 85WG<br>(ozs/A)                 | 2.5   | 2.75  | 3.0   | 3.5   | 4.0   | 4.1   | 4.2   | 5.0   |
| Pyroxasulfone active ingredient<br>(lb ai /A) | 0.133 | 0.146 | 0.159 | 0.186 | 0.213 | 0.218 | 0.223 | 0.266 |

## APPLICATION TIMINGS

**Pyroxasulfone 85 WG** may be applied preplant surface, preplant incorporated, preemergence, early postemergence, postemergence layby, or in the fall.

**Preplant Surface Applications:** Apply **Pyroxasulfone 85 WG** alone, or in tank mixes, up to 45 days before planting. If weeds are present at the time of application, use of additional weed control methods for example tank mixes with an appropriate postemergence herbicide(s) to control emerged weeds.

**Preplant Incorporated (PPI) Applications:** Incorporate **Pyroxasulfone 85 WG** into the upper (1"-2") soil surface up to 14 days before planting. Deeper incorporation may increase the potential for crop injury and also may result in reduced weed control. Use appropriate equipment that provides uniform shallow incorporation, including a field cultivator, harrow, rolling cultivator, or finishing disc.

**Preemergence Surface Applications:** After planting and before crop emergence, apply a uniform broadcast treatment to the soil surface. If weeds are present, apply the **Pyroxasulfone 85 WG** in tank mixture with an appropriate postemergence herbicide for example a glyphosate containing product.

**Early Postemergence Applications:** **Pyroxasulfone 85 WG** must be applied and activated prior to weed seedling emergence or in a tank mixture that controls the emerged weeds. Refer to **Crop-Specific Information** for postemergence application instructions by crop.

**Postemergence Layby Applications.** **Pyroxasulfone 85 WG** must be applied as a directed spray between crop rows and activated before weed seedling emergence or in a tank mixture that controls emerged weeds. Refer to **Crop-specific Information** for postemergence layby application instructions by crop.

**Fall Applications for controlling weeds germinating the following spring:** **Pyroxasulfone 85 WG** may be broadcast surface applied in the fall after crop harvest when soil temperatures at the 4-inch depth are sustained at less than 55° F and before the ground freezes to control weeds in minimum or no tillage fields planted the following

spring. Fall applications must be made after October 1. **DO NOT** apply to frozen or snow covered soil. Tillage operations may be conducted before or after applying **Pyroxasulfone 85 WG**. If tillage is used following an application, tillage needs to be shallow and no more than 2-inches to uniformly incorporate the herbicide into the upper soil surface. Refer to **Crop-Specific Information** for fall application instructions by crop as some state and/or geographic restrictions may occur.

**Fall / Winter Applications for controlling weeds germinating in the fall or winter weeds: Pyroxasulfone 85 WG** may be broadcast surface applied in the fall or winter after crop harvest. **DO NOT** apply to frozen or snow covered soil. Tillage operations may be conducted before or after applying **Pyroxasulfone 85 WG**. If tillage is used following an application, tillage needs to be shallow and no more than 2-inches deep to uniformly incorporate the herbicide into the upper soil surface.

## **APPLICATION METHODS AND EQUIPMENT**

**Pyroxasulfone 85 WG** may be applied by aerial or ground application, or by chemigation applicataion via sprinkler or drip irrigation system.

Thorough spray coverage is required for optimum weed control and can be improved with proper nozzle and spray volume selection. Use and configure application equipment to provide an adequate spray volume, an accurate and uniform distribution of spray droplets over the treated area, and to avoid spray drift to nontarget areas. Equipment needs to be adjusted to maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above the use rates specified in this label.

**Pyroxasulfone 85 WG** may be applied using water or sprayable fluid nitrogen fertilizer solutions as the spray carrier. **DO NOT** apply this product without dilution in a spray carrier. Additionally, **Pyroxasulfone 85 WG** may be impregnated on and applied with dry bulk fertilizer.

### **Spray Mix Preparation Advisory:**

Always pre-dissolve **Pyroxasulfone 85 WG** before adding it into the spray tank. When dissolving **Pyroxasulfone 85 WG** for a spray mix, use a minimum of 4 gallons water per container of **Pyroxasulfone 85 WG** (40 ounces) in the induction system with constant agitation. **DO NOT** pour **Pyroxasulfone 85 WG** straight into the inductor system without minimum water and agitation.

**Aerial Spray Carrier Volume.** Use 3 or more gallons of water per acre. The actual minimum spray volume per acre is determined by the spray equipment used. Use adequate spray volume to provide accurate and uniform distribution of spray particles over the treated area and to avoid spray drift.

**Ground Spray Carrier Volume.** Use 5 or more gallons of water per treated acre or 20 or more gallons of sprayable fluid nitrogen fertilizer per treated acre for weed control applications.

**Handheld Spray Carrier Volume.** Use 15 or more gallons of water per treated acre for weed control applications.

## **Mandatory Spray Drift**

### **Aerial Applications**

- **DO NOT** release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a medium to ultra coarse spray droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

### **Ground Applications**

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a medium to ultra coarse spray droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

## **Spray Drift Advisories**

- THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
- BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.
- IMPORTANCE OF DROPLET SIZE  
An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

### *Controlling Droplet Size - Ground Boom*

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

### *Controlling Droplet Size – Aircraft*

- Adjust Nozzles - Follow nozzle manufacturers directions for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.
- *BOOM HEIGHT - Ground Boom*  
Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.
- *RELEASE HEIGHT - Aircraft*  
Higher release heights increase the potential for spray drift. When applying aurally to crops, **DO NOT** release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.
- *SHIELDED SPRAYERS*  
Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

- *TEMPERATURE AND HUMIDITY*  
When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.
- *TEMPERATURE INVERSIONS*  
Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.
- *WIND*  
Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.  
Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### Ground Application (Dry Bulk Fertilizer)

**Pyroxasulfone 85 WG** may be impregnated or coated onto dry bulk granular fertilizer carriers for residual soil surface (fall, preplant surface, preplant incorporated) applications, for residual weed control from preemergence (to weed) of bearing and nonbearing tree nuts and grape applications, or for residual weed control from postemergence over-the-top of cotton applications. Impregnation or coating may be conducted by either in-plant bulk or on-board systems. Perform the mixing operation in well-ventilated areas.

All individual state regulations relating to dry bulk granular fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company selling the herbicide/fertilizer mixture.

**Pyroxasulfone 85 WG** may be impregnated on many commonly used dry fertilizers but **DO NOT** impregnate on ammonium nitrate, fertilizers containing ammonium nitrate, potassium nitrate, sodium nitrate or powdered limestone.

Generally, fertilizer application rates of at least 200 lbs to 700 lbs per acre of herbicide and fertilizer blend will provide adequate distribution or coverage of **Pyroxasulfone 85 WG** across the soil surface. Application of impregnated fertilizer must be made uniformly to the soil to prevent possible crop injury and offer satisfactory weed control. Impregnated fertilizer spread at half rate and overlapped to obtain a full rate will offer a more uniform distribution. A shallow (< 2 inches) incorporation is desirable for improved weed control. Deeper incorporation will dilute the herbicide layer near the soil surface and may result in unsatisfactory weed control.

Use the following formula to calculate the herbicide rate when using dry bulk fertilizer applications:

$$[\text{oz. of Pyroxasulfone 85 WG per acre} \times 2000] / \text{Pounds fertilizer per acre} = \text{oz. of Pyroxasulfone 85 WG for 1 ton of fertilizer}$$

To impregnate **Pyroxasulfone 85 WG** on bulk fertilizer, use a closed rotary-drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Mix **Pyroxasulfone 85 WG** with sufficient water to form a sprayable slurry mixture. Spray nozzles must be directed to provide uniform fertilizer coverage while avoiding spray contact with mixing equipment. Non-uniform impregnation can cause crop injury or unsatisfactory performance. Spray the herbicide mixture onto the fertilizer after blending has started. Addition of a suitable drying agent may be necessary if the fertilizer and herbicide blend is too wet for uniform application due to high humidity, high urea concentration, or low fertilizer use rate. Slowly add the drying agent to the blend until a flowable mixture is obtained. Drying agents are not advised for use with on-board impregnation systems.

Under some conditions, fertilizer impregnated with **Pyroxasulfone 85 WG** may clog air tubes or deflector plates on pneumatic application systems. Mineral oil may be added to **Pyroxasulfone 85 WG** before blending with fertilizer to reduce plugging. **DO NOT** use drying agents when mineral oil is used. To avoid separation of **Pyroxasulfone 85 WG** and mineral oil mixes in cold temperatures, either keep mixture heated or agitated prior to blending with fertilizer. Mineral oil may be used with inplant blending stations or with on-board injection systems.

Uniformly apply the treated fertilizer with accurately calibrated and proper equipment immediately after impregnation to avoid lump formation and spreading difficulties.

Accurate calibration of fertilizer application equipment and uniform fertilizer distribution is essential for satisfactory weed control.

## Chemigation Application via Sprinkler and Drip Irrigation Systems

**Pyroxasulfone 85 WG** may be applied as a chemigation treatment through sprinkler irrigation systems. Apply this product **ONLY** through a sprinkler irrigation system of the following type: center pivot, end tow, hand move, lateral move, side (wheel) roll, or solid set. **DO NOT** apply this product through any other type of sprinkler irrigation system.

**Pyroxasulfone 85 WG** may also be applied as a chemigation treatment through drip irrigation systems. All chemigation precautions mentioned in this label for sprinkler irrigation systems also apply for drip irrigation systems.

Application may be made alone or in tank mixtures with other herbicides on this label registered for use in specified sprinkler or drip irrigation systems. Application must be made within specific crop stage timings and product use rates given in the container label **Directions For Use**.

Uniform distribution of **Pyroxasulfone 85 WG** -treated irrigation water is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness, or illegal pesticide residue in the crop. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.

Proper calibration is the responsibility of the applicator. The system must be properly calibrated (with water only) to ensure the amount of **Pyroxasulfone 85 WG** applied corresponds to the specified rate. Apply **Pyroxasulfone 85 WG** in volume minimums of 0.33 to 0.67 inch of water using the lower volume for coarse-texture soils and the higher volume for fine- texture soils. Application made in high volumes of water (more than 1 inch) may result in reduced weed control.

Meter herbicide dilution into irrigation water through the entire time of water application for center pivot and lateral move sprinkler systems. For solid-set and hand-move sprinkler irrigation systems and drip irrigation systems, apply **Pyroxasulfone 85 WG** through the system at the beginning of the set; then follow with additional water to reach volume minimums as listed by soil type. To increase calibration accuracy of injection metering equipment, dilute **Pyroxasulfone 85 WG** in a minimum of 3 parts water to 1 part **Pyroxasulfone 85 WG**. Maintain agitation in injection nurse tanks to keep a uniform herbicide suspension during application.

### Special Restrictions for Chemigation:

1. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.
2. **DO NOT** connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
3. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments if the need arises.
4. Tail water (runoff water) from chemigation that contains **Pyroxasulfone 85 WG** needs to be recirculated and/or contained in the field in a cistern or holding reservoir from the initial application and/or used only on adjacent, approved crops for which **Pyroxasulfone 85 WG** is registered for this type of application.
5. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. It must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
6. The sprinkler chemigation system must contain a functional check valve, vacuum-relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow. In addition, systems must use a metering pump, for example a positive displacement injection pump (e.g. diaphragm



pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

7. The sprinkler chemigation system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

8. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

### **Chemigation systems connected to public water systems:**

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system needs to be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

3. All chemigation systems connected to public water systems must also follow restrictions listed in the preceding section.

