STATE OF HAWAII
Department of Agriculture

ACCEPTED

LICENSE NO.
9529.261

BAYER

Alion® HL

Net Contents:

1 Pt. 4 Fl. Oz. (20 Fl. Oz.)

GROUP 29 HERBICIDE

For Preemergent Weed Control in Citrus Fruit, Grapes, Stone Fruit, Pome Fruit, Tree Nuts, and Olives.

ACTIVE INGREDIENT: Indaziflam* **45.05%**
OTHER INGREDIENTS: **54.95%**
Contains 4.16 pounds of indaziflam per gallon. *(CAS No: 730979-19-8) **TOTAL: 100.00%**

EPA Reg. No. 264-1105

KEEP OUT OF REACH OF CHILDREN

CAUTION

For **MEDICAL** And **TRANSPORTATION** Emergencies **ONLY**
Call 24 Hours A Day 1-800-334-7577
For **PRODUCT USE** Information Call 1-866-99BAYER (1-866-992-2937)

See additional precautionary statements and directions for use on label.

Produced for:
Bayer CropScience LP
P.O. Box 12014, 2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709
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FIRST AID

If on skin or clothing:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
For MEDICAL Emergencies Call 24 Hours A Day 1-800-334-7577 Have the product container or label with you when calling a poison control center or doctor or going for treatment.	

Note to physician: No specific antidote is available. Treat symptomatically.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed, absorbed through the skin or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

All mixers, loaders, applicators and other handlers must wear:

- long-sleeved shirt and long pants.
- shoes plus socks.
- waterproof gloves.

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.

ENGINEERING CONTROLS STATEMENTS

When handlers use closed systems or enclosed cabs 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.

USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to fish, aquatic invertebrates, and plants. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean water mark. Do not contaminate water when disposing of equipment rinsate or washwater. This product may enter water through spray drift or runoff. Follow directions for use to avoid spray drift and runoff. A level well maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential of this product entering water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

Surface Water Advisory: This pesticide may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application.

Ground Water Advisory: This pesticide 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.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.
Read the entire label before using this product

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.

SHAKE CONTAINER WELL BEFORE USING.

IN THE STATE OF NEW YORK ONLY: NOT FOR SALE, DISTRIBUTION OR USE IN NASSAU OR SUFFOLK COUNTY.

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 intervals. 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, such as plants, soil, or water, is:

Coveralls

Shoes plus socks

Chemical resistant gloves made of any waterproof material

PRODUCT INFORMATION

Alion® HL is formulated as a suspension concentrate of indaziflam at a concentration of 4.16 pounds of active ingredient per gallon.

Alion HL is a preemergence herbicide for control of annual grasses and broadleaf weeds in Citrus Fruit, Grapes, Stone Fruit, Pome Fruit, Tree Nuts, and Olives. Alion HL may be applied to the soil as a uniform broadcast or band application for the prevention of new weed emergence.

Alion HL provides preemergence, residual control of weeds. A dry soil surface at time of application and 48 hours after application is optimum for binding the active ingredient to soil particles and preventing its downward movement to the crop's roots. Moisture is needed for activation of Alion HL. Dry soil conditions following the initial 48-hour period after application of Alion HL may result in reduced weed control. Weeds that germinate prior to activation by rain or irrigation may not be controlled. If weeds have emerged, the addition of a foliar active herbicide is needed. Alion HL applied alone will not control weeds that are already emerged. Refer to the "Tank Mix Instructions" section.

This product controls weeds by inhibiting cellulose biosynthesis in plants. It may be applied at any time when the ground is not frozen or covered with snow. It will provide most effective residual weed

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control when applied to a dry soil surface followed by 48 hours without irrigation or rain, and then followed by adequate moisture from rain or an irrigation event within 21 days prior to weed seed germination. Weed seeds and seedlings must come into contact with Alion HL prior to emergence to be controlled. If insufficient moisture is present, some weeds may germinate and emerge from below the treated layer of soil. Avoid using Alion HL in areas where soil runoff or erosion is likely to occur.

Excessive crop or weed debris present on the soil surface at the time of application may prevent a uniform distribution of the product reaching the soil and consequently may reduce weed control. Performance may be improved by removing the debris prior to applying Alion HL. In very dense stands of living weeds, an application of a foliar active herbicide first then followed 3-6 weeks later with the application of Alion HL is recommended for improved performance.

The level of weed control is dependent on many variables including soil texture, moisture, temperature, weed species present, the amount of weed seed present in the soil, and the crop canopy.

Do not apply within 25 feet of ponds, lakes, rivers, streams, wetlands, and habitat containing aquatic and semi-aquatic plants.

The Pre-Harvest Interval (PHI) is 7 days for citrus and 14 days for all other crops listed on this label.

