

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

September 18, 2019

Mark D. Gelin Manager, International Registrations ISK Biosciences Corporation 7470 Auburn Road, Suite A Concord, OH 44077

Subject: Label Amendment – Add new application site Product Name: Tolpyralate 400SC Herbicide EPA Registration Number: 71512-29 Application Date: 09/03/2019 Decision Number: 555247

Dear Mr. Gelin:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one 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. 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

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with FIFRA section 6. If you have any questions, please contact Marc Sheahin by phone at 703-347-8639, or via email at sheahin.marc@epa.gov.

Sincerely,

Ein thep

Erik Kraft, Product Manager 24 Fungicide and Herbicide Branch Registration Division (7505P) Office of Pesticide Programs

Enclosure

# **TOLPYRALATE 400SC HERBICIDE**

For broadleaf and grass weed control in fallow areas, field corn, sweet corn, and popcorn.

ACTIVE INGREDIENT: TOLPYRALATE*	35.7 %
OTHER INGREDIENTS:	64.3 %
TOTAL:	100.0 %
*1-[[1-Ethyl-4-[3-(2-methoxyethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-1H-pyrazol-5-yl]oxy]et	hyl methyl
carbonate	

Tolpyralate 400SC Herbicide is formulated as a suspension concentrate (SC) and contains 3.33 pounds of active ingredient per gallon of formulated product (400 grams per liter).

# KEEP OUT OF REACH OF CHILDREN CAUTION

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

	FIRST AID
If swallowed	Call a poison control center or doctor immediately for treatment advice.
	<ul> <li>Have person sip a glass of water if able to swallow.</li> </ul>
	• Do not induce vomiting unless told to do so by the poison control center or doctor.
	<ul> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
If on skin or	Take off contaminated clothing.
clothing	<ul> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> </ul>
	Call a poison control center or doctor for treatment advice.
Have the produc	ct container or label with you when calling a poison control center or doctor, or going for
treatment.	

#### HOT LINE NUMBER

For **24-Hour Medical Emergency Assistance** call **1-888-484-7546**. [For **Chemical Emergency**, Spill, Leak, Fire or Accident, call **CHEMTREC 1-800-424-9300**.]

See inside pages for complete precautionary statements. Read entire label carefully and use only as directed.

EPA Registration No. 71512-29 EPA Establishment No.

Net Contents: xx gallons

ISK Biosciences Corporation 7470 Auburn Road, Suite A Concord, Ohio 44077

# **ACCEPTED** 09/18/2019

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

71512-29

# PRECAUTIONARY STATEMENTS

#### Hazard to Humans and Domestic Animals

#### CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

#### Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes plus socks, and waterproof gloves.

#### **User Safety Requirements**

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

# User Safety Recommendations USERS SHOULD:

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 rinse water. **DO NOT** apply where/when conditions could favor runoff.

#### Ground Water Advisory

Tolpyralate has properties and characteristics associated with chemicals detected in groundwater. Tolpyralate may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

#### Surface Water Advisory

This product may impact surface water due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential loading of Tolpyralate from runoff water and sediment.

Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

## DIRECTIONS FOR USE

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

**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.

#### 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, and greenhouses, and handlers of agricultural pesticides. 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 materials, and shoes plus socks.

Sod and seed farms are within the scope of the Worker Protection Standard.

Tolpyralate 400SC Herbicide must be used only in accordance with directions on this label. To the extent consistent with applicable law, ISK Biosciences Corporation will not be responsible for losses or damage resulting from use of this product in any manner not specifically directed by ISK Biosciences.

# **PRODUCT INFORMATION**

#### Mode of Action

Tolpyralate 400SC Herbicide is a Group 27 (WSSA) or Group  $F_2$  (HRAC) herbicide. Following the absorption of Tolpyralate 400SC Herbicide by actively growing plant tissue, inhibition of p-hydroxyphenyl pyruvate dioxygenase (HPPD) occurs in susceptible weeds and growth ceases. Inhibition of HPPD typically results in bleaching symptomology observed in the growing points.