### **Cleaning Spray Equipment**

Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions. Triple rinse the equipment before and after applying **Pyroxasulfone 85 WG**.

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## **ADDITIVES**

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**Pyroxasulfone 85 WG** has been formulated to provide optimal preemergence weed control. However, several postemergence herbicide tank mixes with **Pyroxasulfone 85 WG** may require adjuvants to improve burndown of emerged weeds. Therefore, an adjuvant may be used with **Pyroxasulfone 85 WG** tank mixes that are applied in the fall, preplant, preemergence, or early postemergence to corn, soybeans, and Sunflower subgroup 20B.

An adjuvant may be used with **Pyroxasulfone 85 WG** tank mixes that are applied preplant, preemergence or early postemergence to bulb vegetables group 3-07; cotton (including cottonseed subgroup 20C); edamame; flax; leaf petiole vegetable subgroup 22B; mint (peppermint and spearmint tops); peanut; pea and bean, dried shelled, except soybean, subgroup 6C; perennial grass for seed; tuberous and corm vegetables subgroup 1C and wheat. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85 WG**.

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## **TANK MIXING INFORMATION**

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It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** can be mixed with one or more registered herbicide products according to the specific tank mixing instructions in this label and respective product labels. Refer to **Crop-specific Information** section for tank mixing details for each crop.

Physical incompatibility, reduced weed control, or crop injury may result from mixing **Pyroxasulfone 85 WG** with other pesticides, additives, or fertilizers.



## Compatibility Test for Tank Mix Products

Before mixing components, always perform a compatibility jar test.

1. For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
2. Add components in the sequence indicated in the mixing order using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.
3. Always cap the jar and invert 10 cycles between component additions.
4. When the components have all been added to the jar, let the solution stand for 15 minutes.
5. Evaluate the solution for uniformity and stability. The spray solution must not have free oil on the surface, or fine particles that precipitate to the bottom, or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

## Mixing Order

Maintain constant agitation throughout mixing and application until spraying is completed.

1. **Water** - Fill tank 1/2 to 3/4 full with clean water and start agitation.
2. **Agitation** - Maintain agitation throughout mixing.
3. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
4. **Products in PVA bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
5. **Water-soluble additives** (including dry and liquid fertilizers for example ammonium sulfate or urea ammonium nitrate).
6. **Water-dispersible products** (for example dry flowables, wettable powders, suspension concentrates, or suspoemulsions). Add **Pyroxasulfone 85 WG** at this point in the mixing process.
7. **Water-soluble products**
8. **Emulsifiable concentrates** (including methylated seed oil adjuvants)
9. **Remaining quantity of water**

Maintain agitation throughout application until spraying is completed. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

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## USE RESTRICTIONS

Refer to “CROP-SPECIFIC INFORMATION” sections of this label for additional use restrictions

- **Maximum use rate:** Refer to CROP-SPECIFIC INFORMATION section for maximum application use rates of Pyroxasulfone 85 WG in each crop and use pattern..
- **DO NOT** contaminate irrigation ditches or water used for domestic purposes.
- **Irrigation:** **DO NOT** use flood irrigation to apply, activate or incorporate **Pyroxasulfone 85 WG**.
- **Emergency Replanting Intervals:** If a labeled crop treated with **Pyroxasulfone 85 WG** is lost to crop failure (because of environmental factors for example drought, frost, hail, etc.), the crop may be replanted immediately. However, **DO NOT** repeat application of **Pyroxasulfone 85 WG** after crop failure. A sequential application can be made as long as the maximum cumulative rate per year for the crop and soil type is not exceeded.

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## USE PRECAUTIONS

Refer to “CROP-SPECIFIC INFORMATION” sections of this label for additional use precautions

**Crop Rotation Intervals:** Use the table following to determine the proper interval between **Pyroxasulfone 85 WG** application and the planting of rotational crops. Be sure to determine the rotational crop interval for tank mix products and utilize the most restrictive interval of all products applied.

| Crop                                | Pyroxasulfone 85 WG                                    |      |     |     |     |
|-------------------------------------|--|------|-----|-----|-----|
|                                     | Use Rate<br>(oz/A) <sup>1</sup>                        |      |     |     |     |
|                                     | 1.0  | 2.0  | 3.0 | 4.0 | 5.0 |
|                                     | Rotational Crop Interval<br>(months after application) |      |     |     |     |
| Alfalfa                             | 10   | 10   | 10  | 10  | 10  |
| Bulb Onion                          | 2  | 4    | 4   | 4   | 4   |
| Canola (rapeseed)                   | 12   | 12   | 15  | 18  | 18  |
| Celery                              | 0  | 0    | 0   | 0   | 4   |
| Chickpea and other edible dry beans | 0  | 0    | 0   | 4   | 4   |
| Corn                                | 0  | 0    | 0   | 0   | 0   |
| Cotton                              | 0  | 2    | 4   | 4   | 4   |
| Edamame                             | 0  | 0    | 0   | 4   | 4   |
| Edible Peas, succulent edible beans | 11   | 11   | 11  | 11  | 11  |
| Garlic                              | 0  | 0    | 4   | 4   | 4   |
| Grain sorghum                       | 6  | 6    | 10  | 12  | 12  |
| Cool-season Grasses grown for seed* | 11**   | 11** | 18  | 18  | 18  |
| Warm-season Grasses grown for seed  | 18   | 18   | 18  | 18  | 18  |
| Green Onion                         | 4  | 6    | 8   | 12  | 12  |
| Lentils                             | 0  | 0    | 0   | 4   | 4   |
| Mint                                | 4  | 4    | 4   | 4   | 4   |
| Peanut                              | 0  | 2    | 4   | 4   | 4   |
| Peas, field (dry)                   | 0  | 0    | 0   | 4   | 4   |
| Potato                              | 0  | 0    | 0   | 0   | 0   |
| Rice                                | 10   | 12   | 18  | 24  | 24  |
| Small grains (other than wheat)     | 11   | 11   | 11  | 18  | 18  |
| Soybean                             | 0  | 0    | 0   | 4   | 4   |
| Sugarbeet                           | 12   | 12   | 15  | 15  | 15  |
| Sunflower and safflower             | 0  | 0    | 0   | 2   | 4   |
| Sweet Potato                        | 4  | 4    | 4   | 9   | 9   |
| Tabacco                             | 9  | 9    | 9   | 9   | 9   |
| Wheat                               | 0  | 1    | 4   | 6   | 6   |
| Other Crops                         | 18   | 18   | 18  | 18  | 18  |

<sup>1</sup>Refer to **Table 4** for active ingredient use rate equivalents

\*Only when grown in states of Idaho, Oregon and Washington, for all other states see rotational crop intervals for "Other Crops".

\*\*An 11 month rotational crop interval only when greater than 15 inches of precipitation (rainfall/irrigation) has occurred from time of application to planting of grass grown for seed. If less than 15 inches of precipitation has occurred, the rotational crop interval is 18 months.

## CROP-SPECIFIC INFORMATION

Read product information, mixing, application, weeds controlled and additive instructions in preceding sections of the label. Read and follow tank mix product labels for restrictions, precautions, instructions, and rotational crop restrictions.

### Bearing and Nonbearing Tree Nuts (Crop Group 14-12) and Grape (Crop Sub-group 13-07F)

**Pyroxasulfone 85 WG** may be applied as part of a weed management program in bearing and nonbearing tree nuts (Crop Group 14-12) and grape (Crop Sub-group 13-07F) using ground equipment, through chemigation systems, or when impregnated onto dry bulk fertilizer. As tree nuts of Group 14-12, crops include African nut-tree; almond; beechnut; Brazil nut; Brazilian pine; bunya; bur oak; butternut; Cajou nut; candlenut; cashew; chestnut; chinquapin; coconut; coquito nut; dika nut; ginkgo; Guiana chestnut; hazelnut (filbert); heartnut; hickory nut; Japanese horse-chestnut; macadamia nut; mongongo nut; monkey-pot; monkey puzzle nut; Okari nut; Pachira nut; peach palm nut; pecan; pequi; Pili nut; pine nut; pistachio; Sapucaia nut; tropical almond; walnut, black; walnut, English; yellowhorn; cultivars, varieties, and/or hybrids of these. As small fruits of the small fruit vine climbing subgroup 13-07F except

fuzzy kiwifruit, crops include amur river grape; gooseberry; grape; kiwifruit, hardy; maypop; schisandra berry; cultivars, varieties, and/or hybrids of these.

Before applying to tree nuts and grape, verify with your local seed company (supplier) the selectivity of **Pyroxasulfone 85 WG** on your inbred line or hybrid to avoid potential injury.

### Application Rates and Timings

Apply **Pyroxasulfone 85WG** at 1.0 to 5.0 ozs/A broadcast or banded before target weed germination. Apply spray directly to the ground beneath trees/vines and/or in areas between rows. **DO NOT** apply over the top of trees or vines with leaves, buds, or fruit. Contact by the spray mixture with leaves, shoots, or buds may cause injury or result in illegal pesticide residues.

**Pyroxasulfone 85 WG** may be applied in a single application or in sequential applications.

### Crop-specific Restrictions

- **DO NOT** apply more than 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A) in a single application.
- **DO NOT** apply more than a maximum cumulative amount of 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A) from sequential applications per year.
- **DO NOT** apply by air.
- Maximum number of applications per year: 3
- Separate sequential applications by at least 30 days.
- Preharvest Interval (PHI): 60 days in tree nuts, 21 days in fruit, small, vine climbing, except fuzzy kiwifruit, subgroup 13-07F.

### Tank Mixtures

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in tree nuts and grape for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use in tree nuts and grape. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

## Bulb Vegetables Group 3-07

**Pyroxasulfone 85WG** may be used as part of a weed management program in the following dry bulb and green bulb vegetables: Chive, fresh leaves; chive, Chinese, fresh leaves; daylily, bulb; elegans hosta; fritillaria, bulb; fritillaria, leaves; garlic, bulb; garlic, great-headed, bulb; garlic, serpent, bulb; kurrat; lady's leek; leek; leek, wild; lily, bulb; onion, Beltsville bunching; onion, bulb; onion, Chinese, bulb; onion, fresh; onion, green; onion, macrostem; onion, pearl; onion, potato, bulb; onion, tree, tops; onion, Welsh, tops; shallot, bulb; shallot, fresh leaves; cultivars, varieties, and/or hybrids of these

**Pyroxasulfone 85 WG** may be applied to direct seeded and transplanted bulb vegetables as a preemergence, delayed preemergence, or a postemergence application to bulb vegetables for residual preemergence control of listed weeds in (Table 1). **Pyroxasulfone 85WG** may be used as part of a weed control program in bulb vegetables either in combination or sequentially with other herbicides for a broader spectrum of weed control and/or control of emerged weeds. See **Tank Mixtures** below.

### Application Rates in Bulb Vegetables

Apply **Pyroxasulfone 85WG** alone, in tank mix combination, or sequentially at the residual rates provided in **Table 5**.

