

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

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

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EPA Reg. Number: Date of Issuance:

5/23/19

NOTICE OF PESTICIDE:

X Registration
Reregistration
(under FIFRA, as amended)

Term of Issuance:

83529-113

Conditional

Name of Pesticide Product:

Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE

Name and Address of Registrant (include ZIP Code):

Sharda USA LLC c/o Wagner Regulatory Associates, Inc. P.O. Box 640 Hockessin, DE 19707

**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 (FIFRA).

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 conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/registration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Continued on page 2

		-
Signature of Approving Official:	Date:	
Mindy Ondoh	5/23/19	
Mindy Ondish, Product Manager 23		
Herbicide Branch Registration Division (7505P)		

EPA Form 8570-6

- 2. You are required to comply with the data requirements described in the Generic Data Call-Ins (GDCIs) identified below:
  - a. Mesotrione GDCI-122990-1474
  - b. Metolachlor GDCI-108801-1506

You must comply with all of the data requirements within the established deadlines. If you have questions about the GDCIs listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: <a href="http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1">http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1</a>

- 3. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 83529-113."
- 4. Submit one copy of the 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 FIFRA 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 you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). 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 12/12/2018
- Alternate CSF 1 dated 12/12/2018

If you have any questions, please contact Shanta Adeeb by phone at 703-347-0502, or via email at adeeb.shanta@epa.gov.

Enclosure

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#### **RESTRICTED USE PESTICIDE**

(GROUND AND SURFACE WATER CONCERNS)

For retail sale to and use only by certified applicators or persons under their direct supervision, and only for those uses covered by the certified applicator's certification. This product is a restricted-use herbicide due to ground and surface water concerns. Users must read and follow all precautionary statements and instructions for use in order to minimize potential for atrazine to reach ground and surface water.

ATRAZINE	GROUP	5	HERBICIDE
METOLACHLOR	GROUP	15	HERBICIDE
MESOTRIONE	GROUP	27	HERBICIDE

[MASTER LABEL]

# Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE ABN: Appeal

For Control of Annual Grass and Broadleaf Weeds in Field Corn, Seed Corn, Sweet Corn, Yellow Popcorn, and Grain Sorghum

ACTIVE INGREDIENTS:	WT. BY %
*Atrazine	18.65%
Atrazine related compounds	0.35%
** Metolachlor	19.00%
***Mesotrione	2.44%
OTHER INGREDIENTS:	59.56%
TOTAL:	100.0%

- \*CAS No. 1912-24-9 Contains 1.71 lbs. per U.S. gal. of the active ingredient atrazine and related triazines.
- \*\*CAS No. 51218-45-2 Contains 1.71 lbs. per U.S. gal. of the active ingredient metolachlor.
- \*\*\*CAS No. 104206-82-8 Contains 0.22 lb. per U.S. gal. of the active ingredient mesotrione. Contains the safener benoxacor.

### KEEP OUT OF REACH OF CHILDREN CAUTION

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

FIRST AID				
IF SWALLOWED:	OWED: • 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 by a poison control center or doctor.			
	Do not give anything by mouth to an unconscious person.			
IF IN EYES:	N EYES: • Hold eye open and rinse slowly and gently with water for 15-20 minutes.			
	Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.			
	Call a poison control center or doctor for treatment advice.			
HOTLINE NUMBER				
11 11 1				

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information concerning this product, call your poison control center at **1-800-222-1222**.

[Optional referral statements when booklets and container labels are used:

See Panel for First Aid Instructions and booklet for complete Precautionary Statements and Directions For Use.

See label booklet for complete Precautionary Statements, Directions For Use, and Storage and Disposal.

See label booklet for additional Precautionary Statements, Directions For Use, and Storage and Disposal.

See label booklet for complete Directions For Use.]

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

EPA Reg. No. 83529-RRG

Manufactured for:
Sharda USA LLC SU

7217 Lancaster Pike, Suite A Hockessin, Delaware 19707

Net Contents: [Gals/L]

**EPA Est. No. XXXXX-XX-XXX** 

ACCEPTED

05/23/2019

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 2007.00 440

83529-113

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinyl chloride (PVC) ≥14 mils or Viton ≥14 mils
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing or loading

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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

#### **ENGINEERING CONTROL STATEMENTS**

When applicators 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)(5)], 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.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

This product is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply when weather conditions favor drift from treated areas.