PRECAUTIONS FOR USE

- Avoid direct or indirect spray contact with crop foliage, green bark, roots or fruit as it may cause localized crop injury or death. Only trunks with callused, mature brown bark may be sprayed with Alion HL. If the trunks are not fully callused, mature brown bark they should not be sprayed unless protected from spray contact by nonporous wraps, grow tubes or waxed containers. Contact of Alion HL with tissues other than mature brown bark may result in serious damage or plant death.
- The soil surface where Alion HL is to be applied should not have open channels or cracks in the soil. This is to prevent the product from reaching the crop roots either through direct contact from the spray application or with water movement from rain or irrigation as this may cause crop injury. If depressions in the soil such as from settling following transplanting exist around the base of the crop, fill them in with soil prior to applying Alion HL. Crops that are stressed may be more sensitive to herbicide injury and should not be treated.
- Weed control activity may be reduced if the application is made to soil covered in heavy crop or weed debris that prevents a uniform distribution of the product reaching the soil. Removing the debris prior to applying Alion HL may improve weed control.

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- Rates provided on this label are based on broadcast treatment. For banded applications reduce the broadcast rate of Alion HL to the proportion of the field being treated. No area of the field may be treated with more than the highest rate provided on this label regardless of the portion of the field that this represents.
- Do not use in crops that exhibit low vigor or poor health as they may be more susceptible to crop injury. Causes of reduced vigor may include such things as previous pesticide applications, excess fertilizer or salt, diseases, insects, nematodes, drought, flooding, wind damage, frost, nutrient deficiency, or mechanical damage.

RESTRICTIONS FOR USE

- Alion HL can only be applied in citrus trees established for a minimum of one year after transplanting and exhibiting normal growth and good vigor, or in new citrus groves one month after planting if the transplanted trees were potted plants (such as citripots) and not bare-rooted, the trunks are protected from spray contact by nonporous wraps, grow tubes or waxed containers, and the trees are actively growing and exhibiting good health and vigor.
- Alion HL can only be applied in labeled tree nut crops (except pecan) that have been established for a minimum of one year after transplanting and exhibiting normal growth and good vigor.
- Alion HL can only be applied in labeled pome and stone fruit, pecan and olive that have been established for a minimum of three years after transplanting and exhibiting normal growth and good vigor.
- Do not use on soils with 20% or more gravel content. To determine gravel content do not remove gravel from soil samples before sending the samples for soil texture analysis, and request that gravel content be included in the analysis. The gravel content (greater than 2 mm or 0.079 inches in size, US standard sieve size 10) is defined as total percent gravel by weight before conducting soil texture analysis.
- Determine soil organic matter content (%OM) of specific orchards, vineyards, and groves by having soil core samples to a minimum depth of 6 inches of soil analyzed.
- Do not apply more than the amount of Alion HL specified per application and per year or in a 12 month period on this label based on soil texture, percent organic matter content, application site and crop.
- Allow at least 90 days between applications of Alion HL.
- Only use in vineyards where the grapes have at least 6 inches of soil barrier between the soil surface and the major portion of the root system.

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- Alion HL can only be applied in grapes that have been established for a minimum of three years after transplanting and exhibiting normal growth and good vigor.
- Do not apply this product through any type of irrigation system.
- Use of spot spraying around desired plants is not allowed due to the variability of the actual application rate. Excessive application rates may result in severe crop injury or death.
- Do not apply this product by aerial application.
- Do not harvest citrus crops within 7 days after the application of Alion HL.
- Do not harvest crops other than citrus within 14 days after the application of Alion HL.
- Only crops listed on this label may be replanted or rotated within 24 months after the last application of Alion HL and while following the instructions listed in the "Rotational Crop Restrictions" section.
- Do not apply this product to frozen or snow covered soil.
- Do not apply this product to water-saturated soil.
- Do not flood-irrigate orchards or vineyards containing stone fruit, pome fruit, grapes, tree nuts, or olives within 60 days following application of Alion HL.
- Do not apply irrigation, exclusive of flood-irrigation, to treated areas within 48 hours after application.
- Do not apply within 25 feet of ponds, lakes, rivers, streams, wetlands, and habitat containing aquatic and semi-aquatic plants.
- Do not use Alion HL in Nassau and Suffolk Counties of New York State.

SPRAY DRIFT MANAGEMENT

Spray equipment and weather affect spray drift. Consider all factors when making application decisions. Where states have more stringent regulations, they must be observed. Avoiding spray drift is the responsibility of the applicator or grower. To reduce the potential for drift, the application equipment must be set to apply medium to large droplets (i.e., ASAE Standard 572) with corresponding spray pressure. Use high flow rate nozzles to apply the highest practical spray volume. With most nozzle types, narrower spray angles produce larger droplets. Follow the nozzle manufacturer's directions on pressure, orientation, spray volume, etc., in order to minimize drift and optimize coverage and control.