**Table 5 Residual Rates of Pyroxasulfone 85 WG in Bulb Vegetables**

| Application Timing   | Use Rate (oz/A) by Soil Texture <sup>1,2</sup> |            |            |                          |
|----------------------|--|------------|------------|--------------------------|
|                      | Coarse   | Medium     | Fine       | Muck greater than 20% OM |
| Preemergence         | 1.25 – 2.5                                     | 1.25 – 2.5 | 1.25 – 2.5 | 2.5                      |
| Delayed Preemergence | 1.25 – 2.5                                     | 1.25 – 2.5 | 1.25 – 2.5 | 2.5                      |
| Postemergence        | 1.25 – 2.5                                     | 1.25 – 2.5 | 1.25 – 2.5 | 2.5                      |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents

### Crop-specific Restrictions

- **DO NOT** apply more than 2.5 ozs/A of **Pyroxasulfone 85 WG** (0.133 lb ai/A of pyroxasulfone) in a single application in bulb vegetables.
- **DO NOT** apply more than a maximum cumulative amount of 2.5 ozs/A of **Pyroxasulfone 85 WG** (0.133 lb ai/A of Pyroxasulfone) from sequential applications (e.g. preemergence application or delayed preemergence application followed by postemergence application or consecutive postemergence applications), in bulb vegetables per year.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than two times per year in bulb vegetables when using labeled rates less than the single maximum application rate.
- **DO NOT** apply **Pyroxasulfone 85WG** in a soil classified as a Sand.
- The pre harvest interval after a preemergence, delayed preemergence, or a postemergence application of **Pyroxasulfone 85WG** is 60 days.
- Separate sequential applications by at least 14 days.

### Crop-specific Precautions

- The use of **Pyroxasulfone 85 WG** may result in temporary growth suppression, leaf burn and/or injury or stand reduction on bulb vegetables under stressful conditions, for example, inadequate or excessive moisture, cool and hot temperatures, compacted soils, injury from other pesticides, disease or other pest damage, mechanical injury, nutrient imbalances, or other conditions known to cause plant stress. Before using, verify the selectivity of **Pyroxasulfone 85WG** with your local seed company (supplier) in order to avoid potential injury.

### Application Timings

**Pyroxasulfone 85 WG** may be applied in a single application or in sequential applications.

### Preemergence Application [*Alternate text: on Muck Soils Only*]

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 5** as a preemergence broadcast spray [*Alternate text: on Muck soils*] after planting, but before bulb vegetables and weeds emerge. Plant seed at least 1 inch deep to reduce potential injury. Apply **Pyroxasulfone 85WG** only to a uniform seedbed which is firm and free of clods and cracks. The seedbed must be prepared to ensure good seed row closure and soil coverage of the seed.

### Delayed Preemergence Application

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 5** as a delayed preemergence broadcast spray to the soil surface after planting when 75% of the radicals have emerged from the seed, but before bulb vegetables and weeds emerge. Plant seed at least 1 inch deep to reduce potential injury. Apply **Pyroxasulfone 85WG** only to a uniform seedbed which is firm and free of clods and cracks. The seedbed must be prepared to ensure good seed row closure and soil coverage of the seed.

### Postemergence Application

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 5** as a treatment to bulb vegetables from the first true leaf stage of development to the sixth leaf stage of development. Weeds germinated at time of treatment will not be controlled and a postemergent herbicide will be needed to control germinated weeds.

## Sequential Applications

If a sequential application program of **Pyroxasulfone 85 WG** is used (e.g. preemergence application or delayed preemergence application followed by postemergence application or consecutive postemergence applications), the maximum combined rate of **Pyroxasulfone 85 WG** that may be applied in a year is 2.5 ozs/A (0.133 lb ai/A of pyroxasulfone) on all soils. Separate sequential applications by at least 14 days.

## Tank Mixtures

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in bulb vegetables for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use on bulb vegetable group 3-07. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

### Corn (field, pop, sweet)

**Pyroxasulfone 85 WG** may be applied preplant surface, preplant incorporated, preemergence or early postemergence to corn for residual preemergence control of listed weeds (**Table 1**). Corn in this label refers to field corn (grown for grain, seed, or silage), popcorn, and sweet corn (grown for fresh, processing or seed). Before applying to seed corn, sweet corn or popcorn, verify with your local seed company (supplier) the selectivity of **Pyroxasulfone 85 WG** on your inbred line or hybrid to avoid potential injury.

## Application Rates

Apply **Pyroxasulfone 85 WG** alone, in tank mix, or sequentially in corn at the residual rates in **Table 6**.

**Table 6. Residual Rates of Pyroxasulfone 85 WG in Corn**

| Application Timing    | Use Rate (oz/A) by Soil Texture <sup>1, 2</sup> |           |           |
|-----------------------|---|-----------|-----------|
|                       | Coarse  | Medium    | Fine      |
| Preplant Surface      | 1.0 – 2.75                                      | 1.5 – 3.0 | 2.0 – 4.0 |
| Preplant Incorporated | 1.0 – 2.75                                      | 1.5 – 3.0 | 2.0 – 4.0 |
| Preemergence          | 1.0 – 2.75                                      | 1.5 – 3.0 | 2.0 – 4.0 |
| Early Postemergence   | 1.0 – 2.75                                      | 1.5 – 3.0 | 2.0 – 4.0 |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents

## Crop-specific Restrictions

- **On coarse soils - DO NOT** apply more than 2.75 ozs/A of **Pyroxasulfone 85WG** (0.146 lb ai/A of pyroxasulfone) in a single application in corn and **DO NOT** exceed the maximum cumulative amount of 2.75 ozs/A of **Pyroxasulfone 85 WG** (0.146 lb ai/A of pyroxasulfone) from all applications, including from sequential applications (e.g., fall application followed by spring application, or sequential applications in the spring), in corn per year.
- **On medium soils - DO NOT** apply more than 3.0 ozs/A of **Pyroxasulfone 85WG** (0.159 lb ai/A of pyroxasulfone) in a single application in corn and **DO NOT** exceed the maximum cumulative amount of 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of pyroxasulfone) from all applications, including from sequential applications (e.g., fall application followed by spring application, or sequential applications in the spring), in corn per year.
- **On fine soils – DO NOT** apply more than 4.0 ozs/A of **Pyroxasulfone 85WG** (0.213 lb ai/A of pyroxasulfone) in a single application in corn and **DO NOT** exceed the maximum cumulative amount of 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of pyroxasulfone) from all applications, including from sequential applications (e.g., fall application followed by spring application, or sequential applications in the spring), in corn per year.

- **DO NOT** apply **Pyroxasulfone 85 WG** more than two times per year in corn when using labeled rates less than the single maximum application rate.
- **DO NOT** harvest sweet corn ears for human consumption less than 37 days after application of **Pyroxasulfone 85 WG**.
- Separate sequential applications by at least 14 days.
- **Preharvest / Pregrazing Interval** (PHI / PGI) for forage after application to V5 to V8 corn – 30 days.
- **DO NOT** permit foraging of field corn less than 30 days after V8 stage application of **Pyroxasulfone 85 WG**.

### Crop-specific Precautions

**Seeding Depth:** Crop seeds must be planted a minimum 1 inch deep.

### Application Timings

**Pyroxasulfone 85 WG** may be applied in a single application or in sequential applications.

### Fall Applications for controlling weeds germinating the following spring

For use only in Iowa, Minnesota, North Dakota, South Dakota, Wisconsin, north of highway 136 in Illinois and north of highway 91 in Nebraska. **Pyroxasulfone 85 WG** may be applied in the fall to control weeds in conventional, minimum tillage, or no-till corn production systems planted the following spring. This fall application program will typically need to be followed with a suitable in-season postemergence herbicide treatment to provide season long control of the complete target weed spectrum. Use only on medium or fine soils and at a use rate of 2.5 to 3.5 ozs/A (0.133 to 0.186 lb ai/A of pyroxasulfone) (medium soil) and 3.5 to 4.0 ozs/A (0.186 to 0.213 lb ai/A of pyroxasulfone) ounces (fine soil) of **Pyroxasulfone 85 WG**. See the main **Application Timings** section (within APPLICATION INSTRUCTIONS) of this label for restrictions and directions.

### Fall / Winter Applications for controlling weeds germinating in the fall or winter annual weeds

**Pyroxasulfone 85 WG** may be broadcast surface applied in the fall or winter to control winter annual weeds and other weeds germinating in the fall. Use on coarse, medium or fine soils at rates listed for the Preplant Surface timing. A sequential preemergence or postemergence application can be made but **DO NOT** exceed the maximum cumulative rate allowed by soil type per year. See the main **Application Timings** section of this label for restrictions and directions.

### Preplant Surface Application (15 to 45 days prior to planting)

Use application rates in **Table 6** when making preplant surface applications, using the highest application rate for a given soil texture. Preplant surface applications are not advised on coarse soils, in areas where average annual rainfall (or rainfall + irrigation) typically exceeds 40 inches, or for popcorn or sweet corn. Cultivation or a labeled postemergence herbicide application may still be required under certain conditions for complete weed control.

### Preplant Surface and Preplant Incorporated Applications (up to 14 days prior to planting)

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 6** as a broadcast spray to the soil surface or incorporated up to 14 days before planting on all soil types.

### Preemergence Surface Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 6** as a broadcast spray to the soil surface after planting and before crop emergence.

### Early Postemergence Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 6** as a broadcast spray to corn at spiking up to the V8 stage (visible 8<sup>th</sup> leaf collar).

### Sequential Applications

If a sequential application program of **Pyroxasulfone 85 WG** is used (e.g., fall application followed by spring application, or sequential applications in the spring), the maximum combined rate of **Pyroxasulfone 85 WG** that

may be applied in corn per year is 2.75 oz/A (0.146 lb ai/A of pyroxasulfone) on coarse soils or 5.0 oz/A (0.266 lb ai/A of pyroxasulfone) on all medium to fine soils. Separate sequential applications by at least 14 days.

### Tank Mixtures

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in corn for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use on specific corn types; not all corn products are registered for use on field corn, popcorn, and sweet corn. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

### Cotton (including Cottonseed subgroup 20C)

*[In Cotton use section, Optional text in brackets]*

**Pyroxasulfone 85 WG** may be applied preplant surface, preplant incorporated, preemergence, early postemergence, postemergence-directed (layby), postemergence spreading of impregnated dry bulk fertilizer, or postemergence by chemigation to cotton (including cottonseed subgroup 20C crops) for residual preemergence control of listed weeds (**Table 1**). Before applying to cotton, verify with your local seed company (supplier) the selectivity of **Pyroxasulfone 85 WG** on your variety to avoid potential injury.

### Crop Response

**Pyroxasulfone 85 WG** applied preplant surface, preemergence, or early postemergence can cause cotton injury. Under stressful conditions (for example inadequate or excessive moisture, cool or hot temperatures, compacted soils, injury from other pesticides, disease or other pest damage, mechanical injury, nutrient imbalances, or other conditions known to cause plant stress), **Pyroxasulfone 85 WG** injury will be intensified.

Cotton injury is not expected when **Pyroxasulfone 85 WG** is applied postemergence-directed (layby). However, some visual cotton response is possible when **Pyroxasulfone 85 WG** is applied under stressful conditions for example inadequate or excessive moisture, cool or hot temperatures, compacted soils, injury from other pesticides, disease or other pest damage, mechanical injury, nutrient imbalances, or other conditions known to cause plant stress.

Cotton response is most often visible as stunting and/or discoloration of leaf tissue (e.g., chlorosis), but in its most severe form can result in stand thinning which could impact cotton yield. The greatest potential for cotton response occurs when **Pyroxasulfone 85 WG** concentrates in the crop row. Unacceptable cotton response may be caused by uneven application, soil clods or disturbances, an open/cracked seed furrow that allows herbicide to directly contact the seed, or a deep seed furrow that allows herbicide concentration after a rain/irrigation event.

### Application Rates

Apply **Pyroxasulfone 85 WG** alone, in tank mix, or sequentially in cotton at the residual rates are provided in **Table 7**.



