

U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs Registration Division (7505P) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460

5481-637

EPA Reg. Number:

Date of Issuance:

3/3/20

NOTICE OF PESTICIDE:

X Registration

Reregistration (under FIFRA, as amended)

Term of Issuance:
Unconditional

Name of Pesticide Product:

216-18 Herbicide

Name and Address of Registrant (include ZIP Code):

Amvac Chemical Corporation 4695 MacArthur Court. Suite 1200 Newport Beach, CA 92660

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

- 1. Submit and/or cite all data required for registration/registration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
- 2. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. A one year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data.

Signature of Approving Official:

Date:

3/3/20

Erik Kraft, Product Manager 24

Fungicide Herbicide Branch, Registration Division (7505P)

EPA Form 8570-6

- 3. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, "EPA Reg. No. 5481-637."
- 4. Submit one copy of the revised final printed label for the record before you release the product for shipment.

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.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 01/22/2019
- Alternate CSF 1 dated 01/22/2019
- Alternate CSF 2 dated 11/14/2019
- Alternate CSF 3 dated 11/14/2019
- Alternate CSF 4 dated 11/14/2019
- Alternate CSF 5 dated 11/14/2019

If you have any questions, please contact Manjula Unnikrishnan by phone at 703-347-8520, or via email at unnikrishnan.manjula@epa.gov.

Enclosure

ACCEPTED

03/03/2020

5481-637

Topramezone	Group	27	Herbicide
Glufosinate- ammonium	Group	10	Herbicide

216-18 HERBICIDE

For control of emerged grass and broadleaf weeds in LibertyLink® (LL) field corn and LL sweet corn.

Active Ingredient:

Topramezone	1.10%
Glufosinate-ammonium	26.95%
Inert ingredients:	71.95%
Total:	100.0%

1 gallon contains 0.1 pounds of TOPRAMEZONE free acid and 2.47 pounds of GLUFOSINATE-ammonium.

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 this label, find someone to explain it to you in detail).

FIRST AID			
	• Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.		
If in eyes:	Remove contact lenses, if present, after first 5 minutes, then continue		
ii iii eyes.	rinsing eye.		
	Call a poison control center or doctor for treatment advice.		
	Take off contaminated clothing.		
If on skin or clothing: • Rinse skin immediately with plenty of water for 15 - 20 minutes.			
 Call a poison control center or doctor for treatment advice. 			
	Call a poison control center or doctor immediately for treatment advice.		
	Have person sip a glass of water if able to swallow.		
If swallowed:	Do not induce vomiting unless told to do so by a poison control center or		
	doctor.		
	Do not give anything by mouth to an unconscious person.		
	Move person to fresh air.		
If inhaled:	• If person is not breathing, call 911 or an ambulance, and then give artificial		
ii iiiiaieu.	respiration, preferably mouth-to-mouth, if possible.		
	Call a poison control center or doctor for treatment advice.		
NOTE TO PHYSICIAN			

If this product is ingested, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by charcoal and sodium sulfate administration. Additionally, call 1-888-681-4261 immediately for further information.

EMERGENCY INFORMATION

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:

For Medical Emergencies phone: 1-888-681-4261
For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC® 1-800-424-9300
For Product Use Information phone: AMVAC® 1-888-462-6822

See back panel for additional Precautionary Statements.

EPA Reg. No. 5481-xxx EPA Est. No.



Net Contents:
As marked on Container



4695 MacArthur Court, Suite 1200 Newport Beach, CA 92660 U.S.A. 1-888-462-6822

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. 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
- Chemical resistant gloves including barrier laminate, polyethylene, Viton® ≥ 14 mils, rubber ≥ 14 mils or polyvinyl chloride ≥ 14 mils.
- Shoes plus socks

Mixers/loaders supporting aerial applications must use closed mixing/loading systems.

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.

Engineering Controls Statement

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (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.

Environmental Hazards

Do not apply directly to water or to areas where surface water is present. Do not apply to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment wash waters or rinsate.

This product is toxic to vascular plants and should be used strictly in accordance with the drift and runoff precautions on this label in order to minimize off-site exposures.

Under some conditions, this product may have a potential to run-off to surface water or adjacent land. Where possible, use methods which reduce soil erosion, including no-till, limited till or contour plowing; these methods also reduce pesticide run-off. Use of vegetation filter strips along rivers, creeks, streams, wetlands, etc. or on the downhill side of fields where run-off could occur to minimize water runoff is recommended.