#### Efficacy

Tolpyralate 400SC Herbicide applied at 1.0 to 1.35 fl oz per acre (0.026 to 0.035 lb ai per acre) can control or suppress the growth of many young and actively growing broadleaf and grass weeds in corn and fallow areas (Table 1). Apply Tolpyralate 400SC Herbicide prior to weeds exceeding 5 inches in

diameter and/or height. In cases where weed infestations are dense, apply Tolpyralate 400SC Herbicide at 1.35 fl oz per acre (0.035 lb ai per acre).

To improve burndown and broaden the postemergence efficacy, particularly the grass control, as well as increase the preemergence weed spectrum, add atrazine to the tank mixture with Tolpyralate 400SC Herbicide. Higher rates of atrazine may be needed to increase the residual preemergence weed control (refer to tank mixture section for details).

Applications need to be made when temperatures and soil moisture conditions favor plant growth, both before and after application, in order to maximize the activity of Tolpyralate 400SC Herbicide. Inadequate coverage of target weeds, improper application technique, and/or application to large, stressed, or mature weeds will usually result in unacceptable weed control. When applied under cloudy, foggy, drought conditions, or cool weather conditions, the activity of Tolpyralate 400SC Herbicide may be slower than expected and/or reduced.

	Scientific Name	Common Name	Tolpyralate 400SC Herbicide	Tolpyralate 400SC Herbicide + Atrazine <sup>1</sup>
Broadleaf	Abutilon theophrasti	Velvetleaf	С	С
Weeds	Amaranthus hybridus	Pigweed, smooth	С	С
	Amaranthus palmeri	Amaranth, Palmer	С	C
	Amaranthus powellii	Amaranth, Powell	С	С
	Amaranthus retroflexus	Pigweed, redroot	С	С
	Amaranthus tuberculatus	Waterhemp	С	С
	Ambrosia artemisiifolia	Ragweed, common	С	С
	Ambrosia trifida	Ragweed, giant	С	С
	Bassia scoparia	Kochia	S	С
	Chenopodium album	Lambsquarters, common	С	С
	Chorispora tenella	Mustard, blue	С	С
	Cirsium arvense	Thistle, Canada	S	S
	Erigeron canadensis	Horseweed	С	С
	Helianthus annuus	Sunflower, Volunteer	С	С
	Helianthus annuus	Sunflower, Common	С	С
	Hibiscus trionum	Mallow, Venice	S	S
	Ipomoea hederacea	Morningglory, ivyleaf	S	S
	Ipomoea purpurea	Morningglory, tall	S	S
	Lamium amplexicaule	Henbit	С	С
	Mollugo verticillata	Carpetweed	С	С
	Persicaria pensylvanica	Smartweed, Pennsylvania	S	S
	Solanum nigrum	Nightshade, black	S	С
	Solanum physalifolium	Nightshade, hairy	С	С
	Solanum ptychanthum	Nightshade, eastern black	S	S
	Solanum rostratum	Buffalobur	С	С
	Sonchus oleraceus	Sowthistle, annual	С	С
	Xanthium strumarium	Cocklebur, common	S	С
Grass	Digitaria sanguinalis	Crabgrass, large	С	С
Weeds	Echinochloa crus-galli	Barnyardgrass	S	C <sup>2</sup>
	Eleusine indica	Goosegrass	S	С

**Table 1.** Broadleaf and grass weeds controlled (C) or suppressed (S) by postemergence applications ofTolpyralate 400SC Herbicide applied at 1.0 to 1.35 fl oz per acre (0.026 to 0.035 lb ai per acre).

Panicum miliaceum	Millet, wild proso	S	С
Setaria faberi	Foxtail, giant	С	С
Setaria pumila	Foxtail, yellow	С	С
Setaria viridis	Foxtail, green	С	С
Sorghum bicolor	Sorghum	S	C <sup>2</sup>
Urochloa platyphylla	Signalgrass, broadleaf	S	S

<sup>1</sup>Refer to tank mixture section for details.

<sup>2</sup>Apply Tolpyralate 400SC Herbicide at 1.35 fl oz per acre (0.035 lb ai per acre ) for control.

#### **Crop Sensitivity**

Corn has exhibited little to no sensitivity to Tolpyralate 400SC Herbicide, however, crop injury may be observed when applications are made during stressful environmental conditions.

Many crops have high sensitivity to Tolpyralate 400SC Herbicide. Avoid all direct and/or indirect contact of Tolpyralate 400SC Herbicide with crops other than corn (see spray drift management and spray drift advisory sections for more information).