**Table 7. Residual Rates of Pyroxasulfone 85 WG in Cotton**

| Application Timing                                  | Use Rate (oz/A) by Soil Texture <sup>1,2</sup> |                            |           |
|---|--|----------------------------|-----------|
|   | Coarse <sup>3</sup>                            | Medium                     | Fine      |
| Preplant Surface                                    | 0.75 – 1.0                                     | 1.0 – 1.5                  | 1.5 – 2.1 |
| Preplant Incorporated                               | 0.75 – 1.0                                     | 1.0 – 1.5                  | 1.5 – 2.1 |
| Preemergence  | 0.75 – 1.0                                     | 1.0 – 1.5                  | 1.5 – 2.1 |
| Early Postemergence <sup>4</sup>                    | 0.75 – 1.0                                     | 0.75 – 1.5                 | 1.5 – 2.1 |
| Postemergence-Directed (Lay-by)                     | 0.75 – 2.1<br>[0.75 – 1.5]                     | 0.75 – 2.1<br>[0.75 – 1.5] | 1.5 – 2.1 |
| Postemergence (via impregnated dry bulk fertilizer) | 0.75 - 2.1<br>[0.75 – 1.5]                     | 0.75 - 2.1<br>[0.75 – 1.5] | 1.5 - 2.1 |
| Postemergence (by chemigation)                      | 0.75 - 2.1<br>[0.75 – 1.5]                     | 0.75 - 2.1<br>[0.75 – 1.5] | 1.5 - 2.1 |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents.

<sup>3</sup> **DO NOT** apply on coarse-textured soils defined as sand or loamy sand. **DO NOT** apply to coarse-textured soils with less than 1% organic matter.

<sup>4</sup> Except for the use pattern of Postemergence Directed (Lay-by) and Postemergence (via impregnated dry bulk fertilizer or by chemigation)

### Crop-specific Restrictions

- **On coarse and medium soils** - **DO NOT** apply more than 2.1 ozs/A of **Pyroxasulfone 85WG** (0.112 lb ai/A of pyroxasulfone) in a single application in cotton and **DO NOT** exceed the maximum cumulative amount of 4.2 ozs/A of **Pyroxasulfone 85 WG** (0.223 lb ai/A of pyroxasulfone) from all applications, including from sequential applications (e.g. preplant application followed by a preemergence application, preplant or preemergence application followed by postemergence or postemergence layby application), in cotton per year.
- **On fine soils** - **DO NOT** apply more than 2.1 ozs/A of **Pyroxasulfone 85WG** (0.112 lb ai/A of pyroxasulfone) in a single application in cotton and **DO NOT** exceed the maximum cumulative amount of 4.2 ozs/A of **Pyroxasulfone 85 WG** (0.223 lb ai/A of pyroxasulfone) from all applications, including from sequential applications (e.g. preplant application followed by a preemergence application, preplant or preemergence application followed by postemergence or postemergence layby application), per year in cotton.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than two times in cotton per year when using labeled rates less than the single maximum application rate.
- There is no required (preharvest) interval between preplant, preemergence, or post emergence application of **Pyroxasulfone 85 WG** and the harvest of cotton.
- Cotton gin byproducts may be fed to livestock.
- Separate sequential applications by at least 14 days.

### Crop-specific Precautions

- **Seeding Depth:** Crop seeds must be planted a minimum 1 inch deep.
- The use of **Pyroxasulfone 85 WG** may result in temporary growth suppression in cotton if extreme conditions of high rainfall and extended periods of water-saturated soil occur during cotton germination or early seedling development.

### Application Timings

**Pyroxasulfone 85 WG** herbicide may be applied in a single application or in sequential applications.

### Preplant Surface or Preplant Incorporated Applications (up to 45 days prior to planting)

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 7** as a broadcast spray to the soil surface or incorporated up to 45 days before planting on all soil types.



## Preemergence Surface Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 7** as a broadcast spray to the soil surface after planting and before crop emergence.

## Early Postemergence Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 7** as a broadcast spray to cotton from first true leaf stage to beginning bloom stage. **Pyroxasulfone 85 WG** will provide residual control of weeds germinating after application. **Pyroxasulfone 85 WG** will not control emerged weeds. Weeds emerged at the time of application must be controlled by another means, for example with cultivation or a tank mix or sequential application of herbicide labeled for postemergence control of the target weeds in cotton. **Pyroxasulfone 85 WG** applications to emerged cotton may result in temporary leaf burn and stunting, but a reduction in cotton yield is not expected. **DO NOT** apply adjuvants with **Pyroxasulfone 85 WG** when making early postemergence applications. **DO NOT** apply **Pyroxasulfone 85 WG** to cotton from emergence (at-cracking) through cotyledon stage or injury may occur.

## Postemergence-Directed (Lay-by) Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 7** as a broadcast directed spray between cotton rows from 4-leaf stage [2-leaf stage] to beginning bloom stage. **Pyroxasulfone 85 WG** will provide residual control of weeds germinating after application. **Pyroxasulfone 85 WG** will not control emerged weeds. Weeds emerged at the time of application must be controlled by another means, for example cultivation or a tank mix or sequential application of herbicide labeled for postemergence control of the target weeds in cotton. The use of hooded or shielded sprayers is advised when applying **Pyroxasulfone 85 WG** as postemergence-directed spray. Avoid contacting cotton leaves with **Pyroxasulfone 85 WG** spray solution or injury may occur.

## Early Postemergence Application - Dry Bulk Fertilizer

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 7** as a broadcast spread of impregnated dry bulk fertilizer to cotton from 5-leaf stage [2-leaf stage] to beginning bloom stage.

See the Ground Application (Dry Bulk Fertilizer) section on this label for further information about this application.

## Early Postemergence Application - Chemigation

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 7** by chemigation to cotton from 5-leaf stage [2-leaf stage] to beginning bloom stage. **Pyroxasulfone 85 WG** application to emerged cotton may result in temporary leaf burn and stunting, but a reduction in cotton yield is not expected.

See the Chemigation Application via Sprinkler and Drip Irrigation Systems section on this label for further information about this application and follow the application instructions for chemigation through sprinkler irrigation systems. Drip irrigation systems are not applicable for this use in cotton.

## Sequential Applications

If a sequential application program of **Pyroxasulfone 85 WG** is used (e.g. preplant application followed by a preemergence application, preplant or preemergence application followed by postemergence or postemergence layby application), the maximum combined rate of **Pyroxasulfone 85 WG** that may be applied in cotton per year is 4.2 ozs/A (0.223 lb ai/A of pyroxasulfone) on all soils. Separate sequential applications by at least 14 days.

## Tank Mixtures

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in cotton for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use in cotton. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

## Edamame

**Pyroxasulfone 85 WG** may be applied as a preplant surface, preemergence or early postemergence application to edamame for residual preemergence weed control. Before applying to edamame, verify with your local seed company (supplier) the selectivity of **Pyroxasulfone 85 WG** on your variety to avoid potential injury.

### Crop Response

The use of **Pyroxasulfone 85 WG** may result in growth suppression or stand loss of edamame if extreme conditions of high/heavy rainfall, high winds, treated soil splashing on the leaves and extended periods of water-saturated soil occur right before or soon after germination and during seedling growth.

### Application Rates

Apply **Pyroxasulfone 85 WG** alone, in tank mix, or sequentially with other herbicides in edamame at the residual rates per cropping season (per year) in **Table 8**.

**Table 8. Residual Rates of Pyroxasulfone 85 WG in Edamame**

| Application Timing  | Use Rate (oz/A) by Soil Texture <sup>1,2</sup> |           |           |
|---------------------|--|-----------|-----------|
|                     | Coarse   | Medium    | Fine      |
| Preplant surface    | 1.0 – 4.1                                      | 1.0 – 4.1 | 1.0 – 4.1 |
| Preemergence        | 1.0 – 4.1                                      | 1.0 – 4.1 | 1.0 – 4.1 |
| Early Postemergence | 1.0 – 4.1                                      | 1.0 – 4.1 | 1.0 – 4.1 |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents

### Crop-specific Restrictions

- **DO NOT** apply more than 4.1 ozs/A of **Pyroxasulfone 85 WG** (0.218 lb ai/A of pyroxasulfone) in a single application in edamame.
- **DO NOT** apply more than 4.1 ozs/A of **Pyroxasulfone 85 WG** (0.218 lb ai/A of pyroxasulfone) per year.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than one time per year in edamame.
- There is no required preharvest interval (PHI) between a preplant surface, preemergence or early postemergence (at third-trifoliate leaf stage) application of **Pyroxasulfone 85WG** and harvest of Edamame.
- **DO NOT** apply **Pyroxasulfone 85WG** in edamame in soils classified as a sand.

### Crop-specific Precautions

**Seeding Depth:** Crop seeds must be planted a minimum 1 inch deep.

### Application Timing

**Pyroxasulfone 85 WG** may be applied in a single application.

### Preplant Surface Applications (up to 14 days prior to planting)

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 8** as a broadcast spray to the soil surface or incorporated up to 14 days before planting on all soil types.

### Preemergence Surface Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 8** as a broadcast spray to the soil surface after planting and before crop emergence.

### Early Postemergence Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 8** as a broadcast spray to edamame at third-trifoliate leaf stage. **Pyroxasulfone 85 WG** will provide residual control of weeds germinating after application. Weeds that are already emerged at the time of application must be controlled with cultivation, or tank mix or sequential application of another herbicide labelled for postemergence control of the target weeds in the crop. **Pyroxasulfone 85 WG** applications to emerged edamame may result in temporary leaf burn and stunting, but a reduction in edamame yield is unexpected. Tank mixes of **Pyroxasulfone 85 WG** with other crop protection products or adjuvants may significantly enhance this effect. Depending upon growing conditions, recovery from this injury begins immediately but may take several weeks for the injury to dissipate entirely.

**DO NOT** apply **Pyroxasulfone 85 WG** to Edamame from emergence (at-cracking) before third-trifoliate leaf stage as injury may occur. **DO NOT** apply **Pyroxasulfone 85 WG** to Edamame after the third trifoliate leaf stage.

## Tank Mixtures

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in edamame for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use in edamame. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

## Flax

**Pyroxasulfone 85 WG** may be applied preplant surface, preemergence or early postemergence to flax for residual preemergence weed control.

## Application Rates

Application rates for **Pyroxasulfone 85 WG** when applied alone, in tank mix and postemergence are provided in **Table 9** for **Flax**.

**Table 9. Residual Rates of Pyroxasulfone 85 WG in Flax**

| Application Timing  | Use Rate (oz./A) by Soil Texture <sup>1, 2</sup> |           |           |
|---------------------|--|-----------|-----------|
|                     | Coarse   | Medium    | Fine      |
| Preplant Surface    | 1.0 – 5.0  | 1.0 – 5.0 | 1.0 – 5.0 |
| Preemergence        | 1.0 – 5.0  | 1.0 – 5.0 | 1.0 – 5.0 |
| Early Postemergence | 1.0 – 5.0  | 1.0 – 5.0 | 1.0 – 5.0 |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents

## Crop-specific Restrictions

- **DO NOT** apply more than 5.0 ozs/A (0.266 lb ai/A of pyroxasulfone) in a single application in flax.
- **DO NOT** apply more than a maximum cumulative amount of 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of Pyroxasulfone) from sequential applications (e.g. preplant or preemergence application followed by an early postemergence application), in flax per year.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than three times per year in flax when using labeled rates less than the single maximum application rate.
- There is no required (preharvest) interval between a preplant, preemergence, or postemergence application of **Pyroxasulfone 85 WG** and the harvest of flax.
- Separate sequential applications by at least 14 days.

## Application Timings

**Pyroxasulfone 85 WG** may be applied in a single application or in sequential applications.

## Preplant Surface Applications

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 9** as a broadcast spray to the soil surface no more than 30 days prior to planting on all soil types.

## Preemergence Surface Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 9** as a broadcast spray to a soil surface with a uniform seedbed which is firm and free of clods after planting and before emergence. Ensure good seed furrow closure and soil coverage to avoid contact with **Pyroxasulfone 85 WG**.