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, with the following exceptions:

- Field corn scouting- REI of 4 days
- Do not move irrigation pipe within 7 days of an application to any crop.

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 worn over short-sleeved shirt and short pants
- Chemical resistant gloves including barrier laminate, polyethylene, Viton ≥ 14 mils, rubber ≥ 14 mils or polyvinyl chloride ≥ 14 mils.
- Chemical-resistant footware plus socks

All applicable directions, restrictions, precautions and Limited Warranty and Disclaimer are to be followed. This labeling must be in the user's possession during application.

IMPORTANT CROP SAFETY INFORMATION READ BEFORE USING THIS PRODUCT

Postemergence applications of 216-18 HERBICIDE may be made only to corn resistant to the active ingredients in this product. To the extent consistent with applicable law, AMVAC does not warrant the use of this product on corn other than those designated as LibertyLink to safely withstand the application of 216-18 HERBICIDE.

The basis of selectivity of 216-18 HERBICIDE in corn is the presence of a gene in LibertyLink corn which results in resistant corn plants to glufosinate, one of active ingredients in 216-18 HERBICIDE. Crops not containing this gene will not be resistant to 216-18 HERBICIDE and severe crop injury and/or death may occur. **DO NOT** allow spray to contact foliage or green tissue of desirable vegetation other than crops resistant to the active ingredients in this product.

Rate Conversion Table

Rate of 216-18 Herbicide	Amount of active ingredient in lbs a.i./acre		
21 fl oz/A	0.0164 lb ai/A topramezone + 0.4 lb ai/A glufosinate		
28 fl oz/A	0.022 lb ai/A topramezone + 0.54 lb ai/A glufosinate		

I. PRODUCT INFORMATION

216-18 HERBICIDE contains both a systemic postemergence herbicide (topramazone) and a water-soluble nonselective, contact herbicide (glufosinate) for selective control or growth suppression of emerged broadleaf and grass weeds in LibertyLink (LL) field corn (grown for grain or silage) and LL sweet corn. This product may only be used on LibertyLink resistant field corn and sweet corn hybrids.

216-18 HERBICIDE is absorbed by plant foliage and controls weeds by inhibiting glutamine biosynthesis (Group 10) and carotenoid biosynthesis (Group 27). 216-18 HERBICIDE is foliar active with limited residual soil activity. Weeds that emerge after application may not be controlled. Apply to small, actively growing weeds before weeds exceed the maximum stem height or vine length listed for broadleaf weeds listed in Table 1 and grass weeds listed in Table 2.

216-18 HERBICIDE requires uniform thorough spray coverage. Applications made in warm temperatures, high humidity, bright sunlight, and made between dawn and 2 hours before sunset will improve activity. Weed control may be reduced if application is made when heavy dew and mist/rain are present; or when weeds are under stress due to environmental conditions including drought, cool temperatures, or extended periods of cloudiness. Necrosis of leaves and young shoots may occur within 2 to 4 days after application under good growing conditions. Total herbicidal symptomology on weeds may take up to 14 days after application.

216-18 HERBICIDE is rainfast four (4) hours after application to most weed species; therefore, rainfall within four (4) hours may necessitate retreatment or may result in reduced weed control.

216-18 HERBICIDE may be tank-mixed with other registered herbicides used to provide both a broader spectrum of weed control and residual weed control. Atrazine at 0.25 to 0.5 lb active ingredient per acre significantly increases the weed activity of 216-18 HERBICIDE. Refer to Tank Mixes in the Crop Use Directions (Section VII). It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and the precautionary statements of each product in the tank mixture.

216-18 HERBICIDE applications must also include specified spray additives. Refer to Additives and Mixing Order (Sections III and IV).

Table 1. Broadleaf Weeds Controlled or Suppressed with 216-18 HERBICIDE applied Postemergence (Including ALS, Auxin-, Glyphosate-, HPPD-, PPO- and Triazine-Resistant Biotypes)