Wind

Avoid making applications when spray particles may be carried by air currents to areas where sensitive crops and plants are growing. Do not spray near sensitive plants if wind is gusty, below 2 mph, or in excess

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of 10 mph and moving in the direction of adjacent areas of sensitive crops or plants. Do not apply during temperature inversions. Always make applications when there is some air movement to determine the direction and distance of possible spray drift.

Local terrain may influence wind patterns; the applicator should be familiar with local conditions and understand how they may impact spray drift. Boom or nozzle shielding can reduce the effects of wind or air currents on drift. Verify that the shields do not interfere with uniform deposition of product prior to application.

Temperature Inversion

A surface temperature inversion (i.e., increasing temperature with increasing altitude) greatly increases the potential for drift. Avoid application when conditions are favorable to inversion. Presence of ground fog is a good indicator of a surface temperature inversion.

Sensitive Areas

Sensitive areas to Alion HL are defined as natural bodies of water (ponds, lakes, rivers, streams), wetlands, habitats of endangered species and non-labelled agricultural crop areas. Applicators must take all precautions necessary to minimize spray drift to these sensitive areas.

APPLICATION INFORMATION

Alion HL can only be applied by ground equipment. Do not apply by aerial equipment, chemigation, or spot spraying around desired plants.

Apply Alion HL alone or in an approved tank mixture in a minimum of 10 gallons of spray mixture per acre. Use higher spray volumes to improve distribution in high densities of emerged weeds or debris. Uniform, thorough spray coverage directed to the soil at the base of the crop is important to achieve consistent weed control. Do not allow spray to directly or indirectly contact crop foliage, green bark, roots, or fruit as it may cause localized crop injury. Application may be made as a broadcast treatment or as a banded treatment under vineyard, grove, or orchard crops. When making banded applications use proportionately less spray water and Alion HL. The dosage listed on this label is for the treated area of the field regardless of the portion of the field that this represents.

Application Equipment

To minimize spray drift to non-target areas, apply this product using nozzles which deliver a medium or larger spray droplet as defined by the ASAE standard S-572 and as shown in nozzle manufacturer's catalogues. Keep the spray boom at the lowest possible spray height recommended by the nozzle manufacturer above the target surface. Refer to nozzle manufacturer's recommendations for proper nozzle, pressure setting and sprayer speed for optimum product performance

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and minimal spray drift. Use sprayers that provide accurate and uniform application to ensure proper distribution. An off-center (OC) nozzle located at the end of the boom may be used to spray near the trunk but must be oriented so that it directs spray to avoid spray contact with crop foliage and green bark. **Maintain adequate agitation at all times including momentary stops. Since settling may occur and be difficult to get back into suspension, spray solution should not be left in the tank overnight.**

Ensure that the spray equipment including spray tank, pumps, lines, filters, screens, and nozzles are clean and free of residue from previous use before mixing and applying Alion HL by following the instructions listed under SPRAYER CLEANUP PROCEDURE. Residue remaining in the spray equipment from previous uses can cause crop injury if not properly cleaned. After applying Alion HL follow the cleaning instructions again to ensure that no product remains in the spray equipment.

Uniform thorough spray coverage is important to achieve consistent weed control. Select nozzles, pressure, and application speed that will deliver medium or larger droplets. Verify that application equipment is in good working condition and is properly calibrated to apply the correct amount of product.

Application Method

Broadcast Applications

For all crops listed on this label, apply Alion HL by ground equipment at rates described in the **Dose Rate Chart** in the **APPLICATION DIRECTIONS** section for the specific crop or site where this product will be used.

Banded Applications

When making banded applications, use the same dosage rate as for broadcast applications but use proportionately less spray water and Alion HL. The use rate provided is for the treated area of the field regardless of the portion of the field that it represents. Banded applications may be made using the following formula to calculate the amount of herbicide and spray volume needed for orchard or vineyard strip sprays:

$$\frac{\text{Treated Band width in Inches}}{\text{Row width in Inches}} \times \text{Herbicide Rate per Treated Acre} = \text{Amount of Herbicide Needed for Treatment}$$

$$\frac{\text{Treated Band width in Inches}}{\text{Row width in Inches}} \times \text{Spray Volume per Treated Acre} = \text{Amount of Spray Volume Needed for Treatment}$$

Tank Mix Instructions

Alion HL may be mixed with and applied in combination with most commonly used pesticides registered for use in the approved crops to expand the spectrum of weed control. Alion HL will generally provide little or no control of weeds that are already emerged or established at the time of application. When weeds are emerged at application, the addition of a labeled foliar active herbicide such as Rely® 280 Herbicide is needed. Only use products that are approved for use in the crop to which the tank mixture is to be applied.

If Alion HL is to be tank mixed with liquid fertilizers or other pesticides, or additives, compatibility should be tested prior to mixing. To test for compatibility, use a small container and mix a small amount (0.5 to 1 qt) of spray, combining all ingredients in the same ratio and mixing order as the anticipated use. If any indications of physical incompatibility develop, do not use this mixture for spraying. Indications of incompatibility usually appear 5-15 minutes after mixing.