Tolpyralate 400SC Herbicide has not been screened on all inbred corn lines for sensitivity. Contact your seed corn supplier for more information. To the extent consistent with applicable law, ISK Biosciences is not responsible for any crop injury following the use of Tolpyralate 400SC Herbicide in inbred corn lines grown for seed.

#### **Rotational Crop Information**

The following rotational crops may be planted after applying Tolpyralate 400SC Herbicide. If Tolpyralate 400SC Herbicide is applied in a tank mixture, review the crop rotational intervals of all tank mixture partners and follow the most restrictive rotational crop interval.

Сгор	Replant and Rotational Intervals (Months)
Corn (field corn, sweet corn, and popcorn)	Immediate
Barley, grass (grown for seed or forage), oats, rye,	3
and wheat	
Alfalfa, bean (dry), bean (green; including seed	9
production), bean (snap), cabbage, canola, cotton,	
pea (field and edible), peanut, potato, rice, sorghum,	
soybean, cucurbits, sunflower, and tomato	
All other crops	12
Sugarbeets	18

## **PRODUCT CROP USE & APPLICATION INSTRUCTIONS**

Tolpyralate 400SC Herbicide is registered for weed control in fallow areas, field corn, sweet corn, and popcorn. Apply using ground spray equipment.

#### Use Restrictions

- **DO NOT** apply this product by air or through any type of irrigation system.
- **DO NOT** exceed the single maximum application rate of 1.35 fl oz per acre (0.035 lb ai per acre).
- **DO NOT** apply more than two applications of Tolpyralate 400SC Herbicide per year.
- **DO NOT** apply more than a total of 2.70 fl oz per acre per year (0.07 lb ai/acre/year).
- Allow at least 14 days between applications of Tolpyralate 400SC Herbicide.
- **DO NOT** apply Tolpyralate 400SC Herbicide within 45 days of field corn and popcorn grain harvest.
- **DO NOT** apply Tolpyralate 400SC Herbicide within 35 days of fresh market sweet corn harvest.
- **DO NOT** graze or feed treated corn forage or silage for 21 days after application of Tolpyralate 400SC Herbicide.

Application Timing	Rate Range (fl oz/A)	Additional Information & Restrictions
Postemergence	1.0 to 1.35	• Apply Tolpyralate 400SC Herbicide-up to the 6 leaf
	(0.026 to 0.035 lb ai per	collar (V6) stage or up to 20 inches tall, whichever
	acre)	is more restrictive.
		<ul> <li>Refer to weed efficacy information to cross-</li> </ul>
		reference the timing for Tolpyralate 400SC
		Herbicide applications in corn for control of target
		weed species.
		<ul> <li>Apply Tolpyralate 400SC Herbicide with an</li> </ul>
		adjuvant for optimum activity (refer to adjuvant
		section for details).
		<ul> <li>Tolpyralate 400SC Herbicide is rainfast within 1</li> </ul>
		hour after application.

#### Corn (All types including field corn, sweet corn, and popcorn)

#### Fallow

Application Timing	Rate Range (fl oz/A)	Additional Information & Restrictions
Postemergence	1.0 to 1.35	<ul> <li>Apply Tolpyralate 400SC Herbicide prior to</li> </ul>
	(0.026 to 0.035 lb ai per	weeds exceeding 5 inches in diameter and/or
	acre)	height.
		<ul> <li>Refer to weed efficacy information to cross-</li> </ul>
		reference the timing for Tolpyralate 400SC
		Herbicide applications for control of target weed
		species.
		<ul> <li>Apply Tolpyralate 400SC Herbicide with an</li> </ul>
		adjuvant for optimum activity (refer to adjuvant
		section for details).
		• Tolpyralate 400SC Herbicide is rainfast within 1
		hour after application.

#### Spray Carrier

Use clean water (free of mud or clay) when applying Tolpyralate 400SC Herbicide. Avoid using liquid nitrogen fertilizer as the total carrier solution.

#### Spray Volume

Tolpyralate 400SC Herbicide can be mixed into a final spray solution that will be applied at a volume between 10 and 50 gallons per acre.