Broadleaf Weeds		21 fl. oz. per acre ^{1,4} Maximum Weed Size (Inches)	28 fl. oz. per acre ^{1,4} Maximum Weed Size (Inches)
Amaranth, Palmer,3	Amaranthus palmeri	4	6
Amaranth, Powell ³	Amaranthus powellii	4	6
Beggarweed, Florida	Desmodium tortuosum	3	4
Black medic	Medicago lupulina	3	4
Blueweed, Texas	Helianthus ciliaris	3	4
Buckwheat, wild	Fallopia convolvulus	3	4
Buffalobur	Solanum rostratum	3	4
Burcucumber	Sicyos angulatus	4	6
Catchweed bedstraw (cleavers)	Galium aparine	2	3
Canola, volunteer ³	Brassica napus	4	6
Carpetweed	Mollugo verticillata	4	6
Chickweed, common	Stellaria media	3	4
Cocklebur, common	Xanthium strumarium	4	6
Copperleaf, hophornbeam	Acalypha ostryifolia	3	4
Cotton, volunteer ³	Gossypium hirsutum	3	4
Croton, tropic	Croton glandulosus	3	4
Croton, woolly	Croton capitatus	2	3
Dandelion	Taraxacum officinale	3 ²	4 ²
Devil's-claw	Proboscidea louisianica	3	4
Eclipta	Eclipta alba	3	4
Fleabane, annual	Erigeron annuus	3	4
Galinsoga, hairy	Galinsoga ciliate	4	6
Galinsoga, small flower	Galinsoga parviflora	3	4
Geranium, cutleaf	Geranium dissectum	3	4
Groundcherry, cutleaf	Physalis angulate	3	4
Hempnettle	Galeopsis tetrahit	3	4
Henbit	Lamium amplexicaule	3	4
Horsenettle, Carolina	Solanum carolinense	22	3 ²
Jimsonweed	Datura stramonium	4	6

Knotweed	Polygonum aviculare	3	4
Kochia	Kochia scoparia	4	6
Ladysthumb	Polygonum persicaria	3	4
Lambsquarters, Common	Chenopodium album	4	6
Lettuce, prickly	Lactuca serriola	3	4
Mallow, common	Malva neglecta	3	4
Mallow, Venice	Hibiscus trionum	3	4
Marestail (Horseweed)	Erigeron canadensis	4	6
Marshelder, annual	Iva annua	3	4
Morningglories	Ipomoea spp.	3	4
Mustard, wild	Sinapis arvensis	4	6
Nightshade, black	Solanum nigrum	4	6
Nightshade, eastern black	Solanum ptycanthum	4	6
Nightshade, hairy	Solanum sarrachoides	4	6
Pennycress (Stinkweed)	Thlaspi arvense	3	4
Pigweed, prostrate	Amaranthus blitoides	4	6
Pigweed, redroot	Amaranthus retroflexus	4	6
Pigweed, smooth	Amaranthus hybridus	4	6
Pigweed, tumble	Amaranthus album	3	4
Puncturevine	Tribulus terrestris	3	4
Purslane, common	Portulaca oleracea	2	3
Pusley, Florida	Richardia scabra	2	3
Ragweed, common	Ambrosia artemisiifolia	4	6
Ragweed, giant	Ambrosia trifida	4	6
Senna coffee	Senna occidentalis	3	4
Sesbania, hemp	Sesbania herbacea	3	4
Shepherd's-purse	Capsella bursa-pastoris	3	4
Sicklepod (java bean)	Senna obtusifolia	3	4
Sida, prickly	Sida spinose	3	4
Smartweed, Pennsylvania	Polygonum pensylvanicum	3	4
Smellmelon	Cucumis melo	3	4
Sowthistle, annual	Sonchus oleraceus	3	4
Soybean, volunteer ³	Glycine max	4	6
Spurge, prostrate	Euphorbia prostrata	2	3
Spurge, spotted	Euphorbia maculate	2	3
Starbur, bristly	Acanthospermum hispidum	3	4
Sunflower, Volunteer	Helianthus spp.	4	6
Sunflower, Wild (Common)	Helianthus annuus	4	6
Thistle, Canada	Cirsium arvense	3 ²	4 ²
Thistle, Russian	Salsola iberica	3	4
Velvetleaf	Abutilon theophrasti	4	6
Waterhemp, common	Amaranthus rudis	4	6
Waterhemp, tall	Amaranthus tuberculatus	4	6

 $^{^{\}rm 1}$ Apply with atrazine at 0.25 to 0.5 lb active per acre for enhanced weed control. $^{\rm 2}$ Indicates growth suppression.

³ Will not control volunteer LibertyLink crops from previous season.

⁴ See Rate Conversion Table for pounds active ingredient per acre

Table 2. Annual Grass Weeds Controlled or Suppressed with 216-18 HERBICIDE Applied Postemergence (Including ALS-, Glyphosate- and Triazine-Resistant Biotypes).