Read and follow the label of each tank mix partner used with Alion HL for all precautionary statements, directions for use, geographic and other restrictions. When tank mixing products with different restrictions, follow the directions of the most restricted label.

Mixing Instructions

Ensure that the application equipment has been thoroughly cleaned from previous use before using to apply Alion HL. Follow the steps as follows:

- Shake container well to ensure that the product is thoroughly suspended prior to measuring in case some settling has occurred during shipping or storage.
- Fill the spray tank with 1/2 of the required volume of water prior to the addition of Alion HL.
- With the pump and agitator running, add the proper amount of Alion HL first.
- Once the Alion HL is completely dispersed, add any other pesticides, fertilizers or additives if they are to be applied with Alion HL.
- Add the rest of the water to the desired volume while maintaining sufficient agitating.

Continue agitation while mixing and during application to ensure a uniform spray mixture.

Re-suspending SC Products in Spray Solution: Like other suspension concentrates (SCs), Alion HL will settle if left standing without agitation. Reagitate the spray solution for a minimum of 10 minutes before application.

Weed Control

Alion HL provides residual control of susceptible grass and broadleaf weeds when applied prior to germination. Best weed control is obtained when Alion HL is applied to a dry soil surface followed by 48 hours without irrigation or rain, and then followed by adequate moisture from rain or an irrigation event within 21 days and prior to weed seed germination and adequate rain or irrigation is received soon after application and prior to weed germination. Supplemental irrigation may be applied following application to improve weed control.

The weed control activity may be reduced if the application is made to dense weed vegetation or to soil covered in heavy crop or weed debris that prevents a uniform distribution of the product reaching the soil. Removing the debris and / or controlling the existing weeds prior to applying Alion HL may improve weed control. In very dense stands of living weeds, an application of a foliar active herbicide first then followed 3-6 weeks later with the application of Alion HL is recommended for improved performance.

If weeds are emerged at application, the addition of a foliar active herbicide is needed. The spectrum of weed control may be increased when Alion HL is tank mixed with other herbicides. Refer to Tank Mix Instructions section.

Rate Ranges

Select proper use rate based on crop or application site and soil texture and percent organic matter content. Soils with high clay content may require a higher use rate of Alion HL than soils with low clay content. Where rate ranges are given, use lower rates within the range on coarser textured soils and higher rates within the range on finer textured soils. Using the higher rates will provide longer weed control and may also improve control in fields with heavy weed or crop debris.

If individual orchards, vineyards, or citrus groves have multiple %OM contents throughout the area where Alion HL is to be applied by a single tank or tank mix, then use the lowest rate of Alion HL corresponding to the lowest %OM content for that area.

Alion HL may be used on soils with greater than 10% organic matter, however the length and level of weed control may be reduced compared to soils with lower organic matter.

Weeds Controlled by 1.4 to 2.6 Fl oz/Ac Alion HL	
Broadleaves	
Common Name	**Genus/Species**
Buckwheat, wild *	*Polygonum convolvulus*
Burclover, California *	*Medicago polymorpha*
Carpetweed	*Mollugo verticillata*
Chickweed, common	*Stellaria media*
Cudweed, purple	*Gnaphalium purpureum*
Dandelion, common (seedling)	*Taraxacum officinale*
Eveningprimrose, cutleaf *	*Oenothera laciniata*
Filaree, redstem / Storksbill	*Erodium cicutarium*
Fleabane, hairy	*Erigeron bonariensis*
Groundsel, common	*Senecio vulgaris*
Henbit *	*Lamium amplexicaule*
Horseweed / Marestail	*Erigeron canadensis*
Knotweed, prostrate *	*Polygonum aviculare*
Kochia	*Kochia scoparia*
Lambsquarters, common **	*Chenopodium album*
Mallow, little/ Cheeseweed	*Malva parviflora*
Mustard, wild	*Sinapis arvensis*
Pigweed, prostrate	*Amaranthus blitoides*
Pigweed, redroot	*Amaranthus retroflexus*
Purslane, common	*Portulaca oleracea*
Pusley, Florida	*Richardia scabra*
Ragweed, common *	*Ambrosia elatior*
Redmaids	*Calandrinia caulescens*
Shepherd's-purse	*Capsella bursa-pastoris*
Sowthistle, annual	*Sonchus oleraceus*
Sunflower, common *	*Helianthus annuus*
Swinecress	*Coronopus didymus*
Thistle, Russian	*Salsola kali*
Velvetleaf	*Abutilon theophrasti*
Willowherb, panicle	*Epilobium brachycarpum*

* Denotes partial control of these weeds
** Consistent control dependent on timely activation by rain or irrigation