## Early Postemergence Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 9**, Early Postemergence, as a broadcast spray to flax from emergence to the 4 inch stage. **Pyroxasulfone 85 WG** will provide residual control of weeds germinating after application and rainfall / irrigation activation. **Pyroxasulfone 85 WG** will not control already germinated or emerged weeds. For control of any emerged weeds this product may be applied as a tank mix or sequential application with a labeled postemergence herbicide(s). Apply as early as possible to obtain better weed control and reduce weed competition.

## Sequential Applications

Sequential Applications (e.g. preplant or preemergence application may be followed by an early postemergence application) as long as the maximum total, as described by the soil type, is not exceeded. Follow all application timing instructions and Application Restrictions noted for preplant, preemergence and early postemergence application noted above. Separate sequential applications by at least 14 days.

### Leaf Petiole Vegetable Subgroup 22B

**Pyroxasulfone 85 WG** may be applied to leaf petiole vegetable subgroup 22B crops as an early post-transplant application or as a mid-post application for residual preemergence control of listed weeds in (**Table 1**). Crops include cardon; celery; celery, Chinese; fuki; rhubarb; udo; zuiki, cultivars, varieties, and hybrids of these commodities. **Pyroxasulfone 85 WG** may be used as part of a weed control program in leaf petiole vegetable subgroup 22B crops either in combination with other herbicides for a broader spectrum of weed control and/or control of emerged weeds.

## Crop Response

The use of **Pyroxasulfone 85 WG** may result in temporary growth suppression, leaf burn and/or injury or stand reduction to transplanted leaf petiole vegetable subgroup 22B crops under stressful conditions, for example, inadequate or excessive moisture, cool and hot temperatures, compacted soils, injury from other pesticides, disease or other pest damage, mechanical injury, nutrient imbalances, or other conditions known to cause plant stress.

## Application Rates

Apply **Pyroxasulfone 85 WG** alone or in a tank mix combination with another early post-transplant herbicide, 1 to 6 days after transplanting or as a mid post-transplant application after transplanting, but not less than 60 days before harvest, either alone or in combination with a postemergence herbicide for control of germinated weeds at the residual rates in **Table 10**. **Pyroxasulfone 85 WG** will not control germinated weeds.

**Table 10 Residual Rates of Pyroxasulfone 85 WG in Leaf Petiole Vegetable subgroup 22B**

| Application Timing                                     | Use Rate (oz./A) by Soil Texture <sup>1,2</sup> |           |           |                             |
|--|---|-----------|-----------|-----------------------------|
|  | Coarse  | Medium    | Fine      | Muck<br>greater than 20% OM |
| Early Post-transplant<br>(1 to 6 days Post-transplant) | 1.0 – 5.0                                       | 1.0 – 5.0 | 1.0 – 5.0 | 1.0 – 5.0                   |
| Mid Post-Transplant                                    | 1.0 – 5.0                                       | 1.0 – 5.0 | 1.0 – 5.0 | 1.0 – 5.0                   |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents

## Crop-specific Restrictions

- **DO NOT** apply more than 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of pyroxasulfone) in a single application in leaf petiole vegetable subgroup 22B crops.
- **DO NOT** apply more than 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of pyroxasulfone) per year.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than one time per year in leaf petiole vegetable subgroup 22B crops.
- There is no required pre-harvest interval (PHI) for **Pyroxasulfone 85 WG** when applied as an early post-transplant application one to six days after transplanting in leaf petiole vegetable subgroup 22B crops.
- **DO NOT** apply **Pyroxasulfone 85WG** as a mid post-transplant application in leaf petiole vegetable subgroup 22B crops less than 60 days before harvest.

## Application Timings

**Pyroxasulfone 85 WG** may be applied in a single application.

### Early Post-transplant Application

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 10** as an early post-transplant application either alone in combination with another post-transplant herbicide. If weeds have emerged a postemergence herbicide will be needed to control emerged weeds. Apply as a broadcast spray to the soil surface 1-6 days after transplanting. Apply **Pyroxasulfone 85WG** only to a uniform transplant bed which is firm and free of clods and cracks. The transplant bed must be prepared to ensure good transplant row closure.

### Mid-Post Transplant Application

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 10** as a mid - post transplant application after transplanting, but not less than 60 days before harvest, either alone or in combination with a postemergence herbicide. Apply **Pyroxasulfone 85WG** only to a uniform transplant bed which is firm and free of clods and cracks. The transplant bed must be prepared to ensure good transplant row closure and soil coverage.

### Tank Mixtures

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in leaf petiole vegetable subgroup 22B crops for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use in leaf petiole vegetable subgroup 22B crops. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

### Mint (Peppermint and Spearmint\*)

\*Mint ( peppermint and spearmint tops) includes peppermint and spearmint harvested for fresh mint leaves or for stems and leaves processed into mint oil.

**Pyroxasulfone 85 WG** may be applied as a dormant application to mint (peppermint and spearmint tops) for residual preemergence control of listed weeds (**Table 1**).

### Crop Response

The use of **Pyroxasulfone 85 WG** may result in growth suppression of mint if extreme conditions of high/heavy rainfall, high winds and extended periods of water-saturated soil occur right before or soon after the mint breaks dormancy.

### Application Rates in mint

Apply **Pyroxasulfone 85 WG** alone or in a tank mix combination with another Dormant use herbicide, or as a dormant application to mint followed by a labeled postemergence herbicide application at the residual rates per cropping season (per year) in **Table 11**.

**Table 11. Residual Rates of Pyroxasulfone 85 WG in Mint**

| Application Timing  | Use Rate (oz/A) by Soil Texture <sup>1,2</sup> |           |           |
|---------------------|--|-----------|-----------|
|                     | Coarse   | Medium    | Fine      |
| Dormant Application | 1.0 - 5.0                                      | 1.0 - 5.0 | 1.0 - 5.0 |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents

## Crop-specific Restrictions

- **DO NOT** apply more than 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of pyroxasulfone) in a single application in mint.
- **DO NOT** apply more than 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of pyroxasulfone) per year in mint.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than one time per year in mint.
- **DO NOT** apply if roots and rhizomes of mint are weak, thinned or damaged.
- There is no required preharvest interval (PHI) between a dormant application of **Pyroxasulfone 85 WG** and the harvest of mint.
- **DO NOT** use roots from **Pyroxasulfone 85 WG** treated plants for human consumption. Roots treated with **Pyroxasulfone 85 WG** can be used for root propagation.
- **DO NOT** apply **Pyroxasulfone 85 WG** to newly planted mint
- **DO NOT** use **Pyroxasulfone 85 WG** between cuttings of mint
- Apply only to stands that in the previous year were healthy and vigorous.
- **DO NOT** apply **Pyroxasulfone 85 WG** to mint that has broken dormancy. Application to mint that is near dormancy break can result in crop injury. Risk of crop injury increases the closer application is to mint dormancy break.
- **DO NOT** apply to soils with less than 1% organic matter.
- **DO NOT** apply to soils that are classified as a “sand”.

## Application Timings

**Pyroxasulfone 85 WG** may be applied in a single application at the dormant physiological stage of mint.

## Dormant Application

**Pyroxasulfone 85 WG** may be applied only as a dormant application to mint at use rates specified in **Table 11** as a broadcast spray. Weeds that have emerged will not be controlled.

## Tank Mixtures

It is the pesticide user’s responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in mint for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use in mint. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

## Peanut

**Pyroxasulfone 85 WG** may be applied preplant surface, preplant incorporated, preemergence or early postemergence to peanut for residual preemergence control of listed weeds (**Table 1**). Before applying to peanut, verify with your local seed company (supplier) the selectivity of **Pyroxasulfone 85 WG** on your variety to avoid potential injury.

## Application Rates

Apply **Pyroxasulfone 85 WG** alone, in tank mix, or sequentially in peanut at the residual rates are provided in **Table 12**.

**Table 12. Residual Rates of Pyroxasulfone 85 WG in Peanut**

| Application Timing    | Use Rate (oz/A) by Soil Texture <sup>1, 2</sup> |           |           |
|-----------------------|---|-----------|-----------|
|                       | Coarse  | Medium    | Fine      |
| Preplant Surface      | 1.0 – 5.0                                       | 1.0 – 5.0 | 1.0 – 5.0 |
| Preplant Incorporated | 1.0 – 5.0                                       | 1.0 – 5.0 | 1.0 – 5.0 |
| Preemergence          | 1.0 – 5.0                                       | 1.0 – 5.0 | 1.0 – 5.0 |
| Early Postemergence   | 1.0 – 5.0                                       | 1.0 – 5.0 | 1.0 – 5.0 |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents



### Crop-specific Restrictions

- **DO NOT** apply more than 5.0 ozs/A of **Pyroxasulfone 85 WG WG** (0.266 lb ai/A of pyroxasulfone) in a single application in peanut.
- **DO NOT** apply more than a maximum cumulative amount of 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of Pyroxasulfone) from sequential applications (e.g. preplant surface or preplant incorporated or preemergence application followed by early postemergence application or consecutive postemergence applications), in peanut per year.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than three times per year in peanut when using labeled rates less than the single maximum application rate.
- There is no required (preharvest) interval between a preplant, preemergence or postemergence application of **Pyroxasulfone 85 WG** and the harvest of peanut.
- Separate sequential applications by at least 14 days.

### Crop-specific Precautions

- **Pyroxasulfone 85 WG** applied preplant or preemergence may result in temporary growth suppression in peanut if extreme conditions of high rainfall and extended periods of water-saturated soil occur during peanut germination or early seedling development.

### Application Timings

**Pyroxasulfone 85 WG** herbicide may be applied in a single application or in sequential applications.

### Preplant Surface or Preplant Incorporated Applications (up to 14 days prior to planting)

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 12** as a broadcast spray to the soil surface or incorporated up to 14 days before planting on all soil types.

### Preemergence Surface Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 12** as a broadcast spray to the soil surface after planting, through ground swell, and before crop emergence.

### Early Postemergence Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 12** as a broadcast spray to peanut from “at cracking” stage to first leaf stage through pod development stage. **Pyroxasulfone 85 WG** will provide residual control of weeds germinating after application. **Pyroxasulfone 85 WG** will not control emerged weeds. Weeds emerged at the time of application must be controlled by another means, for example with cultivation, a tank mix or sequential application of another herbicide labeled for postemergence control of the target weeds in peanut. **Pyroxasulfone 85 WG** applications to emerged peanut may result in temporary leaf burn and stunting, but a reduction in peanut yield is not expected.

Adjuvant may be applied with **Pyroxasulfone 85 WG** when making early postemergence applications.

### Sequential Applications

If a sequential application program of **Pyroxasulfone 85 WG** is used (e.g. preplant surface or preplant incorporated or preemergence application followed by early postemergence application or consecutive postemergence applications), the maximum combined rate of **Pyroxasulfone 85 WG** that may be applied in peanut per year is 5.0 ozs/A (0.266 lb ai/A of pyroxasulfone) on all soils. Separate sequential applications by at least 14 days.

### Tank Mixtures

It is the pesticide user’s responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in peanut for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to

confirm that the respective tank mix products are registered for use in peanut. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with fungicide or insecticide products.

### Pea and Bean, dried shelled, except soybean, subgroup 6C

**Pyroxasulfone 85 WG** may be applied preplant surface, preemergence or early postemergence to pea and bean, dried shell, except soybean, subgroup 6C crops for residual preemergence weed control. Crops include pea and bean, dried shelled, except soybean, subgroup 6C (Dried cultivars of bean (*Lupinus* spp.)(includes grain lupin, sweet lupin, white lupin, and white sweet lupin); bean (*Phaseolus* spp.) (includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean; tepary bean); bean (*Vigna* spp.) (includes adzuki bean, blackeyed pea, catjang, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean); broad bean (dry); chickpea; guar; lablab bean; lentil; pea (*Pisum* spp.) (includes field pea) and pigeon pea.