Annual Grass Weeds		21 fl. oz. per acre ^{1,5}	28 fl. oz. per acre ^{1,5}
		Maximum Weed	Maximum Weed
		Size (Inches)	Size (Inches)
Barley, volunteer	Hordeum vulgare	3 ³	43
Barnyardgrass	Echinochloa crus-galli	3	4
Bluegrass, annual	Poa annua	3	5
Corn, volunteer ⁴	Zea mays	4	5
Crabgrass, Large ²	Digitaria sanguinalis	3	4
Crabgrass, Smooth ²	Digitaria ischaemum	3	4
Cupgrass, Woolly	Eriochloa villosa	3	4
Foxtail, bristly	Setaria verticillata	3	4
Foxtail, giant	Setaria faberi	4	5
Foxtail, green	Setaria viridis	3	4
Foxtail, robust purple	Seteria viridis	3	4
Foxtail, yellow ²	Setaria pumila	3	4
Goosegrass	Eleusine indica	3	4
Johnsongrass, seedling	Sorghum halepense	3	4
Junglerice	Echinochloa colonum	3	4
Millet, wild-proso	Panicum miliaceum	3	4
Millet, volunteer proso	Panicum miliaceum	3	4
Oat, wild ²	Avena fatua	3	4
Panicum, fall	Panicum dichotomiflorum	3	4
Panicum, Texas	Panicum texanum	3	4
Rice, red	Oryza sativa	3	4
Sandbur, field	Cenchrus incertus	2 ^{2,3}	2 ²
Shattercane	Sorghum bicolor	3	4
Signalgrass, broadleaf	Brachiaria platyphylla	3	4
Sprangletop	Leptochloa filiformis	3	4
Sorghum, volunteer	Sorghum bicolor	3	3
Stinkgrass	Eragrostis cilianensis	3	4
Wheat, volunteer ²	Triticum aestivum	3	4
Witchgrass	Panicum capillare	3	4

¹ Apply with atrazine at 0.25 to 0.5 lb active per acre for enhanced weed control.

Weed Resistance Management

Herbicide resistance has become an important management focus to maximize weed control. Weeds have developed resistance to many herbicide modes of action. 216-18 Herbicide contains both a Group 10 (glufosinate-

² Apply before tiller initiation of grasses.

^{3.} Indicates growth suppression.

⁴ Will not control volunteer LibertyLink crops from previous season.

⁵ See Rate Conversion Table for pounds active ingredient per acre

ammonium) and a Group 27 (topramezone) herbicide to reduce development of herbicide resistance in weeds. Any weed population may contain plants resistant to Group 10 and/or Group 27 herbicides. Resistant plants may dominate weed populations if Group 10 and Group 27 herbicides are used repeatedly in the same fields. It is recommended to follow effective resistance-management strategies.

Follow as many as possible of the following recommendations to delay herbicide resistance in weeds:

- Rotate the use of 216-18 Herbicide or other Group 10 and 27 herbicides in the same and successive growing seasons with herbicides of different groups that control the same weeds.
- Use tank mixtures with labeled herbicides containing active ingredients that are effective on both susceptible and resistant weed species. Use the highest label rates allowed to achieve the highest weed control. Weed resistance does not develop when weeds do not survive the herbicide treatment. Consult your local extension service or certified crop advisor if unsure of weed susceptibility to each herbicide active ingredient.
- Adopt an integrated weed-management program that includes non-herbicide components, such as, scouting, use of historical information related to herbicide use and crop rotation; mechanical control practices including various forms of tillage and hand removal; cover crops; cultural control practices including crop rotation, row spacing, and using higher crop seeding rates, weed-competitive crops or varieties, and precision fertilizer application and timing to favor the crop and not weeds); biological control agents, if available; and other management practices.
- Scout before and after herbicide applications to monitor development of herbicide resistance in weed populations. Indicators of possible herbicide resistance include: (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 noncontrolled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If herbicide resistance in weeds is suspected, prevent weed seed production in the affected area by hoeing or hand removal, using an effective herbicide from a different group, or by a mechanical method such as tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed population continues to progress after treatment with this product, discontinue use of this product and use other management strategies. Only use herbicides with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional herbicide resistance-management and integrated weed-management recommendations for specific crops and weed species.
- For further information or to report suspected resistance, contact AMVAC Chemical Corporation at 1-888-462-6822.