Weeds Controlled by 1.4 to 2.6 Fl oz/Ac Alion HL	
Grasses	
Common Name	**Genus/Species**
Barley, mouse	*Hordeum murinum*
Barnyardgrass, common	*Echinochloa crus-galli*
Bluegrass, annual	*Poa annua*
Brome, foxtail	*Bromus rubens*
Cheat	*Bromus secalinus*
Crabgrass, large	*Digitaria sanguinalis*
Foxtail, giant	*Setaria faberi*
Foxtail, green	*Setaria viridis*
Foxtail, yellow	*Pennisetum glaucum*
Goosegrass	*Eleusine indica*
Lovegrass, tufted	*Eragrostis pectinacea*
Ryegrass, Italian (annual)	*Lolium multiflorum*

Weeds Controlled by 2.0 to 2.6 Fl oz/Ac Alion HL	
Broadleaves	
Common Name	**Genus/Species**
Amaranth, spiny	*Amaranthus spinosus*
Buttercup, corn *	*Ranunculus arvensis*
Catsear, spotted ***	*Hypochoeris radicata*
Celery, wild *	*Apium leptophyllum*
Chickweed, mouse-ear	*Cerastium vulgatum*
Clover, crimson ***	*Trifolium incarnatum*
Clover, red *	*Trifolium pratense*
Clover, white ***	*Trifolium repens*
Fiddleneck, coast	*Amsinckia intermedia*
Filaree, whitestem	*Erodium moschatum*
Geranium, Carolina	*Geranium carolinianum*
Lettuce, prickly *	*Lactuca serriola*
Mallow, common *	*Malva neglecta*
Morningglory, ivyleaf *	*Ipomoea hederacea*
Morningglory, pitted	*Ipomoea lacunosa*
Mustard, black	*Brassica nigra*
Nettle, stinging	*Urtica dioica*
Pigweed, smooth	*Amaranthus hybridus*

* Denotes partial control of these weeds
*** Seedling control only

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Weeds Controlled by 2.0 to 2.6 Fl oz/Ac Alion HL	
Broadleaves	
Common Name	**Genus/Species**
Plantain, buckhorn	*Plantago lanceolata*
Prickly sida / Teaweed	*Sida spinosa*
Purslane, horse	*Trianthema portulacastrum*
Rocket, London	*Sisymbrium irio*
Sesbania, hemp / Coffeebean	*Sesbania exaltata*
Smartweed, Pennsylvania	*Polygonum pensylvanicum*
Smellmelon	*Cucumis melo*
Sorrel, red *	*Rumex acetosella*
Sowthistle, spiny	*Sonchus asper*
Spanishneedles *	*Bidens bipinnata*
Spurge, prostrate	*Euphorbia supina*
Spurge, spotted	*Euphorbia maculata*
Spurry, corn	*Spergula arvensis*
Vetch, purple	*Vicia benghalensis*
Woodsorrel, common yellow *	*Oxalis stricta*
Woodsorrel, Florida yellow	*Oxalis florida*

* Denotes partial control of these weeds

Weeds Controlled by 2.0 to 2.6 Fl oz/Ac Alion HL	
Grasses	
Common Name	**Genus/Species**
Brome, downy	*Bromus tectorum*
Bromegrass, ripgut	*Bromus rigidus*
Crabgrass, smooth	*Digitaria ischaemum*
Cupgrass, southwestern	*Eriochloa gracilis*
Guineagrass	*Panicum maximum*
Junglerice	*Echinochloa colonum*
Millet, wild proso	*Panicum miliaceum*
Oat, wild	*Avena fatua*
Panicum, fall	*Panicum dichotomiflorum*
Panicum, Texas *	*Panicum texanum*
Signalgrass, broadleaf	*Brachiaria platyphylla*
Sprangletop, bearded	*Leptochloa fascicularis*
Sprangletop, Mexican	*Leptochloa uninervia*

* Denotes partial control of these weeds

APPLICATION DIRECTIONS FOR USE IN CITRUS GROVES

Only apply Alion HL in citrus groves where the soil has completely settled around citrus trees and there are no open channels or depressions in the soil that would allow the product to move into the root zone through open channels.

Citrus Crops: Crop group 10 including Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; clementine; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; mount white lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin); tangor; trifoliate orange; uniq fruit; cultivars, varieties, and or hybrids of these

Dose Rate Chart for Citrus Groves

Soil Texture	Alion HL (fl oz product / broadcast acre)
Any soil except those that contain 20% or greater gravel content	2.0 to 2.6 fl oz/A (0.065 to 0.085 lb ai/A)

Do not apply more than 4.1 fl oz product/A (0.134 lb ai/A) per year or in a 12 month period.

When making more than one application per year, allow a minimum of 90 days between applications.

Use in Established Groves:
Only apply Alion HL in groves where the trees have been established for a minimum of one year after transplanting.

Use in Recently Planted Citrus Groves:
Alion HL may be used in groves planted a minimum of one month provided the following condition exists:

1) The transplanted trees were potted plants (such as citripots) and not bare-rooted.
2) The trunks are protected from spray contact by nonporous wraps, grow tubes, or waxed containers.
3) The trees are actively growing and exhibiting good health and vigor.