#### **Ground Water Advisory**

Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE contains both the active ingredients atrazine and metolachlor. Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

Metolachlor has the potential to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

#### **Surface Water Advisory**

The active ingredients in this product have the potential to contaminate surface water through ground spray drift. Under some conditions, the active ingredients may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These include poorly drained or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

#### Mixing/Loading Instructions

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

This product must not be mixed/loaded or used within 50 ft. of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment

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or containers within 50 ft. of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The abovespecified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed.

This product must not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied aerially or by ground within 66 ft. of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft. around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 ft. buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.

#### **Tile-Outletted Terraced Fields Containing Standpipes**

One of the following restrictions must be used in applying atrazine to tile-terraced fields containing standpipes:

- 1. Do not apply this product within 66 ft. of standpipes in tile-outletted terraced fields.
- 2. Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2 3 inches in the entire
- 3. Apply this product to the entire tile-outletted terraced field under a no-till practice only when a high crop residue management practice is practiced. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during and after crop harvest.

#### **DIRECTIONS FOR USE**

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

ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Atrazine Watershed Information Center (AWIC) to determine whether the use of this product is prohibited in your watershed. AWIC can be accessed through www.atrazine-watershed.info or 1-866-365-3014. If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact Sharda USA LLC for a refund.

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

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL. CROP INJURY, OR ILLEGAL RESIDUES.

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

#### 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 24 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 over short-sleeved shirt and short pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinyl chloride (PVC) ≥14 mils or Viton ≥14 mils
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

#### PRODUCT INFORMATION

Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE may be used pre-emergence and post-emergence in the culture of field corn and seed corn. Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE may also be used in the culture of sweet corn, yellow popcorn, and grain sorghum, but the application must be made prior to crop emergence (pre-emergence), or severe crop injury may occur.

Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE is for pre-emergence use for control of most annual grasses and broadleaf weeds in the crops described above. Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE may also be applied early post-emergence for the control of broadleaf weeds in field corn (pre-emergence only in sweet corn, yellow popcorn, and grain sorghum). See Table 1 and 2 for a list of weeds controlled. Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE will not consistently control grasses that are emerged at the time of application.

**Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** is a combination of the herbicides: metolachlor, mesotrione, and atrazine. **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** controls weeds by interfering with normal germination and seedling development and is for management of the weed species listed in Tables 1 and 2.

#### **Precautions:**

- Observe all precautions and limitations on the label of each product used in tank mixtures. 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 precautionary statements of each product in the tank mixture.
- Thoroughly clean sprayer or other application device before using. Dispose of cleaning solution in a responsible manner. Do not use a sprayer or applicator contaminated with other materials, or crop damage or sprayer clogging of the application device may occur.

#### Restrictions:

- Do not apply this product through any type of irrigation system.
- Do not apply by aerial application.
- Do not use **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** on any crop other than field corn (for grain, seed, or silage), sweet corn (pre-emergence applications only), yellow popcorn (pre-emergence applications only), or grain sorghum (pre-emergence applications only).
- Do not use **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** in the culture of white popcorn or ornamental (Indian) corn.
- Do not make application under conditions which favor runoff or wind erosion of soil containing this product to non-target areas.
- Do not make application to powdery dry or light sand soils when conditions are favorable for wind erosion, unless soil has first been settled by rainfall or irrigation.
- Do not apply to impervious substrates, such as paved or highly compacted surfaces.
- Do not use tail water from the first flood or furrow irrigation of treated fields to treat non-target crops, unless at least ½ inch of rainfall has occurred between application and the first irrigation.
- Atrazine Herbicide Rate Restrictions and Limitations: Certain states may have established rate limitations within specific geographical areas for the use of atrazine. These more restrictive/protective requirements must be followed. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.
  - Maximum atrazine application rates for field corn, seed corn, field silage corn, sweet corn, and yellow popcorn must be as follows:
    - If no atrazine was applied prior to corn emergence, apply a maximum of 2.0 lbs. a.i./acre broadcast. If a post-emergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 lbs. a.i./acre per calendar year. When tank mixing or sequentially applying atrazine or products containing atrazine to corn, the total pounds of atrazine applied (lbs. a.i./acre) must not exceed 2.5 lbs. active ingredient per year;
    - Apply a maximum of 2.0 lbs. a.i./acre as a single pre-emergence application on soils that are not highly erodible or on highly erodible soils if at least 30% of the soil is covered with plant residues; or
    - Apply a maximum of 1.6 lbs. a.i./acre as a single pre-emergence application on highly erodible soils if <30% of the surface is covered with plant residues, or 2.0 lbs. a.i./acre if only applied post-emergence.