Best Management and Stewardship Practices

Adopt a diversified weed management system for best stewardship of 216-18 HERBICIDE and for optimum weed control. Best management practices that diversify weed management include using herbicide treatments with multiple modes of action (MOA) that are effective on target weeds. Apply herbicides correctly and in proper application, including timing, full use-rates and appropriate spray volumes. Use highest rates of effective herbicides when combined and in herbicide and crop rotation. Use cultural (e.g., crop rotation) and mechanical (e.g., tillage) weed management tactics. Alternate herbicide-resistant traits and/or use herbicide-resistant trait stacks for more efficient rotation. Correctly identify weeds and know where the weeds are in your fields. Start with clean fields. Effective tillage or the use of a burndown herbicide program can control emerged weeds prior to planting. Clean equipment to prevent the spread of weeds seeds. Use residual herbicides in pre-emergence and early post-emergence applied applications. Scout fields soon after herbicide application to identify escaped weeds, population shifts, and herbicide resistant biotypes. Closely monitor problematic areas with difficult-to-control weeds or dense weed populations. Control weed escapes by spot herbicide applications, rope wicking, cultivation or hand removal of weeds or other techniques to stop weed seed production and accumulation in the soil bank. Stopping weed seed development will decrease weed populations from year to year and prevent major weed shifts.

Crop Resistance

Apply 216-18 HERBICIDE during favorable growing conditions for optimum crop resistance and weed control. Crops under environmental stress are more likely to show injury from any herbicide application. Rarely, plants under environmental stress conditions and treated with 216-18 HERBICIDE may show some transient discoloration of the portion of the leaves intercepting the spray application. These symptoms are temporary and occur rarely, and crop growth is not affected.

Cultivation

Avoid disturbing (e.g., cultivation) treated areas for at least 5 days before and 7 days following an application of 216-18 HERBICIDE to allow maximum herbicide absorption and weed control. Avoid deep cultivation that will move dormant weed seeds into the upper soil zone where seeds may germinate.

Insecticide Information

216-18 HERBICIDE may be used sequentially or in combination with soil or foliar applied insecticides registered for use in LibertyLink corn.

Cleaning Spray Equipment

To avoid injury to sensitive crops, drain and clean application equipment thoroughly using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions. Clean and triple rinse equipment before and after applying this product.

II. APPLICATION AND MIXING INSTRUCTIONS

216-18 HERBICIDE applied postemergence controls many annual weeds in conservation and conventional tillage crop production systems. **DO NOT** apply 216-18 HERBICIDE within 30 feet of a native plant community. To the extent consistent with applicable law, the applicator is responsible for any loss or damage that results from spraying 216-18 HERBICIDE in a manner other than specified in this label. In addition, applicator must follow all applicable state and local regulations and ordinances in regards to spraying.

Spray Coverage

Weed plant must be thoroughly covered with spray droplets to achieve optimum and consistent control of emerged weeds. Dense leaf canopies can prevent adequate spray coverage resulting in poor weed control. **DO NOT** use flood jet nozzles, controlled droplet application equipment, or air-assisted spray equipment.

Ground Application Methods and Equipment

Apply 216-18 HERBICIDE with properly calibrated ground equipment in a minimum of 15 or more gallons of water per acre. Use higher water volumes when treating larger weeds and/or dense weed infestations. 216-18 HERBICIDE applications can be made with drop nozzles if the crop canopy prevents adequate weed coverage using broadcast applications methods. Apply at ground speed of less than 15 mph to attain adequate coverage.

After using 216-18 HERBICIDE, triple rinse the spray equipment and clean with a commercial tank cleaner before using the equipment for a new application. Make sure any rinsate or foam is thoroughly removed from spray tank and boom.

Mandatory Spray Drift Mitigation: When applying to crops via aerial application equipment, the spray boom must be mounted on the aircraft so as to minimize drift caused by wing tip or rotor blade vortices. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

• When applying to crops via aerial application equipment, applicators must use 1/2 swath displacement upwind at the downwind edge of the field.

- DO NOT apply when wind speeds exceed 10 miles per hour at the application site.
- DO NOT apply during temperature inversions.
- For aerial applications, **DO NOT** release spray at a height greater than 10 feet above the crop canopy, unless a greater application height is required for pilot safety.
- For ground applications and aerial applications, select nozzle and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1.
- Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but do not exceed a boom height of 24 inches above target pest or crop canopy. Set boom to lowest effective height over the target pest or crop canopy based on equipment manufacturer's directions. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Advisory Spray Drift Language

- **Pollinator Advisory:** This product contains an herbicide. Follow all label directions and precautions to minimize potential off-target exposure in order to prevent effects to non-target plants adjacent to the treated site which may serve as habitat or forage for pollinators.
- **Spray Drift Management:** The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.
- Importance of Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS! See Wind, Temperature and Humidity, and Temperature Inversions sections of this label.