Avoid direct or indirect spray contact with crop foliage, green bark, roots, or fruit as it may cause localized crop injury or death. Only the trunks of trees transplanted more than one year may be sprayed with Alion HL if the trunk is callused, mature brown bark. Contact of Alion HL with tissues other than mature brown bark can result in serious damage or plant death.

APPLICATION DIRECTIONS FOR USE IN GRAPE VINEYARDS

Only use Alion HL in established vineyards at least three years after the vines have been planted and exhibiting normal growth and good vigor. Ensure that the grapes have 6 inches of soil barrier between the soil surface and the major portion of the root system prior to using Alion HL or injury may occur.

Dose Rate Chart for Grape Vineyards

Soil Texture	Alion HL (fl oz product / broadcast acre)			Minimum Vine Age
Sand	Do Not Use			
Any other soil except those that contain 20% or greater gravel content	**Soil Percent Organic Matter Content**	**Rate Per Application**	**Max Rate Per Year**	3 years
	%	**fl oz/A**	**fl oz/A**	
	<1	1.4 (0.045 lb ai/A)	2.0 (0.065 lb ai/A)	
	≥1	2.0 (0.065 lb ai/A)	2.0 (0.065 lb ai/A)	

Do not apply more than the amount of Alion HL specified per application and per year or in a 12 month period on this label based on soil texture, percent organic matter content, application site, and crop.

Do not use in grapes grown in Florida or Georgia.

Do not use in grapes grown on sand.

Do not use on soils with 20% or more gravel content.

Do not apply more than a total of 2.0 fl oz product/A (0.065 lbs ai/A) per year or in a 12 month period when used in grape vineyards.

When making more than one application per year, allow a minimum of 90 days between applications.

APPLICATION DIRECTIONS FOR USE IN POME and STONE FRUIT, TREE NUTS AND OLIVE

For use in pome and stone fruit, pecan, and olive only use Alion HL in orchards where the trees have been established at least three years and exhibiting normal growth and good vigor.

For use in tree nuts, except pecan, only use Alion HL in orchards where the trees have been established at least one year and exhibiting normal growth and good vigor.

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If cracks in the soil or depressions from transplanting are present, fill them in prior to applying Alion HL.

Pome Fruit: Crop group 11 including apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these

Stone Fruit: Crop group 12 apricot; cherry, sweet; cherry, tart; nectarine; peach; plum; plum, Chickasaw; plum, Damson; plum, Japanese; plumcot; prune

Tree Nuts: Crop group 14 including almond; beech nut; Brazil nut; butternut; cashew; chestnut; chinquapin; filbert (hazelnut); hickory nut; macadamia nut; pecan; pistachio; walnut, black and English

Olive

Dose Rate Chart for Pome and Stone Fruit, Tree Nuts, and Olive

Soil Texture	Alion HL (fl oz product / broadcast acre)			
Any soil except those that contain 20% or greater gravel content	**Soil Percent Organic Matter Content**	**Rate Per Application**	**Max Rate Per Year**	**Minimum Days Between Applications**
	%	**fl oz/A**	**fl oz/A**	**Days**
	<1	1.4 (0.045 lb ai/A)	2.8 (0.091 lb ai/A)	90
	1 to 3	1.4 to 2.0 (0.045 to 0.065 lb ai/A)	3.4 (0.11 lb ai/A)	
	> 3	2.0 to 2.6 (0.065 to 0.085 lb ai/A)	4.1 (0.134 lb ai/A)	

Do not apply more than the amount of Alion HL specified per application and per year or in a 12 month period on this label based on soil texture, percent organic matter content, application site, and crop.

When making more than one application per year, allow a minimum of 90 days between applications.

Do not use on soils with 20% or more gravel content.

Do not apply when nuts intended for harvest are on the ground or illegal residues may result.

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Do not apply more than a total of 4.1 fl oz of product (0.134 lb ai/A) per year or in a 12 month period when used in pome fruit, stone fruit, tree nuts and olive.

In the California counties of Kern, Inyo, Tulare, Kings, Fresno, and Madera, Alion HL can only be applied beginning after harvest up to initiation of pink bud stage in almonds, and up to beginning emergence of green leaf tissue in pistachios, walnuts, and pecans.

APPLICATION DIRECTIONS FOR REPLANTED LABELED CROPS IN ESTABLISHED POME and STONE FRUIT, TREE NUT, OLIVE ORCHARDS AND GRAPE VINEYARDS

Alion HL may be used in established orchards/groves/vineyards around new trees or vines (resets/replants) anytime following planting provided the following conditions exist:

1) The soil is completely settled around established and newly planted trees/vines and there are not open channels or depressions in the soil that would allow the product to move into the root zone through open channels.
2) The trunks are protected from spray contact by nonporous wraps, grow tubes, or waxed containers.
3) The trees/vines are exhibiting good health and vigor.
4) Alion HL can be applied to resets/replants contained within 3 year old and older established grapes, pome and stone fruit, pecan and olive.