This product contains a safener (Benoxacor). Applied according to directions and under normal growing conditions, **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** will not harm the treated crop. During germination and early stages of growth, extended periods of unusually cold and wet or hot and dry weather, insect or plant disease attack, carry-over pesticide residues, the use of certain soil applied systemic insecticides, improperly placed fertilizers or soil insecticides may weaken crop seedlings. **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** used under these conditions could result in crop injury.

#### **INTEGRATED PEST (WEED) MANAGEMENT**

Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE may be integrated into an overall pest management strategy. Practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding, and rotations) should be followed wherever possible. Consult local agricultural authorities or weed control specialists for additional Integrated Pest (Weed) Management strategies established for your area.

#### WEED RESISTANCE MANAGEMENT

Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE contains three active ingredients, atrazine, metolachlor and mesotrione (Group 5, 15 and 27 Herbicides). Atrazine is classified as a Group 5 herbicide (triazine chemical family), an inhibitor of photosynthesis at photosystem II site A; metolachlor is classified as a Group 15 herbicide (chloroacetamide chemical family) a mitosis inhibitor; and mesotrione is classified as a Group 27 herbicide (triketone chemical family) an inhibitor of 4-hydroxyhenyl-pyruvatedioxygenase (4-HPPD).

Herbicide resistance is defined as the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to the wild type. In a plant, resistance may be naturally occurring or induced by such techniques as genetic engineering or selection of variants produced by tissue culture or mutagenesis. Any weed population may contain or develop plants that are naturally resistant to **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** and other Group 5, 15, or Group 27 herbicides. Weed species with acquired resistance to Group 5, 15, or Group 27 herbicides may eventually dominate the weed population if Group 5, 15, or Group 27 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** or other Group 5, 15, or Group 27 herbicides.

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 non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or 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 pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.

To delay herbicide resistance, consider:

- Avoiding the consecutive use of Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE or other target site of action Group 5, 15, or Group 27 herbicides that have a similar target site of action, on the same weed species.
- Using tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive Integrated Pest Management (IPM) program.
- Monitoring treated weed populations for loss of field efficacy.

Users should scout before and after application. Users should report lack of performance to registrant or their representative.

Contact your local sales representative, extension agent, or certified crop advisors to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action for each target weed.

#### **APPLICATION PROCEDURES**

#### **Ground Application**

Adjust spray nozzles so that they are uniformly spaced, the same size and type to provide accurate and uniform application. Use spray nozzles that provide medium to coarse droplet size to avoid drift yet provide good coverage. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser. Use a pump that can maintain a pressure of at least 35-40 psi at the nozzles and provide proper agitation within the tank to keep the product dispersed. Lower pressures may be used with extended range or drift reduction nozzles as long as adequate coverage is maintained. Always ensure that agitation is maintained until spraying is completed, even if stopped for brief periods of time. If the agitation is stopped for more than 5 minutes, resuspend the spray solution by running on full agitation prior to spraying.

#### **Pre-Emergence Application**

Make application in a spray volume of 10-80 gals. per acre.

#### **Post-Emergence Application**

Thorough weed coverage is essential for optimum weed control. Boom height for broadcast over-the-top applications should be based on the height of the crop - at least 15" above the crop canopy, but only high enough to give uniform coverage. Apply in a spray volume of 10-30 gals./acre. When weed foliage is dense, use a minimum spray volume of 20 gals./A. Flat fan nozzles of 80° or 110° are recommended for equipment for post-emergence applications. Nozzles may be angled forward 45° for optimum post-emergence coverage. Do not use flood-jet nozzles or controlled droplet application for post-emergence applications of **Sharda Atrazine 18.65%** + **Metolachlor 19% + Mesotrione 2.44% ZE**.