#### **Nozzle Selection**

Tolpyralate 400SC Herbicide can be applied through various nozzle types and sizes. Review and follow restrictions from the spray drift management section before making a nozzle selection.

#### **Application Timing and Rates**

For Tolpyralate 400SC Herbicide application timing and rates, see instructions listed for each use.

#### Adjuvants

Always use a methylated seed oil (MSO), crop oil concentrate (COC), or a nonionic surfactant (NIS) when applying Tolpyralate 400SC Herbicide to avoid reduced performance. MSO has been observed to provide the most consistent performance over a wide range of environmental conditions. MSO and COC can be applied at a concentration of 0.5 and 1% v/v (0.5 and 1 gallon per 100 gallon of spray volume), respectively, of the final spray volume. NIS can be applied at a concentration equal to 0.25% v/v (2 pints per 100 gallon of spray volume) of the final spray volume.

The addition of an ammonium nitrogen fertilizer, either a 28% or 32% N urea ammonium nitrate (UAN) or a spray grade ammonium sulfate (AMS), to the final spray solution is allowed. If UAN or AMS is added to the spray mixture, add UAN (or a liquid formulation of AMS) at a concentration of 2.5% v/v (2.5 gallons per 100 gallons or spray volume) and add AMS at a concentration of 8.5 lbs product per 100 gallons of the final spray volume.

**Adjuvant Mixtures** – Combinations of adjuvant products may be used at doses that are relative to the adjuvant specifications above. It is the user's responsibility to understand whether the adjuvant mixture quality is equal to or better than the addition of MSO, COC, NIS, and/or fertilizer at the rates specified above.

#### **Tank Mixtures**

Tolpyralate 400SC Herbicide may be tank mixed with other herbicides registered for weed control in field corn, sweet corn, and popcorn. Read and follow all label directions for each product. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations, and directions for use on all product labels involved in the tank mixture. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

For tank mixtures, add individual components to the spray tank in the following sequence: water, dry formulated products, liquid formulated products, fertilizer (dry and/or liquid), and then adjuvants. Be sure to reference the product labels for each tank mixture partner to determine if exceptions apply, including the addition of the tank mixture products after the addition and dispersal of fertilizer.

Tolpyralate 400SC Herbicide is compatible with fertilizers and micronutrient products, provided sufficient free water is available for dispersion of all the products in the tank mixture. Use tank mixture combinations only when applicator experience indicates that the tank mixture will not result in objectionable crop injury.

The physical compatibility of Tolpyralate 400SC Herbicide with tank mix partners needs to be evaluated before use (see compatibility test instructions).

#### Compatibility Test:

Additives and tank mixtures need to be tested for compatibility by mixing in a small container prior to mixing in spray tank.

In a glass jar (~1 quart), add all mix partners, in their relative proportions. Invert, shake or mix the jar thoroughly. If mixture forms precipitates (flakes or sludge), gels, balls up or forms oily films or layers, this indicates incompatibility. Though signs of incompatibility will typically be seen within 5 minutes of mixing, mixture needs to be observed for approximately 30 minutes.

Compatibility agents can be used to facilitate mixing. Add ¼ teaspoon of the compatibility agent to the mix (assuming a mixing rate of 2 pints compatibility agent per 100 gallons spray mix). If compatibility agents to do not facilitate mixing, the mixture is incompatible and must not be used.

#### Tolpyralate 400SC Herbicide plus Atrazine

To improve burndown and broaden the postemergence efficacy, particularly the grass control, as well as increase the preemergence weed spectrum, add atrazine to the tank mixture with Tolpyralate 400SC Herbicide. Tolpyralate 400SC Herbicide can be applied at 1 to 1.35 fl oz per acre (0.026 to 0.035 lb ai per acre) in combination with atrazine applied at 0.5 to 2 lb ai per acre. Higher rates of atrazine may be needed to increase the residual preemergence weed control.

#### Tolpyralate 400SC Herbicide plus Insecticides

Tolpyralate 400SC Herbicide has no restrictions for use with registered insecticides.

#### Sprayer Mixing

#### Mixing and Loading Instructions

Prepare no more spray mixture than is needed for the immediate application-and avoid overnight storage of Tolpyralate 400SC Herbicide in spray mixtures.