Pome Fruit: Crop group 11 including apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these

Stone Fruit: Crop group 12 including apricot; cherry, sweet; cherry, tart; nectarine; peach; plum; plum, Chickasaw; plum, Damson; plum, Japanese; plumcot; prune

Tree Nuts: Crop group 14 including almond; beech nut; Brazil nut; butternut; cashew; chestnut; chinquapin; filbert (hazelnut); hickory nut; macadamia nut; pistachio; walnut, black and English, and pecan

Olive

Grape Vineyard

Spot spraying is not allowed. Application is made with broadcast equipment delivering a uniform spray pattern. Avoid direct or indirect spray contact with crop foliage, green bark, roots, or fruit as it may cause localized crop injury or death. Non-protected trunks of reset/

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replant trees/vines in an established orchard/vineyard planted more than one year may be sprayed with Alion HL if the trunk is callused, mature brown bark. Contact of Alion HL with tissues other than mature brown bark can result in serious damage or plant death. If cracks in the soil or depressions are present after planting, fill them in prior to applying Alion HL.

An established tree nut orchard, except pecan, is defined as the majority of trees in the orchard established a minimum of one year. Established pome and stone fruit, pecan, and olive orchards, and grape vineyard are defined as the majority of trees/vines in the orchard/grove/vineyard established a minimum of three years.

Labeled crops may be planted anytime following an application of Alion HL if the treated soil is removed from the transplant hole and soil that has not received any application of Alion HL within the last 12 months is used around the roots of the new transplant.

APPLICATION DIRECTIONS FOR USE IN FARMSTEAD AREAS

Alion HL will provide preemergence weed control around farmstead building foundations, non-paved farm roads and driveways, farm equipment lots, ungrazed fences, and shelter belts (windbreaks) around cropland when applied according to the directions found on this label.

Refer to the APPLICATION INFORMATION section of this label for application instructions and a list of the weeds that Alion HL will control. Apply Alion HL in a uniform broadcast spray as described in the APPLICATION INFORMATION section of this label. Apply as a directed spray when using under and around desired trees or shrubs such as in a shelterbelt once they are well-established and the soil has finished settling. Apply 2.0 fl oz/A for coarse and medium textured soil or 2.0 to 2.6 fl oz/A for fine textured soil in a minimum spray volume of 10 gallons per acre in a single application. Do not exceed 2.7 fl oz/A (0.088 lb ai/acre) per year or in a 12 month period for any site. For small sprayers mix 0.04 fl oz per gallon water to be applied to 1,000 square feet. Avoid direct or indirect spray contact with foliage, green bark, and roots of desired plants as it may cause localized plant injury or death.

Alion HL will not control weeds that are already emerged. For postemergence control of weeds, refer to the Tank Mix Instructions section of this label and follow the Mixing Instructions provided. Only use products that are also registered for the specific use where the application of the mixture is intended. When tank mixing products with different restrictions, follow the directions of the most restricted label.

Do not use Alion HL in farmstead areas on Long Island, NY.

SPRAYER CLEANUP PROCEDURE

Before and after using Alion HL, thoroughly clean all mixing and spray equipment, including tanks, pumps, lines, filters, screens, and nozzles with a good quality tank cleaner on an approved rinse pad or on the field site where an approved crop is being grown. Clean sprayer thoroughly after each use and before Alion HL residue dries in the equipment. Proper PPE must be worn while cleaning.

- Completely drain all remaining spray solution from the tank in an appropriate location.
- Clean the sprayer using a commercially available tank cleaner following the use instructions provided by the manufacturer. A rotating cleaning nozzle may be beneficial to dislodge any product from the sides of the tank.
- Drain all cleaning solution from the tank and lines in an appropriate location.
- Rinse the tank and flush spray booms with clean water to remove the cleaning solution.
- Remove, clean, and inspect filters, screens, nozzles, and boom endcaps if equipped to ensure that no product remains.
- Rinse the inside and outside of the spray tank and all lines once more with clean water.
- Drain all rinse solution in an appropriate location.

If any Alion HL is left in the spray equipment and subsequently applied to another crop it has the potential to cause injury to that crop.

ROTATIONAL CROP RESTRICTIONS

Alion HL is intended for use in perennial tree and vine crops listed in this label and for non-crop farmstead uses. Do not rotate to any crops not listed on this label within 24 months after the last application. Planting earlier than this may result in crop injury or death. If a crop is not on this label, a bioassay should be conducted prior to planting if Alion HL has been used in the previous 36 months. A successful field bioassay means growing a test strip or several plots of the intended crop from seed or transplant to maturity without any observed herbicide symptoms. The test should be conducted in representative areas across the field that includes knolls, low areas, field edges, and changes in soil texture. The 24 month rotational crop interval must be extended if the field bioassay does not result in acceptable crop tolerance.