### Application Rates

Apply **Pyroxasulfone 85 WG** alone, in tank mix, or sequentially in Peas and Beans at the residual rates provided in Table 13.

**Table 13. Residual Rates of Pyroxasulfone 85 WG in Pea and Bean, dried shelled, except soybean, subgroup 6C**

| Application Timing  | Use Rate (oz./A) by Soil Texture <sup>1, 2</sup> |           |           |
|---------------------|--|-----------|-----------|
|                     | Coarse   | Medium    | Fine      |
| Preplant Surface    | 1.0 – 5.0  | 1.0 – 5.0 | 1.0 – 5.0 |
| Preemergence        | 1.0 – 5.0  | 1.0 – 5.0 | 1.0 – 5.0 |
| Early Postemergence | 1.0 – 5.0  | 1.0 – 5.0 | 1.0 – 5.0 |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents

### Crop-specific Restrictions

- **DO NOT** apply more than 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb. ai/A) in a single application in pea and bean, dried shelled, except soybean, subgroup 6C.
- **DO NOT** apply more than a maximum cumulative amount of 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of Pyroxasulfone) from sequential applications (e.g. preplant or preemergence application followed by an early postemergence application), per year in pea and bean, dried shelled, except soybean, subgroup 6C.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than three times per year in pea and bean, dried shelled, except soybean, subgroup 6C when using labeled rates less than the single maximum application rate.
- There is no required (preharvest) interval between a preplant, preemergence, or postemergence application of **Pyroxasulfone 85 WG** and the harvest of pea and bean, dried shelled, except soybean, subgroup 6C.
- Vegetable, foliage of legume, except soybean, subgroup 7A may be fed or grazed by livestock.
- Separate sequential applications by at least 14 days.

### Application Timings

**Pyroxasulfone 85 WG** may be applied in a single application or in sequential applications.

### Preplant Surface Applications

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 13** as a broadcast spray to the soil surface no more than 30 days prior to planting on all soil types.

### Preemergence Surface Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 13** as a broadcast spray to a soil surface with a uniform seedbed which is firm and free of clods after planting and before emergence. Ensure good seed furrow closure and soil coverage to avoid contact with **Pyroxasulfone 85 WG**.



## Early Postemergence Application

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 13**, early Postemergence as a broadcast spray to pulse crops from emergence to third-trifoliate leaf stage. **Pyroxasulfone 85 WG** will provide residual control of weeds germinating after application and rainfall / irrigation activation. **Pyroxasulfone 85 WG** will not control already germinated or emerged weeds. For control of any emerged weeds this product may be applied as a tank mix or sequential application with a labeled postemergence herbicide(s). Apply as early as possible to obtain better weed control and reduce weed competition.

## Sequential Applications

Sequential Applications (e.g. preplant or preemergence application may be followed by an early postemergence application) as long as the maximum total, as described by the soil type, is not exceeded. Follow all application timing instructions. Separate sequential applications by at least 14 days.

### Perennial Grasses for seed (Fine Fescue, Perennial Ryegrass, Tall Fescue, Orchardgrass) For use in Idaho, Oregon and Washington only

**Pyroxasulfone 85 WG** may be applied to perennial grasses for seed (including fine fescue, perennial ryegrass, tall fescue and orchardgrass), in the fall, preemergence to the weeds, in spring planted (at least 8 tillers) and established stands, for residual weed control (at beginning of fall rains) of many annual grasses, volunteer spouts and winter annual broadleaf weeds listed in **Table 1**. Before applying to perennial grass for seed, verify with your local seed company (supplier) the selectivity of **Pyroxasulfone 85 WG** on your variety to avoid potential injury.

## Crop Response

The use of **Pyroxasulfone 85 WG** may result in growth suppression or stand loss of perennial grasses for seed if extreme conditions of high/heavy rainfall, high winds, treated soil splashing on the leaves and extended periods of water-saturated soil occur right before or soon after germination and during seedling growth.

## Application Rates

Apply **Pyroxasulfone 85 WG** alone, in tank mix, or sequentially with other herbicides in perennial grasses for seed at the residual rates per cropping season (per year) in **Table 14**.

**Table 14. Residual Rates of Pyroxasulfone 85 WG in Perennial Grasses for seed**

| Use Timing or Method   | Use Rate (oz/A) by Soil Texture <sup>1,2</sup> |           |           |
|--|--|-----------|-----------|
|  | Coarse   | Medium    | Fine      |
| Application for Spring planted grass seed crops<br>(8 or more tillers per plant) | 1.0 – 2.0                                      | 1.0 – 2.0 | 1.0 – 2.0 |
| Application for established grass seed crops<br>(at least one seed harvest)      | 1.0 – 2.0                                      | 1.0 – 2.0 | 1.0 – 2.0 |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents

## Crop-specific Restrictions

- **DO NOT** apply **Pyroxasulfone 85 WG** at more than 2.0 ozs/A (0.107 lb ai/A of pyroxasulfone) in perennial grass for seed in a single application.
- **DO NOT** apply more than 2.0 ozs/A of **Pyroxasulfone 85 WG** (0.107 lb ai/A of pyroxasulfone) per year.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than one time per year in perennial grass for seed.
- Preharvest Interval (PHI) in perennial grass for seed is 60 days.
- **DO NOT** graze perennial grass for seed treated fields or feed treated hay to livestock sooner than 60 days after application.
- **DO NOT** apply **Pyroxasulfone 85WG** in soils classified as a Sand.

## Use Method, Rate and Timing

### Application for Spring planted grass seed crops:

**Pyroxasulfone 85 WG** may be applied at use rates specified in **Table 14** as a broadcast spray in the fall following a spring planting if the crop has attained a growth stage of at least eight tillers and depending on stand vigor.

### Application for Established grass seed crops (at least one seed harvest):

**Pyroxasulfone 85 WG** may be applied following seed harvest at use rates specified in **Table 14** as a broadcast spray depending on stand vigor.

### Tank Mixtures

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in Perennial grass for seed for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use in perennial grass for seed. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

## Soybean

**Pyroxasulfone 85 WG** may be applied preplant surface, preplant incorporated, preemergence or early postemergence, or in the fall to soybean for residual preemergence weed control. Before applying to soybean, verify with your local seed company (supplier) the selectivity of **Pyroxasulfone 85 WG** on your variety to avoid potential injury .

### Application Rates

Apply **Pyroxasulfone 85 WG** alone, in tank mix, or sequentially in soybeans at the residual rates in **Table 15**.

**Table 15. Residual Rates of Pyroxasulfone 85 WG in Soybean**

| Application Timing    | Use Rate (oz/A) by Soil Texture <sup>1, 2</sup> |           |            |
|-----------------------|---|-----------|------------|
|                       | Coarse  | Medium    | Fine       |
| Preplant Surface      | 1.0 – 2.1                                       | 1.5 – 3.0 | 1.75 – 3.5 |
| Preplant Incorporated | 1.0 – 2.1                                       | 1.5 – 3.0 | 1.75 – 3.5 |
| Preemergence          | 1.0 – 2.1                                       | 1.5 – 3.0 | 1.75 – 3.5 |
| Early Postemergence   | 1.0 – 2.1                                       | 1.5 – 3.0 | 2.0 – 3.5  |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents

### Crop-specific Restrictions

- **On coarse soils - DO NOT** apply more than 2.1 ozs/A of **Pyroxasulfone 85 WG** (0.112 lb ai/A of pyroxasulfone) in a single application in soybean and **DO NOT** exceed the maximum cumulative amount of 2.1 ozs/A of **Pyroxasulfone 85 WG** (0.112 lb ai/A of pyroxasulfone) from all applications, including from sequential applications (e.g., fall application followed by spring application or sequential applications in the spring), in soybean per year.
- **On medium soils - DO NOT** apply more than 3.0 ozs/A of **Pyroxasulfone 85 WG** (0.159 lb ai/A of pyroxasulfone) in a single application in soybean and **DO NOT** exceed the maximum cumulative amount of 3.5 ozs/A of **Pyroxasulfone 85 WG** (0.186 lb ai/A of pyroxasulfone) from all applications, including from sequential applications (e.g., fall application followed by spring application or sequential spring applications), in soybean per year.
- **On fine soils - DO NOT** apply more than 3.5 ozs/A of **Pyroxasulfone 85 WG** (0.186 lb ai/A of pyroxasulfone) in a single application in soybean and **DO NOT** exceed the maximum cumulative amount of 3.5 ozs/A of **Pyroxasulfone 85 WG** (0.186 lb ai/A of pyroxasulfone) from all applications, including from sequential applications (e.g., fall application followed by spring application or sequential spring applications), in soybean per year.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than two times per year in soybean when using labeled rates less than the single maximum application.

- There is **no required (preharvest)** interval between a preplant, preemergence, or early postemergence application of **Pyroxasulfone 85 WG** and the harvest of soybean grain.
- Separate sequential applications by at least 14 days.

### Crop-specific Precautions

- **Seeding Depth:** Crop seeds must be planted a minimum 1 inch deep.
- The use of **Pyroxasulfone 85 WG** may result in temporary growth suppression in soybean if extreme conditions of high rainfall and extended periods of water-saturated soil occur during soybean germination or early seedling development.

### Application Timings

**Pyroxasulfone 85 WG** may be applied in a single application or in sequential applications.

### Fall Applications for controlling weeds germinating the following spring

**For use only in Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin, north of highway 136 in Illinois and north of highway 91 in Nebraska.** **Pyroxasulfone 85 WG** may be applied in the fall to control weeds in conventional, minimum tillage, or no-till soybean production systems planted the following spring. This fall application program will typically need to be followed with a suitable in-season postemergence herbicide treatment to provide season long control of the complete target weed spectrum. Use only on medium or fine soils and at a use rate of 2.5 to 3.5 ozs/A (0.133 to 0.186 lb ai/A of pyroxasulfone) (medium soil) and 3.5 ounces (0.186 lb ai/A of pyroxasulfone) (fine soil) of **Pyroxasulfone 85 WG**. See the main **Application Timings** section of this label for restrictions and directions.

### Fall / Winter Applications for controlling weeds germinating in the fall or winter annual weeds

**Pyroxasulfone 85 WG** may be broadcast surface applied in the fall or winter to control winter annual weeds and other weeds germinating in the fall. Use on coarse, medium or fine soils at rates listed for the preplant surface timing. Sequential preemergence and/or postemergence applications can be made, but **DO NOT** exceed the maximum cumulative rate allowed by soil type in soybean per year. See the main **Application Timings** section of this label for restrictions and directions.

### Early Preplant Surface Application (15 to 45 days prior to planting)

Use the higher application rate listed for preplant surface applications when applied earlier (15 to 45 days) before planting. A lower rate within the list range could be used if a later sequential application is planned. Preplant surface applications are not advised on coarse soils or in areas where average annual rainfall (or rainfall + irrigation) typically exceeds 40 inches. Cultivation or a labeled postemergence herbicide application may still be required under certain conditions for complete weed control.

### Preplant Surface or Preplant Incorporated Applications (up to 14 days prior to planting)

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 15** as a broadcast spray to the soil surface or incorporated up to 14 days before planting on all soil types.

### Preemergence Surface Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 15** as a broadcast spray to the soil surface after planting and before crop emergence.