#### **SPRAY DRIFT MANAGEMENT**

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of equipment and weather related factors determine the potential for drift. The applicator is responsible for considering these factors when making an application decision.

Do not apply when weather conditions may cause drift to non-target areas. Drift may result in injury to adjacent crops and vegetation. To avoid spray drift, DO NOT apply when the wind speed is greater than 10 mph or during periods of temperature inversions.

Leave a sufficient buffer to avoid drift to sensitive crops. This buffer may be untreated corn rows or field border species maintained

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for this purpose. The width of the buffer needed for a specific application will depend on the wind speed, distance to sensitive crops, and application equipment parameters.

#### **Information on 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. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions.

#### **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** Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- **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.

#### **Application Height**

Applications should be made at the lowest height above the target area that still provides uniform coverage of the target. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### **Sensitive Areas**

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

#### **ADDITIVES**

When an adjuvant is to be used with this product, the use of an adjuvant that meets the standards of the Chemical Producers and Distributors Association (CPDA) adjuvant certification program is recommended.

#### **Applications After Corn Has Emerged**

When making application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** post-emergence to corn, add either a non-ionic surfactant (NIS) or crop oil concentrate (COC). When using a NIS, add at 0.25% v/v (1 qt./100 gals.). When using a COC, add at a rate of 1% v/v (1 gal./100 gals.) or the equivalent of 1 gal./100 gals. The use of COC will provide more consistent weed control than an NIS but may also result in temporary crop injury.

In addition to NIS or COC, a nitrogen-based adjuvant may also be added to increase consistency of weed control. The use of nitrogen-based adjuvants (AMS or UAN) will increase the risk of crop injury and can result in temporary crop injury.

Do not use methylated seed oil (MSO) with **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** when applied alone to emerged field corn, or when **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** is applied as a post-emergence tank mixture with other products.

#### **Applications Prior to Corn Emergence**

Any of the adjuvants may be used at a pre-emergence or pre-plant timing, i.e., where the corn crop has not yet emerged to increase burndown activity on existing weeds.

#### **Use of Spray Adjuvants With Tank Mixtures**

When **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** is used as a pre-emergence herbicide and before weeds have emerged, spray adjuvants have little or no influence on performance. However, in burndown situations where the weeds have emerged and the corn has not, an adjuvant may be used with **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** applied alone or when applied in tank mixture with a burndown herbicide as allowed on the individual product labels. Use only those adjuvants approved for agricultural crop use.

For post-emergence (after corn emergence) tank mixtures with Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE, use the additives described in the Applications After Corn Has Emerged section above for additional use information. If the Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE tank mixture partner label has more restrictive additive requirements than what is listed on this label, follow the more restrictive directions.

#### **MIXING PROCEDURES**

It is the end-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. Do not exceed label dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing. Do not tank mix **Sharda Atrazine 18.65%** + **Metolachlor 19%** + **Mesotrione 2.44% ZE** with any other insecticide, fungicide, fertilizer solution, or adjuvant not listed on the label without testing compatibility as poor mixing may result. Perform a compatibility 'jar test' for tank mixtures where compatibility is unknown before actual tank mixing.

Carrier for Pre-Emergence Applications: Either clean water or liquid fertilizers, excluding suspension fertilizers, may be used as carriers for pre-emergence applications. If fluid fertilizers are used, a compatibility test must be done. Even if **Sharda Atrazine 18.65%** + **Metolachlor 19%** + **Mesotrione 2.44% ZE** is physically compatible with a fluid fertilizer, constant agitation is necessary to maintain a uniform mixture during application.

Carrier for Post-Emergence Applications: Use only clean water as the carrier when applying Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE after field corn emergence. Do not apply Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE to emerged sweet corn, yellow popcorn, or grain sorghum.