Labeled citrus crops may be transplanted into soil previously treated with Alion HL 1 month or more after the last application provided potted trees (such as citripots) are used.

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New orchards of labeled pome and stone fruit, tree nut, pistachio and olive may be established in a location previously treated with Alion HL 1 year after application. Grape vineyards may be established in a location previously treated with Alion HL 2 years after application. In labeled pome and stone fruit, tree nuts, grapes, pistachio, and olive previously treated soil must be thoroughly mixed to a depth of at least 6 inches prior to planting. This may be done through any combination of tillage operations such as ripping, disking, or plowing.

If other herbicides have also been used, follow the most restrictive label for the crop rotation interval.

RESISTANCE MANAGEMENT

Indaziflam, the active ingredient in this product, is a Group 29 herbicide based on the mode of action classification system of the Weed Science Society of America. A given weed population may contain plants naturally resistant to Group 29 herbicides. Such resistant weed plants may not be effectively managed using Group 29 herbicides but may be effectively managed using another herbicide alone or in mixtures from a different Group and/or by using cultural or mechanical practices. However, a herbicide mode of action classification by itself may not adequately address specific weeds that are resistant to specific herbicides. Consult your local company representative, state cooperative extension service, professional consultants or other qualified authorities to determine appropriate actions for treating specific resistant weeds.

Best Management Practices

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to herbicides is recommended. A diversified weed management program may include the use of multiple herbicides with different modes of action with overlapping weed control spectrum, tillage operations and/or other cultural practices that control weeds. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance. Scouting after a herbicide application is important because it can facilitate the early identification of weed shifts and/or weed resistance and thus provide direction on future weed management practices. One of the best ways to contain resistant populations is to implement measures to avoid allowing weeds to reproduce by seed or to proliferate vegetatively. Cleaning equipment between sites and avoiding movement of plant material between sites will greatly aid in retarding the spread of resistant weed seed.

- There are no known cases of weed resistance to Alion HL nor any known instances of cross resistance between Alion HL and other classes of herbicides or modes of action. Research has shown that performance of Alion HL is not affected by the presence of

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biotypes resistant to glyphosate, triazines, ALS-inhibiting, growth regulant, or other herbicide modes of action.

- To delay the development of herbicide resistance, the following practices are recommended:
  - Use herbicides with different modes of action in the tank mixture, rotation, or in conjunction with alternate cultural practices.
  - Always use at least the minimum rate specified by the label and observe all use rate instructions.
  - Avoid the consecutive use of Alion HL unless another herbicide that is effective on the same target weeds is used in rotation or as a tankmix partner.
  - Base herbicide use on a comprehensive Integrated Pest Management (IPM) program.
  - Monitor treated areas and control escaped weeds by alternate means.

Contact local extension or crop advisor for IPM and resistance management information.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Protect the product from freezing temperatures. Store the product at temperatures above 32°F and preferably above 40°F.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING

Rigid, Non-refillable containers small enough to shake (i.e., with capacities equal to or less than 5 gallons)

Non-refillable container. 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 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.

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Pressure rinse as follows: Empty the remaining contents into application equipment or a 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.

Offer for recycling, if available or reconditioning, if appropriate. Then puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the 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 Bayer CropScience LP. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE LP MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of Bayer CropScience LP is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE LP DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

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LIMITATIONS OF LIABILITY: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT BAYER CROPSCIENCE LP'S ELECTION, THE REPLACEMENT OF PRODUCT.

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NET CONTENTS: 1 Pt. 4 Fl. Oz. (20 Fl. Oz.)

Alion® HL

GROUP 29 HERBICIDE

For Preemergent Weed Control in Citrus Fruit, Grapes, Stone Fruit, Pome Fruit, Tree Nuts, and Olives.

ACTIVE INGREDIENT:

Indaziflam* **45.05%**

OTHER INGREDIENTS: **54.95%**

TOTAL: 100.00%

Contains 4.16 pounds of indaziflam per gallon.

*(CAS No: 730979-19-8)

EPA Reg. No. 264-1105

KEEP OUT OF REACH OF CHILDREN

CAUTION

For **MEDICAL** And **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours A Day
1-800-334-7577
For **PRODUCT USE** Information Call
1-866-99BAYER (1-866-992-2937)

See additional precautionary statements and directions for use on label.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed, absorbed through the skin or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing mist.

See back panel for FIRST AID and STORAGE AND DISPOSAL.

Bayer CropScience LP
P.O. Box 12014, 2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709
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FIRST AID

If on skin or clothing: • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled: • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed: • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
For MEDICAL Emergencies Call 24 Hours A Day 1-800-334-7577 Have the product container or label with you when calling a poison control center or doctor or going for treatment.

Note to physician: No specific antidote is available. Treat symptomatically.

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