### Early Postemergence Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 15** as a broadcast spray to soybean from emergence (cracking stage) to sixth-trifoliolate leaf stage. Additional crop response may occur if **Pyroxasulfone 85WG** is applied between emergence (cracking stage) and the first trifoliolate stage especially when mixed with other herbicide and adjuvant. **Pyroxasulfone 85 WG** will provide residual control of weeds germinating after application. Weeds that are already emerged at the time of application must be controlled with cultivation, or tank mix or sequential application of another herbicide labeled for postemergence control of the target weeds in the crop. **Pyroxasulfone 85 WG** applications to emerged soybeans may result in temporary leaf burn and stunting, but a reduction in soybean

yield is unexpected. Tank mixes of **Pyroxasulfone 85 WG** with other crop protection products or adjuvants may significantly enhance this effect. Depending upon growing condition, recovery from this injury begins immediately but may take several weeks for the injury to dissipate entirely.

## Sequential Applications

If a sequential application program of **Pyroxasulfone 85 WG** is used (e.g., fall application followed by spring application, or sequential applications in the spring), the maximum combined rate of **Pyroxasulfone 85 WG** that may be applied in soybean per year is 2.1 oz/A (0.112 lb ai/A of pyroxasulfone) on coarse soils or 3.5 oz/A (0.186 lb ai/A of pyroxasulfone) on medium to fine soils. Separate sequential applications by at least 14 days.

## Tank Mixtures

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in soybean for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use in soybean. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

## Sunflower Subgroup 20B

**Pyroxasulfone 85 WG** may be applied preplant surface, preplant incorporated, preemergence or postemergence to Sunflower subgroup 20B crops for residual preemergence control of lited weeds (**Table 1**). Crops include Calendula; castor oil plant; Chinese tallowtree; euphorbia; evening primrose; jojoba; niger seed; rose hip; safflower; stokes aster; sunflower; tallowwood; tea oil plant; vernonia; cultivars, varieties, and/or hybrids of these. Before applying to Sunflower subgroup 20B crops verify with your local seed company (supplier) the selectivity of **Pyroxasulfone 85 WG** on your inbred line or hybrid to avoid potential injury.

## Application Rates

Apply **Pyroxasulfone 85 WG** alone, in tank mix, or sequentially in sunflower subgroup 20B at the residual rates provided in **Table 16** hereafter.

| Application Timing    | Use Rate (oz/A) by Soil Texture <sup>1, 2</sup> |           |           |
|-----------------------|---|-----------|-----------|
|                       | Coarse  | Medium    | Fine      |
| Preplant Surface      | 1.0 – 5.0                                       | 1.0 – 5.0 | 1.0 – 5.0 |
| Preplant Incorporated | 1.0 – 5.0                                       | 1.0 – 5.0 | 1.0 – 5.0 |
| Preemergence          | 1.0– 5.0  | 1.0 – 5.0 | 1.0 – 5.0 |
| Early Postemergence   | 1.0 – 5.0                                       | 1.0 – 5.0 | 1.0 – 5.0 |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents

## Crop-specific Restrictions

- **DO NOT** apply more than 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of pyroxasulfone) in a single application in Sunflower subgroup 20B.
- **DO NOT** apply more than a maximum cumulative amount of 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of Pyroxasulfone) from sequential applications (e.g. preplant surface or preplant incorporated or preemergence application followed by early postemergence application or consecutive postemergence applications), per year in Sunflower subgroup 20B.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than three times per year in Sunflower subgroup 20B when using labeled rates less than the single maximum application rate.
- There is no required (preharvest) interval between a preplant, preplant incorporated, or preemergence application of **Pyroxasulfone 85 WG** and Sunflower subgroup 20B harvest.

- **DO NOT** apply **Pyroxasulfone 85WG** as an early postemergence application less than 60 days before harvest of sunflower seeds.
- Separate sequential applications by at least 14 days.

### Crop-specific Precautions

- **Seeding Depth:** Crop seeds must be planted a minimum 1 inch deep.
- The use of **Pyroxasulfone 85 WG** may result in temporary growth suppression in sunflower subgroup 20B if extreme conditions of high rainfall and extended periods of water-saturated soil occur during soybean germination or early seedling development.
- The use of **Pyroxasulfone 85 WG** may result in temporary growth suppression or leaf burn on Sunflower subgroup 20B under stressful conditions including inadequate or excessive moisture, cool and hot temperatures, compacted soils, injury from other pesticides, disease or other pest damage, mechanical injury, nutrient imbalances, or other conditions known to cause plant stress.

### Application Timings

**Pyroxasulfone 85 WG** may be applied in a single application or in sequential applications.

### Fall/Winter Application for controlling weeds germinating in the fall, or winter annual weeds.

**Pyroxasulfone 85 WG** may be broadcast surface applied in the fall or winter to control winter annual weeds and other weeds germinating in the fall. Use on coarse, medium, or fine soils at rates listed in **Table 16** for preplant surface timing.

### Preplant surface application (15 to 45 days before planting)

Use application rates in **Table 16** when making preplant surface applications, using the highest application rate within the rate range for a given soil texture. Preplant surface applications are not advised on coarse soils, in areas where average annual rainfall (or rainfall plus irrigation) typically exceeds 40 inches. Cultivation or a labeled postemergence herbicide application may be required for complete weed control.

### Preplant surface, Preplant Incorporated Applications (up to 14 days prior to planting)

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 16** as a broadcast spray to the soil surface or incorporated ( $\leq 2$  inch deep) up to 14 days before planting on all soil types.

### Preemergence Surface Application

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 16** as a broadcast spray to the soil surface after planting but before crop emergence. Apply **Pyroxasulfone 85WG** only to a uniform seedbed which is firm and free of clods, cracks, excess trash (previous crop residue), and weed growth. The seedbed must be prepared to ensure good seed row closure and soil coverage of the seed. Utilize a tank mix with an effective labeled burndown herbicide to control emerged weeds.

### Early Postemergence Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 16** as a broadcast spray from emergence to first true leaf through 60 days before harvest. **Pyroxasulfone 85 WG** will provide preemergence residual control of weeds germinating after application. Weeds that are already emerged at the time of application must be controlled with cultivation, or tank mix or sequential application of another herbicide labeled for postemergence control of the target weeds in the crop. **Pyroxasulfone 85 WG** applications to the emerged Sunflower subgroup 20B crops may result in temporary leaf burn and stunting, but a reduction in yield is not expected. Adjuvant may be applied with **Pyroxasulfone 85 WG** when making early postemergence applications.

### Sequential Applications

If a sequential application program of **Pyroxasulfone 85 WG** is used (e.g. preplant surface or preplant incorporated or preemergence application followed by early postemergence application or consecutive postemergence applications), the maximum combined rate of **Pyroxasulfone 85 WG** that may be applied in Sunflower subgroup

20B per year is 5.0 ozs/A (0.266 lb ai/A of pyroxasulfone) on all soils. Separate sequential applications by at least 14 days.

## Tank Mixtures

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in Sunflower subgroup 20B for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use in Sunflower subgroup 20B. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

### Tuberous and corm vegetables (Crop subgroup 1C):

**Pyroxasulfone 85WG** may be used as part of a weed management program in the following tuberous and corm vegetables: Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava, bitter and sweet; chayote (root); chufa; dasheen; ginger; leren; potato; sweet potato; taniel; turmeric; yam bean; yam, true.

**Pyroxasulfone 85 WG** may be applied preemergence or as a postemergence directed spray (lay-by) application for residual preemergence control of listed weeds (**Table 1**).

## Crop Response

The use of **Pyroxasulfone 85 WG** may result in temporary growth suppression of tuberous and corm vegetables if extreme conditions of high rainfall and extended periods of water-saturated soil occur during germination or early seedling development. Before using, verify the selectivity of **Pyroxasulfone 85WG** with your local seed company (supplier) in order to avoid potential injury.

## Application Rates in Tuberous and corm vegetables

Apply **Pyroxasulfone 85 WG** alone, in tank mix combination, or sequentially at the residual rates provided in **Table 17**.

**Table 17. Residual Rates of Pyroxasulfone 85 WG in Tuberous and corm vegetables**

| Application Timing                    | Use Rate (oz/A) by Soil Texture <sup>1, 2</sup> |           |           |                                       |
|---------------------------------------|---|-----------|-----------|---------------------------------------|
|                                       | Coarse  | Medium    | Fine      | Muck, greater than 20% Organic Matter |
| Preemergence                          | 1.0 – 5.0                                       | 1.0 – 5.0 | 1.0 – 5.0 | 1.0 – 5.0                             |
| Postemergence Directed Spray (Lay-by) | 1.0 – 5.0                                       | 1.0 – 5.0 | 1.0 – 5.0 | 1.0 – 5.0                             |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents.

## Crop-specific Restrictions

- **DO NOT** apply more than 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of pyroxasulfone) in a single application in Tuberous and Corm Vegetables.
- **DO NOT** apply more than a maximum cumulative amount of 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of Pyroxasulfone) from sequential applications (e.g. preemergence application followed by a postemergence-directed (lay-by) application), in Tuberous and Corm Vegetables per year.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than three times per year in Tuberous and Corm Vegetables when using labeled rates less than the single maximum application rate.
- There is no required (preharvest) interval between a preemergence application of **Pyroxasulfone 85 WG** and Tuberous and Corm Vegetable harvest.



- The pre harvest interval after postemergence directed spray (lay-by) application of **Pyroxasulfone 85 WG** is 60 days.
- **DO NOT** apply **Pyroxasulfone 85 WG** prior to planting tuberous and corm vegetables seed pieces.
- Separate sequential applications by at least 14 days.

### Crop-specific Precautions

- The use of **Pyroxasulfone 85 WG** may result in temporary growth suppression or leaf burn on tuberous and corm vegetables under stressful conditions for example inadequate or excessive moisture, cool and hot temperatures, compacted soils, injury from other pesticides, disease or other pest damage, mechanical injury, nutrient imbalances, or other conditions known to cause plant stress.

### Application Timings

**Pyroxasulfone 85 WG** may be applied in a single application or in sequential applications.

### Preemergence Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 17** as a broadcast spray to the soil surface after planting or drag-off, but before tuberous and corm vegetables and weeds emerge. Where “drag off” is practiced, **DO NOT** apply **Pyroxasulfone 85 WG** until the “drag off” process is complete and there is a minimum of 2 inches of soil covering the vegetative portion of the tuberous and corm vegetables plants, or **Pyroxasulfone 85 WG** may be applied after hilling but prior to tuberous and corm vegetables or weed emergence, or **Pyroxasulfone 85 WG** may be applied where tuberous and corm vegetables hills are harrowed and re-hilled and sprayed, but application must be prior to tuberous and corm vegetables and weed emergence. There needs to be 2 inches of soil covering the tuberous and corm vegetables. Care must be exercised so that “drag off” implements do not injure the plants. Efficacy will be reduced if later cultural practices expose untreated soil. Apply **Pyroxasulfone 85WG** only to a uniform seedbed which is firm and free of clods and cracks. The seedbed must be prepared to ensure good seed piece row closure and soil coverage of the seed pieces.

### Postemergence-Directed Spray (Lay-by) Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 17** as a postemergence directed spray at layby, in combination with a postemergence herbicide, between plant rows, in order to extend residual control of the postemergence herbicide. **Pyroxasulfone 85 WG** will not control emerged weeds. **Pyroxasulfone 85 WG** will provide preemergence residual control of weeds germinating after application. **Pyroxasulfone 85 WG** applications to tuberous and corm vegetables may result in temporary leaf burn and stunting, but a reduction in yield is not expected. Avoid contacting leaves of tuberous and corm vegetables with **Pyroxasulfone 85 WG** spray solution or injury may occur.