Use the Following Mixing Instructions for Adding Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE to the Spray Tank

- 1. Only use sprayers in good operating condition with adequate agitation. Ensure the sprayer is cleaned according to instructions on label of the product used prior to use of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE**. If water is used as the carrier, use clean water.
- 2. Begin to fill sprayer tank or premix tank with clean water and engage agitator. Agitation must be continued throughout the entire mixing and spraying procedure.
- 3. When the sprayer or premix tank is half full of water, begin to add the mixture components (if they pass the compatibility test).
- 4. If ammonium sulfate (AMS) is used, continue agitation until completely dispersed.
- 5. If a wettable powder or dry flowable formulation is used, add it slowly to the tank. Mixing and compatibility may be improved when a wettable powder or dry flowable is diluted with water before adding to the tank. Agitate during the procedure.
- 6. If a flowable formulation is used, add slowly to the tank.
- 7. Add Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE.
- 8. Add any other tank-mix products next, with emulsifiable concentrates added last.
- 9. Add an adjuvant last, if needed.
- 10. Complete filling the sprayer tank and continue agitation. Apply as soon as possible after spray mixture is prepared. Do not leave mixture in spray tank overnight without agitation or unattended.

If Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE is added to the spray tank via induction, compatibility may be compromised. If an induction tank (or similar equipment) is used, add each product separately and allow each to disperse into the spray tank before adding the next product. For best tank-mix compatibility, rinse the induction tank with water before adding each component. Do not add Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE to the spray tank via in-line injection.

#### **Compatibility Test**

Conduct a compatibility test before tank mixing to ensure compatibility of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** with other pesticides. The following test assumes a spray volume of 25 gals./A. For other spray volumes, make appropriate changes in the ingredients.

Nitrogen solutions or complete liquid fertilizers, excluding suspension fertilizers, may replace all or part of the water in the spray. Because liquid fertilizers vary even within the same analysis, **always check compatibility with pesticide(s) before use**. Incompatibility of tank mixtures is more common with mixtures of fertilizer and pesticides.

#### **Compatibility Test Procedure**

- 1. Add 1.0 pt. of carrier (fertilizer or water) to each of two 1 qt. jars with tight lids. **Note:** Use the same source of water that will be used for the tank mix and conduct the test at the temperature the tank mix will be applied.
- 2. To one of the jars, add ¼ tsp. or 1.2 mL of a compatibility agent approved for this use, such as Compex or Unite (¼ tsp. is equivalent to 2.0 pts./100 gals. spray). Shake or stir gently to mix.
- 3. To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on specified label rates. If more than one pesticide is used, add them separately with dry pesticides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix.
- 4. After adding all ingredients, put lids on and tighten and invert each jar 10 times to mix. Let the mixtures stand 15- 30 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility:
  - a. slurry the dry pesticide(s) in water before addition, or
  - b. add ½ the compatibility agent to the fertilizer or water and the other ½ to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, do not use the mixture.
- 5. After compatibility testing is complete, dispose of any pesticide wastes in accordance with the **Storage and Disposal** section in this label.

#### **Cleaning Equipment After Application**

Special attention must be given to cleaning equipment before spraying a crop other than field corn. Mix only as much spray solution as needed.

- 1. Flush tank, hoses, boom, and nozzles with clean water.
- 2. Prepare a cleaning solution of 1 gallon of household ammonia per 25 gals. of water. Many commercial spray tank cleaners may be used.
- 3. Use a pressure washer to clean the inside of the spray tank with this solution. Take care to wash all parts of the tank, including the inside top surface. If a pressure washer is not available, completely fill the sprayer with the cleaning solution to ensure contact of the cleaning solution with all internal surfaces of the tank and plumbing. Start agitation in the sprayer and thoroughly

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recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.

- 4. Flush hoses, spray lines, and nozzles for at least 1 minute with the cleaning solution.
- 5. Remove boom end caps and flush dead space areas, with water, then replace caps.
- 6. Dispose of rinsate from steps 1-5 in an appropriate manner.
- 7. Repeat steps 2-6.
- 8. Remove nozzles, screens, and strainers and clean separately in the ammonia solution after completing the above procedures.
- 9. Rinse the complete spraying system with clean water.

#### **WEEDS CONTROLLED**

When application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** is made as directed on this label the product will provide control or partial control of the weeds listed in Tables 1 and 2.

If a significant rainfall does not occur within 7 days after application, weed control may be decreased. If irrigation is available, apply ½ to 1 inch of water. If irrigation is not available, a uniform shallow cultivation is recommended as soon as weeds emerge.