- 1. Ensure the spray system is free of residues from previous applications.
- 2. Fill the tank 1/2 full of clean water.
- 3. Turn on the tank agitation system.
- 4. Add the required amount of Tolpyralate 400SC Herbicide and continue agitation until the Tolpyralate 400SC Herbicide is completely dispersed.
- 5. As the tank is filling, add the required spray adjuvants.

Maintain-agitation during mixing and application.

#### MANDATORY SPRAY DRIFT DIRECTIONS

#### Ground Boom 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 or coarser 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.

#### Boom-less Ground Applications

- Applicators are required to use a Medium or coarser droplet size (ASABE S572.1) for all applications.
- 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.
- 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.

• 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.

- BOOM-LESS GROUND APPLICATIONS Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.
- HANDHELD TECHNOLOGY APPLICATIONS Take precautions to minimize spray drift.

#### Calibration

Equipment must be calibrated regularly according to manufacturer's specifications.

#### Spray Tank Cleaning

Clean application equipment thoroughly by using a strong detergent or commercial spray cleaner according to the manufacture's direction, followed by triple rinsing the equipment before and after applying this product.

## PRODUCT STEWARDSHIP INFORMATION

#### Resistance Management

Tolpyralate 400SC herbicide is a Group 27 (WSSA) or Group F2 (HRAC) herbicide which inhibits carotenoid biosynthesis in plants. Naturally occurring biotypes of certain weed species with resistance to several herbicide modes of action (triazine (Group 5), ALS (Group 2), PPO (Group 14), glyphosate (Group 9), auxin (Group 4), HPPD (Group 27) and etc.) have been identified. The repeated use of herbicides with the same modes of action allow resistant weeds to be selected and spread. To manage the development and spread of herbicide resistant weed species, it is important to use herbicides with different modes of action either as tank mixes or in sequential applications and in rotations along with altering cultural practices.

To help reduce the development of resistance to HPPD inhibitors (Group 27), always apply the full labeled rate and at the specified application timing listed on the label. Contact your local sales representative, crop advisor, or extension agent to determine if there is suspected HPPD resistant weeds in your region. If HPPD resistant biotypes of target weeds have been reported, use the specified application rates of this product specified for your conditions and add tank mix products so that there are multiple effective mechanisms of actions for each target weed.

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 that the treatment was effective. If suspected weed resistance is observed in a particular weed species contact your retailer representative or call [ISK Biosciences at 1-877-706-4640]. Lack of weed control is not necessarily an indicator of weed resistance.

Suspected herbicide resistant weeds may be identified by these indicators:

- 1. Failure to control a weed species normally controlled by the herbicide applied at specified application rates, especially if control is achieved on adjacent weeds.
- 2. The spreading of a patch of a particular weed species that survives a herbicide application; and
- 3. Surviving plants mixed with controlled individuals of the same species.

If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.

To manage a known herbicide resistant weed population, it is important to use herbicides with varying effective modes of action as tank mix partners, in sequential applications within a growing season, and/or in a multi-year weed management plan.

#### Integrated Pest Management (IPM)

Tolpyralate 400SC herbicide should be used as part of an integrated pest management strategy. Consult with local university extension and agricultural professional's for IPM strategies specific for your area.

#### STORAGE AND DISPOSAL

**Pesticide Storage:** Store product in original container only. **DO NOT** contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place.

**Pesticide Disposal: DO NOT** contaminate water, food, or feed by disposal. Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Non-refillable container (equal to or less than 5 gallons). **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable container (greater than 5 gallons). **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## LIMITATION OF WARRANTY AND DAMAGES