Techniques for Controlling Droplet Size:

- **Volume** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- **Nozzle Type** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

Controlling Droplet Size – Aircraft:

- **Number of Nozzles** Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations. AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.
- **Nozzle Type** Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- Boom Length Longer booms increase drift potential. Therefore, a shorter boom length is recommended.
- Application Height Application more than 10 ft above the canopy increases the potential for spray drift.

Boom Height. Setting the boom at the lowest referenced height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

Drift Reduction Technology (DRT). The EPA Drift Reduction Technology (DRT) Program was developed to encourage the manufacture, marketing, and use of spray technologies scientifically verified to significantly reduce pesticide drift. The use of DRTs should result in significantly less pesticide from spray applications drifting and being deposited in areas not targeted by those applications, compared to spray technologies that do not meet the minimum DRT standard. EPA-verified drift reduction technologies (DRTs) and their ratings will be added to the following webpage as they become available: https://www.epa.gov/reducing-pesticide-drift/epa-verifiedand-rated-drift-reduction-technologies.

Wind. Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS. **Note:** Local terrain can influence wind patterns. Every applicator needs to be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity. When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

Temperature Inversions. Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified 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.

Shielded Sprayers. Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

Agriculturally approved drift-reducing additives may also be used in accordance with product labels.

III. ADDITIVES

Postemergence applications of 216-18 HERBICIDE require the addition of an adjuvant and a nitrogen fertilizer source to achieve optimum weed control.

1. ADJUVANTS: Preferred adjuvants include: MSO (methylated seed oil) adjuvants at 1% v/v (1 gallon/100 gallons of water) or HSMOC (high surfactant methylated oil concentrate) adjuvants at 0.5 to 0.75% v/v (2 to 3 qts/100 gallons of water). MSO or HSMOC adjuvants will result in greater weed control across a wide range of environmental conditions including when weeds are under moisture and/or temperature stress. Petroleum oil concentrate (COC) adjuvants may also be used 1% v/v. For adjuvant use when tank-mixing with other herbicides refer to Section VII. Crop Use Directions – Tank Mixes.

AND

2. NITROGEN FERTILIZER SOURCE: Always add spray grade ammonium sulfate (AMS) at 3 lbs/A. A liquid AMS product may be used which provides an equivalent rate of AMS per acre. Commercial liquid solutions of AMS contain approximately 3.4 lbs of AMS per gallon.

IV. MIXING ORDER INSTRUCTIONS:

216-18 HERBICIDE is formulated to mix readily in water. Prior to adding 216-18 HERBICIDE to the spray tank, ensure that the spray tank is thoroughly clean, particularly if an herbicide with the potential to injure crops other than corn was previously used. 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.

Following are mixing order guidelines for 216-18 HERBICIDE either alone or with other components, including spray adjuvants:

WATER:

- 1. Fill the spray tank $\frac{1}{2}$ to $\frac{3}{4}$ full with clean water.
- 2. Add the required amount of 216-18 HERBICIDE to the spray tank while agitating.
- 3. After 216-18 HERBICIDE has visibly dispersed, continue agitation and add spray additives while filling the remainder of the tank with water.

TANK-MIX PREPARATION:

When tank-mixing 216-18 HERBICIDE with specified herbicides, add the other herbicides and other components in the following order, all while agitating:

- 1. Fill spray tank $\frac{1}{2}$ to $\frac{3}{4}$ full with clean water and start agitation.
- 2. Add soluble packet products and thoroughly mix.
- 3. Add 216-18 HERBICIDE and thoroughly mix.
- 4. Add WP (wettable powder), DG (dispersible granule), DF (dry flowable), or F (liquid flowable) formulations.
- 5. Add EC (emulsifiable concentrate) and liquid products.
- 6. Add fertilizer and spray adjuvants to the spray tank.
- 7. Use a silicone based anti-foam agent if foaming occurs.
- 8. Fill the remainder of the tank with water.
- 9. Maintain adequate agitation until all contents in the tank are applied.

V. TANK MIX INFORMATION

216-18 HERBICIDE may be used sequentially or tank mixed with other herbicides as part of a complete weed control program. Tank mix directions are for use only in states where the sequential or tank mix product and application site is registered. Refer to Crop Use Directions (Section VII) for more details and for specific tank mix restrictions. Read and follow the applicable Restrictions and Limitations (Section VI) and Directions for Use on all products included in any tank mix. The most restrictive labeling applies to tank mixes. **DO NOT** use liquid fertilizer as a carrier for postemergence applications of 216-18 HERBICIDE. Use only water as a carrier.