Where reference is made to weeds partially controlled, partial control can either mean erratic control from good to poor or consistent control at a level below that generally considered acceptable for commercial weed control.

Dry weather following pre-emergence application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** may reduce weed control effectiveness. Cultivate if weeds develop in conventional tillage corn.

Table 1: Weeds Controlled or Partially Controlled by Pre-Emergence by Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE

2.44% ZE  Common Name	Scientific Name	C = Control PC = Partial Control	Common Name	Scientific Name	C = Control PC = Partial Control
Amaranth, Palmer	Amaranthus palmeri	С	Nightshade, Black	Solanum nigrum	С
Amaranth, Powell	Amaranthus powellii	С	Nightshade, Eastern Black	Solanum ptycanthum	С
Barnyardgrass	Echinochloa crus-galli	С	Nightshade, Hairy	Solanum sarrachoides	С
Bedstraw, Catchweed	Galium aparine	PC	Nutsedge, Yellow	Cyperus esculentus	С
Beggarweed, Florida	Desmodium tortuosum	С	Panicum, Browntop	Panicum fasciculatum	С
Buckwheat, Wild	Polygonum convolvulus	С	Panicum, Fall	Panicum dichotomiflorum	С
Buffalobur	Solanum rostratum	С	Panicum, Texas	Panicum texanum	PC
Carpetweed	Mollugo verticillata	С	Pigweed, Redroot	Amaranthus retroflexus	С
Chickweed, Common	Stellaria media	С	Pigweed, Smooth	Amaranthus hybridus	С
Cocklebur, Common	Xanthium strumarium	PC	Puncturevine	Tribulus terrestris	PC
Crabgrass	Digitaria spp.	С	Purslane, Common	Portulaca oleracea	С
Crowfootgrass	Dactyloctenium aegyptium	С	Pusley, Florida	Richardia scabra	С
Cupgrass, Prairie	Eriochloa contracta	С	Radish, Wild	Raphanus raphanistrum	С
Cupgrass, Southwestern	Eriochloa gracilis	С	Ragweed, Common	Ambrosia artemisiifolia	С
Cupgrass, Woolly	Eriochloa villosa	PC	Ragweed, Giant	Ambrosia trifida	PC
Deadnettle, Purple	Lamium purpureum	С	Rice, Red	Oryza sativa	С
Devil's Claw	Proboscidea louisianica	С	Sandbur, Field	Cenchrus incertus	PC
Foxtail, Giant	Setaria faberi	С	Sesbania, Hemp	Sesbania exaltata	С
Foxtail, Green	Setaria viridis	С	Shattercane	Sorghum bicolor	PC
Foxtail, Robust (Purple, White)	Setaria spp.	С	Shepherd's Purse	Capsella bursa-pastoris	С
Foxtail, Yellow	Setaria pumila	С	Sicklepod	Senna obtusifolia	PC
Galinsoga	Galinsoga parviflora	С	Sida, Prickly	Sida spinosa	С
Goosegrass	Eleusine indica	С	Signalgrass, Broadleaf	Brachiaria platyphylla	PC
Henbit	Lamium amplexicaule	С	Signalgrass, Narrowleaf	Brachiaria piligera	С
Horseweed (Marestail)	Conyza canadensis	С	Smartweed, Ladysthumb	Polygonum persicaria	С
Jimsonweed	Datura stramonium	С	Smartweed, Pennsylvania	Polygonum pensylvanicum	С
Johnsongrass, Seedling	Sorghum halepense	PC	Sprangletop, Red	Leptochloa filiformis	С
Kochia	Kochia scoparia	С	Starbur, Bristly	Acanthospermum hispidum	С
Lambsquarters, Common	Chenopodium album	С	Sunflower, Common	Helianthus annus	PC
Mallow, Venice	Hibiscus trionum	С	Velvetleaf	Abutilon theophrasti	С
Millet, Foxtail	Setaria italica	С	Waterhemp, Common	Amaranthus rudis	С
Millet, Wild Proso	Panicum miliaceum	PC	Waterhemp, Tall	Amaranthus tuberculatus	С
Morningglory, Ivyleaf/Entireleaf	Ipomoea hederacea	PC	Witchgrass	Panicum capillare	С
Mustard, Wild	Brassica kaber	С			

Table 2: Weeds Controlled or Partially Controlled Post-Emergence by Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE

Application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** made early post-emergence will provide control or partial control of small emerged broadleaf weeds (less than 3") but will not provide consistent or effective control of weeds identified as resistant to post-emergence HPPD inhibitors.

Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE will not provide consistent control of most emerged grass weeds.

Common Name	Scientific Name	C = Control PC = Partial Control	Common Name	Scientific Name	C = Control PC = Partial Control
Amaranth, Palmer	Amaranthus palmeri	С	Nightshade, Black	Solanum nigrum	С
Amaranth, Powell	Amaranthus powellii	С	Nightshade, Eastern Black	Solanum ptycanthum	С
Beggarweed, Florida	Desmodium tortuosum	С	Nightshade, Hairy	Solanum sarrachoides	С
Buckwheat, Wild	Polygonum convolvulus	С	Nutsedge, Yellow	Cyperus esculentus	PC
Buffalobur	Solanum rostratum	С	Pigweed, Redroot	Amaranthus retroflexus	С
Carpetweed	Mollugo verticillata	С	Pigweed, Smooth	Amaranthus hybridus	С
Chickweed, Common	Stellaria media	С	Pokeweed	Phytolacca americana	С
Cocklebur, Common	Xanthium strumarium	С	Potatoes, Volunteer	Solanum spp.	С
Crabgrass, Large	Digitaria spp.	С	Purslane, Common	Portulaca oleracea	С
Dandelion	Taraxacum officinale	PC	Pusley, Florida	Richardia scabra	С
Deadnettle, Purple	Lamium purpureum	С	Radish, Wild	Raphanus raphanistrum	С
Devil's Claw	Proboscidea louisianica	С	Ragweed, Common	Ambrosia artemisiifolia	С
Galinsoga	Galinsoga parviflora	С	Ragweed, Giant	Ambrosia trifida	С
Hemp	Cannabis sativa.	С	Sesbania, Hemp	Sesbania exaltata	С
Henbit	Lamium amplexicaule	С	Shepherd's Purse	Capsella bursa-pastoris	С
Horsenettle	Solanum carolinense	С	Sida, Prickly	Sida spinosa	С
Horseweed (Marestail)	Conyza canadensis	С	Signalgrass, Broadleaf	Brachiaria platyphylla	С
Jimsonweed	Datura stramonium	С	Smartweed, Ladysthumb	Polygonum persicaria	С
Kochia	Kochia scoparia	С	Smartweed, Pennsylvania	Polygonum pensylvanicum	С
Lambsquarters, Common	Chenopodium album	С	Sunflower, Common	Helianthus annus	С
Mallow, Venice	Hibiscus trionum	С	Thistle, Canada	Cirsium arvense	С
Marestail	Hippuris vulgaris	С	Velvetleaf	Abutilon theophrasti	С
Morningglory, Ivyleaf/Entireleaf	Ipomoea hederacea.	С	Waterhemp, Common	Amaranthus rudis	С
Mustard, Wild	Brassica kaber	С	Waterhemp, Tall	Amaranthus tuberculatus	С

#### **ROTATIONAL CROPS**

When rotating crops following an application of Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE:

- Field corn, seed corn, field silage corn, sweet corn, yellow popcorn, and grain sorghum (where seed is treated with a safener that provides tolerance to metolachlor) may be replanted immediately, if crop is lost. Do not reapply **Sharda Atrazine 18.65%** + **Metolachlor 19%** + **Mesotrione 2.44% ZE**.
- If Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE is applied after June 1<sup>st</sup>, rotating to crops other than corn (all types) or sorghum the next spring may result in crop injury.
- Do not rotate to crops other than corn (all types), cotton, small grain cereals, rice, soybeans, sorghum or peanuts the spring following application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE**.
- Injury may occur to soybeans planted the year following application on soils having a calcareous surface layer for example, those found within the Clarion-Nicollet-Webster soil series of northern Iowa and southern Minnesota.
- In eastern parts of the Dakotas, Kansas, western Minnesota, and Nebraska do not rotate to soybeans for 18 months following application if the combined atrazine rate applied was more than 2.0 lbs. a.i./A, or equivalent band application rate, or soybean injury may occur.
- In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use only when corn (all types) or sorghum is to follow field corn, or a crop of untreated corn (all types) or sorghum is to precede other rotational crops.
- For all other crops wait 18 months.