Seller warrants to those persons lawfully acquiring title to this product that at the time of first sale of this product by Seller that this product conformed to its chemical description and was reasonably fit for the express purposes stated on the label when used in accordance with Seller's directions under normal conditions of use as described on the label. To the extent consistent with applicable law, Buyers and users of this product assume the risk of any use contrary to such directions. TO THE FULLEST EXTENT PERMITTED BY LAW, EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESS REFERENCE TO THIS LIMITATION OF WARRANTY AND LIMITATION OF DAMAGES, SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OR GUARANTY, AND SELLER EXPRESSLY DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTIES OF MERCHANTIBILITY OR OF FITNESS FOR A PARTICULAR PURPOSE AND EXPRESSLY DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES THAT MAY EXIST UNDER APPLICABLE LAW, COURSE OF DEALING OR USAGE OF TRADE. NO AGENT OF SELLER IS AUTHORIZED TO GRANT ANY WARRANTY IN EXCESS OF THAT GRANTED IN THIS LIMITATION OF WARRANTY AND LIMITATION OF DAMAGES. TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT. TO THE FULLEST EXTENT PERMITTED BY LAW, SELLER'S LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT SHALL NOT EXCEED THE PURCHASE PRICE OF THE PRODUCT AS TO WHICH A CLAIM IS MADE. To the fullest extent permitted by law, Buyers and users of this product are responsible for all loss or damage from use or handling of this product that results from conditions beyond the control of Seller, including, but not limited to, incompatibility with other products (unless otherwise expressly provided for in the Directions for Use of this product), weather conditions, cultural practices, moisture conditions or other environmental conditions outside of the ranges that are commonly recognized as being conducive to good agricultural and/or horticultural practices.



Tolpyralate 400SC Herbicide Supplemental Labeling

#### SUPPLEMENTAL DIRECTIONS FOR THE USE OF Tolpyralate 400SC Herbicide (EPA Reg. No. 71512-29) KEEP OUT OF REACH OF CHILDREN

#### CAUTION

FOR APPLICATION ON FALLOW GROUND

This Supplemental Label Expires on September 18, 2022 and must not be used or distributed after this date. **Directions for Use:** It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Fallow

ACCEPTED

09/18/2019

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 71512-29

Application Timing	Rate Range (fl oz/A)	Additional Information & Restrictions
Postemergence	1.0 to 1.35	Apply Tolpyralate 400SC Herbicide prior to weeds
	(0.026 to 0.035 lb ai per	exceeding 5 inches in diameter and/or height.
	acre)	<ul> <li>Refer to weed efficacy information to cross-</li> </ul>
		reference the timing for Tolpyralate 400SC
		Herbicide applications for control of target weed
		species.
		<ul> <li>Apply Tolpyralate 400SC Herbicide with an</li> </ul>
		adjuvant for optimum activity (refer to adjuvant
		section for details).
		<ul> <li>Tolpyralate 400SC Herbicide is rainfast within 1</li> </ul>
		hour after application.

**NOTE**: Follow all applicable directions, restrictions, and precautions on the **Tolpyralate 400SC Herbicide** label. **NOTE**: This labeling must be in the possession of the user at the time of pesticide application.

ISK Biosciences Corporation

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Seller warrants to those persons lawfully acquiring title to this product that at the time of first sale of this product by Seller that this product conformed to its chemical description and was reasonably fit for the express purposes stated on the label when used in accordance with Seller's directions under normal conditions of use as described on the label. To the extent consistent with applicable law, Buyers and users of this product assume the risk of any use contrary to such directions. TO THE FULLEST EXTENT PERMITTED BY LAW, EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESS REFERENCE TO THIS LIMITATION OF WARRANTY AND LIMITATION OF DAMAGES, SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OR GUARANTY, AND SELLER EXPRESSLY DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTIES OF MERCHANTIBILITY OR OF FITNESS FOR A PARTICULAR PURPOSE AND EXPRESSLY DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES THAT MAY EXIST UNDER APPLICABLE LAW. COURSE OF DEALING OR USAGE OF TRADE. NO AGENT OF SELLER IS AUTHORIZED TO GRANT ANY WARRANTY IN EXCESS OF THAT GRANTED IN THIS LIMITATION OF WARRANTY AND LIMITATION OF DAMAGES. TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT. TO THE FULLEST EXTENT PERMITTED BY LAW, SELLER'S LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT SHALL NOT EXCEED THE PURCHASE PRICE OF THE PRODUCT AS TO WHICH A CLAIM IS MADE. To the fullest extent permitted by law, Buyers and users of this product are responsible for all loss or damage from use or handling of this product that results from conditions beyond the control of Seller, including, but not limited to, incompatibility with other products (unless otherwise expressly provided for in the Directions for Use of this product), weather conditions, cultural practices, moisture conditions or other environmental conditions outside of the ranges that are commonly recognized as being conducive to good agricultural and/or horticultural practices.