After using 216-18 HERBICIDE, triple rinse the spray equipment and clean with a commercial tank cleaner before using the equipment for a new application. Make sure any rinsate or foam is thoroughly removed from spray tank and boom. Rinsate may be disposed following the pesticide disposal directions on this label.

VI. ROTATIONAL CROP RESTRICTIONS

The following rotational crops may be planted after uniformly applying 216-18 HERBICIDE at the application rates in corn shown in the chart below. **DO NOT** plant earlier than the specified interval at the rates shown in the chart below, as crop injury could occur. Avoid over-applications by minimizing overlaps of spray swaths and by

switching off spray boom when turning (end rows). In the event of a crop loss due to weather or other causes, any corn type can be replanted at any time following an application of 216-18 Herbicide. If 216-18 HERBICIDE was tank-mixed with other herbicides, the label replanting restrictions for these herbicides must also be followed.

Rotational Crop	Rotational Interval (Months) 216-18 HERBICIDE Application Rate	
	21 fl oz/A ⁶	28 fl oz/A ⁶
Corn, sweet corn and popcorn (all types)	Immediate	Immediate
Cereal grains (wheat, barley, oats, rye)	3	3
Grass, grown for seed and forage	3	3
Rice	3	3
Alfalfa	9	9
Cotton	9	9
Peanut	9	9
Potato	9	9
Sorghum	9	9
Soybean	9	9
Sunflower	9	9
Canola	9	18
Dry Bean (excluding cranberry bean)	9 ¹	18 ²
Flax	9	18
Green Bean(including seed production)	9 ^{3,4}	18 ⁵
Pea	9	18 ²
Sugar beet	9 4	18 ²
All Other Crops	18	18

¹18 month interval in MI, MN, MT, ND, SD, WI, and WY.

VII. CROP USE DIRECTIONS

FIELD AND SILAGE CORN

216-18 HERBICIDE can be selectively applied postemergence only on LibertyLink field corn hybrids (including silage corn). Apply 216-18 HERBICIDE as a postemergence, broadcast spray at 21 fl oz/A to 28 fl oz/A (See Rate Conversion Table for pounds active ingredient per acre) to LibertyLink field corn from emergence up to 24 inches tall or in the V7 (7 developed collars) stage of growth, whichever occurs first.

To achieve spray coverage of weeds in corn larger than 24 inches tall, 216-18 HERBICIDE may be applied to LibertyLink field corn up to 36 inches tall using ground application and drop nozzles. Avoid spraying into the whorl or leaf axils of corn plants.

Restrictions to use on LibertyLink field corn:

- Apply 216-18 HERBICIDE before weeds exceed maximum labeled size.
- Apply a minimum spray volume of 15 gpa for ground applications, and 10 gpa for aerial applications. Thorough coverage of weeds is essential.

² 9 month interval in ID, OR, and WA.

³ 18 month interval in ID, UT, and in area East of Cascade Mountains in OR and WA.

⁴ 18 month interval in CO, MI, MN, MT, NE (Panhandle counties), ND, SD, WI, and WY.

⁵ 9 month interval in area West of Cascade Mountains in OR and WA.

⁶ See Rate Conversion Table for pounds active ingredient per acre

- Apply higher spray volumes for dense canopies, large weeds, or unfavorable growing conditions.
- **DO NOT** apply more than 28 fl oz per treated acre (0.022 lb ai/A topramezone + 0.54 lb ai/A glufosinate) in a single application.
- **DO NOT** apply more than once per year.
- DO NOT apply more than 28 fl oz per treated acre (0.022 lb ai/A topramezone + 0.54 lb ai/A glufosinate) per year.
- DO NOT make a post-harvest or fallow application if 216-18 Herbicide has been applied to in-season corn.
- 216-18 HERBICIDE applied following soil-applied insecticides will not injure corn.
- 216-18 HERBICIDE is rainfast within 4 hours after application.
- 216-18 HERBICIDE can be applied postemergence up to 60 days of harvesting field corn forage and within 70 days of harvesting field corn grain and corn fodder.
- **DO NOT** use nitrogen solutions as spray carriers.
- **DO NOT** apply 216-18 HERBICIDE if corn shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** apply this product through any type of irrigation system.
- Refer to the "Rotational Crop Restrictions" section under the "Product Information" heading of this label for the appropriate rotational crop plant back intervals.