### Sequential Applications

If a sequential application program of **Pyroxasulfone 85 WG** is used (e.g. preemergence application followed by a postemergence-directed (lay-by) application), the maximum combined rate of **Pyroxasulfone 85 WG** that may be applied in Tuberous and Corm Vegetables per year is 5.0 ozs/A (0.266 lb ai/A of pyroxasulfone) on all soils. Separate sequential applications by at least 14 days.

### Tank Mixtures

It is the pesticide user’s responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in Tuberous and Corm Vegetables for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use in Tuberous and Crom Vegetables. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

## Spring and Winter Wheat

**Pyroxasulfone 85 WG** may be applied preplant surface, preemergence, delayed preemergence or early postemergence in fall-seeded or spring-seeded wheat for residual preemergence weed control.

Certain wheat varieties can be more sensitive to **Pyroxasulfone 85 WG**. Before applying to wheat, verify with your local seed company (supplier), university extension specialist (e.g., wheat breeder, weed scientist, county agent, etc.), or K-I CHEMICAL U.S.A., Inc. representative the selectivity of **Pyroxasulfone 85 WG** on your variety to avoid potential injury.

### Crop Response

**Pyroxasulfone 85 WG** applied preplant surface or preemergence surface can cause wheat injury. Under stressful conditions (for example inadequate or excessive moisture, cool or hot temperatures, compacted soils, injury from other pesticides, disease or other pest damage, mechanical injury, nutrient imbalances, or other conditions known to cause plant stress) **Pyroxasulfone 85 WG** injury will be intensified.

Wheat injury is not expected when **Pyroxasulfone 85 WG** is applied delayed preemergence or early postemergence. However, some visual wheat response is possible when **Pyroxasulfone 85 WG** is applied to wheat under stressful conditions for example inadequate or excessive moisture, cool or hot temperatures, compacted soils, injury from other pesticides, disease or other pest damage, mechanical injury, nutrient imbalances, or other conditions known to cause plant stress.

Wheat response is most often visible as stunting and/or discoloration of leaf tissue (e.g., chlorosis), but in its most severe form can result in stand loss. The greatest potential for wheat response occurs when **Pyroxasulfone 85 WG** concentrates in the crop row. Unacceptable wheat response may be caused by uneven application, soil clods or disturbances, an open/cracked seed furrow that allows herbicide to directly contact the seed, or a deep seed furrow that allows herbicide concentration after a rain/irrigation event during wheat germination.

Apply **Pyroxasulfone 85 WG** only to a uniform seedbed which is firm and free of clods, cracks, excess trash (previous crop residue), and weed growth. The seedbed **MUST** be prepared to ensure good seed row closure and soil coverage of the seed. Open furrows or poor furrow closure can result in crop injury. Use high quality seed. Plant seed at least 3/4-inch deep to avoid crop injury.

When applications of **Pyroxasulfone 85 WG** are intended to be made preplant surface or preemergence, plantseed at least 1-inch deep to avoid possible crop injury, but not too deep for proper germination. When applications of **Pyroxasulfone 85 WG** are intended to be made early postemergence, plantseed at least 1/2-inch to 1-inch deep to avoid crop injury.

The use of **Pyroxasulfone 85 WG** in wheat may result in temporary or sustained growth suppression and chlorosis if high rainfall or irrigation leads to extended periods of water-saturated soil during early seeding development. To reduce crop response, avoid applying **Pyroxasulfone 85 WG** if a long period of rain is expected prior to wheat emergence.

Herbicidal activity of **Pyroxasulfone 85 WG** may be reduced if trash from the previous crop covers more than 25% of the soil surface. Manage trash levels with combine straw shredder/spreaders, earlier burndown of emerged weeds, or light tillage.

Prolonged periods of dry weather following application of **Pyroxasulfone 85 WG** may reduce herbicidal effectiveness. When **Pyroxasulfone 85 WG** is not activated and weeds emerge, a labeled and effective postemergence herbicide in wheat may be needed to control weed escapes.

**Pyroxasulfone 85 WG** will not control germinated or emerged weeds. For control of emerged weeds this product may be applied with a tank mix partner or sequential application with a labeled burndown or postemergence wheat herbicide(s).

### Application Rates

Apply **Pyroxasulfone 85 WG** alone, in tank mix, or sequentially in wheat at the residual rates in **Table 18**.



**Table 18. Residual Rates of Pyroxasulfone 85 WG in Wheat**

| Application Timing   | Use Rate (oz/A) by Soil Texture <sup>1, 2</sup> |           |           |
|----------------------|---|-----------|-----------|
|                      | Coarse  | Medium    | Fine      |
| Preplant Surface     | 0.7 – 1.5                                       | 1.0 – 2.0 | 1.0 – 2.5 |
| Preemergence         | 0.7 – 1.5                                       | 1.0 – 2.0 | 1.0 – 2.5 |
| Delayed Preemergence | 0.7 – 1.5                                       | 1.0 – 2.0 | 1.0 – 2.5 |
| Early Postemergence  | 0.7 – 1.5                                       | 1.0 – 2.0 | 1.0 – 2.5 |

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>2</sup> Refer to **Table 4** for active ingredient use rate equivalents.

### Crop-specific Restrictions

- **On coarse soils - DO NOT** apply more than 1.5 ozs/A of **Pyroxasulfone 85WG** (0.079 lb ai/A of pyroxasulfone) in a single application in wheat and **DO NOT** exceed the maximum cumulative amount of 2.5 ozs/A of **Pyroxasulfone 85 WG** (0.133 lb ai/A of pyroxasulfone) from all applications, including from sequential applications (e.g., preplant, preemergence, or delayed preemergence application followed by early postemergence application or multiple early postemergence applications), in wheat per year.
- **On medium soils - DO NOT** apply more than 2.0 ozs/A of **Pyroxasulfone 85WG** (0.106 lb ai/A of pyroxasulfone) in a single application in wheat and **DO NOT** exceed the maximum cumulative amount of 2.5 ozs/A of **Pyroxasulfone 85 WG** (0.133 lb ai/A of pyroxasulfone) from all applications, including from sequential applications (e.g., preplant, preemergence, or delayed preemergence application followed by early postemergence application or multiple early postemergence applications), in wheat per year.
- **On fine soils - DO NOT** apply more than 2.5 ozs/A of **Pyroxasulfone 85WG** (0.133 lb ai/A of pyroxasulfone) in a single application in wheat and **DO NOT** exceed the maximum cumulative amount of 2.5 ozs/A of **Pyroxasulfone 85 WG** (0.133 lb ai/A of pyroxasulfone) from all applications, including from sequential applications (e.g., preplant, preemergence, or delayed preemergence application followed by early postemergence application or multiple early postemergence applications), in wheat per year.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than two times per year in wheat when using labeled rates less than the single maximum application rate.
- **DO NOT** apply preplant incorporated in wheat.
- **DO NOT** apply to durum wheat.
- Wheat forage and hay may be fed or grazed 7 or more days after application.
- **DO NOT** seed wheat deeper than 1.5-inches after a preplant application or before a preemergence or delayed preemergence application.
- **DO NOT** apply **Pyroxasulfone 85 WG** to flooded fields or fully saturated soils.
- **DO NOT** apply preemergence if ¼-inch or more rain is expected within 48 hours after application.
- **DO NOT** irrigate fields after a preemergence or delayed preemergence application until wheat spiking.
- **DO NOT** apply preplant, preemergence, or delayed preemergence to broadcast-seeded wheat.
- Separate sequential applications by at least 14 days.

### Application Timings

**Pyroxasulfone 85 WG** may be applied in a single application or in sequential applications relative to the growth stage of wheat.

### Preplant Surface Applications

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 18** as a broadcast spray to the soil surface no more than 14 days prior to planting on all soil types. Soil disturbance after application from planters/drills may result in herbicide incorporation that can result in unacceptable crop injury, or displacement of **Pyroxasulfone 85 WG** that can result in inconsistent weed control.

### Preemergence Surface Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 18** after planting but before wheat spiking as a broadcast spray to the soil surface with uniform seedbed which is firm and free of clods. Ensure good seed row

closure and soil coverage to avoid contact with **Pyroxasulfone 85 WG**. As the interval from planting to application increases, the potential for crop injury decreases.

### Delayed Preemergence Surface Application

Apply **Pyroxasulfone 85 WG** at the use rates specified in **Table 18** as a broadcast spray to the soil surface following wheat planting when 80% of germinated wheat seeds have a shoot at least ½-inch long until wheat spiking.

### Early Postemergence Application

Apply **Pyroxasulfone 85 WG** at use rates specified in **Table 18** as a broadcast spray to wheat at spiking up to the 4<sup>th</sup> tiller growth stage. **Pyroxasulfone 85 WG** will only suppress or control labeled weeds that germinate after the early postemergence application and rainfall / irrigation activation. **Pyroxasulfone 85 WG** will not control already germinated or emerged weeds. For control of any emerged weeds this product may be applied as a tank mix or sequential application with a labeled postemergence herbicide(s). Apply **Pyroxasulfone 85 WG** as early as possible after wheat emergence in order to prevent weed emergence.

### Sequential Applications

**Pyroxasulfone 85 WG** may be applied as a sequential or split application program where a preplant, preemergence, or delayed preemergence application is followed by an early postemergence application or where multiple early postemergence applications are made. **DO NOT** apply more than a maximum cumulative amount of 2.5 oz/A (0.133 lb ai/A of pyroxasulfone) in wheat per year. Separate sequential applications by at least 14 days.

### Tank Mixtures

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Pyroxasulfone 85 WG** may be tank mixed or applied sequentially with the herbicide products registered for use in wheat for a broader spectrum of control and/or control of emerged weeds. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use in wheat. Follow the adjuvant directions for the tank mix partner of **Pyroxasulfone 85WG**.

### Fallow

**Pyroxasulfone 85 WG** may be used as a residual treatment to control listed weeds at any time of the year during the fallow period following crop harvest and before the following crop is planted.

### Application Rate and Timing

Apply **Pyroxasulfone 85 WG** as a broadcast spray at 1.0 to 4.0 ozs/A (0.053 to 0.213 lb ai/A of pyroxasulfone). Best product performance is obtained when weeds are not emerged before application. Sequential applications may be made with a minimum of 30 days between applications.

### Application Restrictions

- **DO NOT** apply **Pyroxasulfone 85 WG** more than 4.0 ozs/A (0.213 lb ai/A of pyroxasulfone) in a single application in Fallow.
- **DO NOT** apply more than a maximum cumulative amount of 5.0 ozs/A of **Pyroxasulfone 85 WG** (0.266 lb ai/A of Pyroxasulfone) from sequential applications used on fallow per year.
- **DO NOT** apply **Pyroxasulfone 85 WG** more than three times per year in fallow when using labeled rates less than the single maximum application rate.
- Specific rotational crop planting intervals must be observed between an application of **Pyroxasulfone 85 WG** and planting of the following crops (see the table in the section of **Crop Rotation Intervals**).
- Separate sequential applications by at least 14 days.

## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the unopened container at once.

The **Directions for Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of K-I Chemical U.S.A., Inc. or the Seller. All such risks shall be assumed by the Buyer.

To the extent consistent with applicable law, K-I CHEMICAL U.S.A. INC. warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of K-I CHEMICAL U.S.A. INC. To the extent consistent with applicable law, K-I CHEMICAL U.S.A. INC., shall not be liable for consequential, special or indirect damages resulting from the use or handling of this product. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer. To the extent consistent with applicable law exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling or application of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid for this product or at K-I CHEMICAL U.S.A. INC.'s election, the replacement of this product. K-I CHEMICAL U.S.A. INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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