SWEET CORN

216-18 HERBICIDE can be selectively applied postemergence only on LibertyLink sweet corn hybrids. Apply 216-18 HERBICIDE as a postemergence, broadcast spray at 21 fl oz/A (see Rate Conversion Table) to LibertyLink sweet corn hybrids from emergence up to V6 (6 developed collars) stage of growth.

Restrictions to use on LibertyLink sweet corn:

- DO NOT apply 216-18 HERBICIDE within 50 days of harvesting sweet corn ears and within 55 days of harvesting sweet corn stover.
- **DO NOT** use nitrogen solutions as spray carriers.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply more than 21 fl oz per treated acre (0.0164 lb ai/A topramezone + 0.4 lb ai/A glufosinate) in a single application.
- **DO NOT** apply more than once per year.
- **DO NOT** apply more than 21 fl oz per treated acre (0.0164 lb ai/A topramezone + 0.4 lb ai/A glufosinate) per year.
- DO NOT make a post-harvest or fallow application if 216-18 Herbicide has been applied to in-season corn.
- **DO NOT** apply 216-18 HERBICIDE if corn shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.)

Tank Mixes

216-18 HERBICIDE may be applied in tank mix combinations with labeled rates of other registered products that are labeled for the timing and method of application to corn. The tank mix partner must be used in accordance with the label limitations and precautions. No label dosage rates may be exceeded. **DO NOT** mix 216-18 HERBICIDE with any product containing a label prohibition against such mixing. Refer to the specific crop section for rates and other restrictions.

Apply a tank-mix of 216-18 Herbicide plus atrazine at 0.25 to 0.5 lb active per acre for enhanced control of both grass and broadleaf weeds. A tank mix of 216-18 Herbicide plus atrazine can be applied to LibertyLink field corn and LibertyLink sweet corn up to 12 inches in height. Refer to the atrazine label for additional crop use directions and precautions.

VIII. BETWEEN CROP APPLICATIONS (Fallow Fields or Post Harvest)

216-18 HERBICIDE may be used as a foliar application to control emerged broadleaf and grass weeds at any time of the year in a fallow crop system, and during the period following crop harvest and before the following crop is planted. If tank mixing 216-18 with another herbicide, follow the precautions and directions for use of the most restrictive herbicide. Crops may be planted after observing the required interval as defined in the Rotational Crop Restrictions section (Table 3) when using 216-18 alone for between crop applications.

Restrictions to use on fallow fields or post harvest:

- **DO NOT** apply more than 28 fl oz per treated acre (0.022 lb ai/A topramezone + 0.54 lb ai/A glufosinate) in a single application.
- **DO NOT** make more than 1 application per year.
- **DO NOT** apply more than 28 fl oz per treated acre (0.022 lb ai/A topramezone + 0.54 lb ai/A glufosinate) per year.
- DO NOT make an in-season corn application if 216-18 Herbicide has been applied post-harvest or fallow.
- **DO NOT** apply more than 28 fl oz per treated acre (0.022 lb ai/A topramezone + 0.54 lb ai/A glufosinate) per year.

IX. SEQUENTIAL HERBICIDE COMBINATIONS AND USES

In addition to the control of many emerged broadleaf weeds, 216-18 HERBICIDE controls or suppresses the growth of several emerged grass weed species. To target a broader spectrum of annual grasses, apply 216-18 HERBICIDE as a sequential postemergence treatment following a preemergence herbicide which contains an active ingredient including acetochlor, s-metolachlor, or pyroxasulfone (HG 15) or pendimethalin (HG3). 216-18 HERBICIDE can also be used in sequential programs following registered burndown herbicides.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage, disposal, or cleaning of equipment. Open dumping is Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE:

Store product in original container only. Store product in a cool, dry place. Do not store this product under wet conditions. If this product has been stored where freezing temperatures have occurred, agitate or mix contents of container well before use. 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 state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Triple rinse (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 and 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 reconditioning, 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.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN TORT, CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

©2019 AMVAC Chemical Corporation is a wholly owned subsidiary of American Vanguard Corporation. All Rights Reserved. AMERICAN VANGUARD, AMVAC and their respective logos are trademarks owned by AMVAC Chemical Corporation.

CHEMTREC is a service of the American Chemistry Council, Inc.

Liberty and LibertyLink are trademarks owned by Bayer IP, GmbH.

Viton is a trademark owned by Chemours

AMVAC Chemical Corporation 4695 MacArthur Court, Suite 1200 Newport Beach, CA 92660 U.S.A.