#### **CORN - USE DIRECTIONS**

**Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** is labeled for pre-emergence use for control of most annual grass and broadleaf weeds in field corn, seed corn, sweet corn, and yellow popcorn.

Application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** may also be made early post-emergence for the control of broadleaf weeds in field corn and seed corn. Do not make application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** to emerged sweet corn or yellow popcorn or severe crop injury will occur.

#### Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE Application Timings

- Burndown for Reduced Tillage Situations: In reduced or no-till corn and before the crop has emerged, Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE can be applied alone or in tank mixture with glyphosate and paraquat or other registered herbicides for burndown of emerged weeds. Refer to Tables 1 and 2 for a list of weeds controlled or partially controlled by Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE. 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 precautionary statements of each product in the tank mixture.
- Early Pre-Plant: For early pre-plant applications, apply Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE up to

14 days prior to planting.

- Pre-Emergence Surface: For pre-emergence surface applications, apply Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE to the soil surface as a broadcast or banded application.
- Post-Emergence: For post-emergence applications, apply Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE after field corn emergence. See the ADDITIVES section of this label for adjuvant recommendations. Do not apply early post-emergence to field corn in liquid fertilizer or severe crop injury may occur. Apply this treatment to small broadleaf weeds and before the field corn exceeds 12" in height. Occasional field corn leaf burn may result, but this will not affect later growth or corn yield. Do not apply Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE to emerged sweet corn or yellow popcorn or severe crop injury may occur. This product will not provide consistent control of emerged weed grasses. For control of emerged weed grasses, a tank mix with another herbicide may be required (see tank mix recommendations on this label). 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 precautionary statements of each product in the tank mixture.
- Split Application: For split applications, apply Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE as follows in field corn and seed corn. Apply first application of 1.5-2.0 qts./acre (0.64 lbs. a.i. atrazine; 0.64 lbs. a.i. metolachlor and 0.08 lbs. a.i. mesotrione/A to 0.86 lbs. a.i. atrazine; 0.86 lbs. a.i. metolachlor and 0.11 lbs. a.i. mesotrione/A) of Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE prior to crop emergence, followed by a second at a rate of 1.25-1.75 qts./acre (0.53 lbs. a.i. atrazine; 0.53 lbs. a.i. metolachlor and 0.07 lbs. a.i. mesotrione/A to 0.75 lbs. a.i. atrazine; 0.75 lbs. a.i. metolachlor and 0.10 lbs. a.i. mesotrione/A) as a post application after corn emergence. The total amount of Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE applied in the split application program cannot exceed 3.0 qts./acre (1.3 lbs. a.i. atrazine; 1.3 lbs. a.i. metolachlor and 0.17 lbs. a.i. mesotrione/A)) in soils with <3% organic matter and cannot exceed 3.5 qts./acre (1.5 lbs. a.i. atrazine; 1.5 lbs. a.i. metolachlor and 0.19 lbs. a.i. mesotrione/A) in soils with >3% organic matter. Refer to the Post-Emergence section above for instructions on post-emergence applications.

### Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE Use Rates Table 3: Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE Use Rates in Corn

% Organic Matter	Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE Use Rate
<3%	3.0 qts./A (1.3 lbs. a.i. atrazine; 1.3 lbs. a.i. metolachlor and 0.17 lbs. a.i. mesotrione/A)
>3%	3.5 qts./A (1.5 lbs. a.i. atrazine; 1.5 lbs. a.i. metolachlor and 0.19 lbs. a.i. mesotrione/A)

**Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** is not recommended on soils with greater than 10% organic matter or poor weed control may result.

#### **Tank-Mix Combinations**

The tank-mix partners listed in this section may be used in conventional, reduced, or no-till systems and can be applied by the same methods and at the same timings as **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE**, unless otherwise specified in the tank-mix product label. Follow all tank-mix product labels for use rates and restrictions. Perform a compatibility test prior to spraying the tank-mix application. Do not apply **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** tank mixtures to emerged sweet corn or yellow popcorn. For specific adjuvant recommendations, refer to the **ADDITIVES** section on this label. 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 precautionary statements of each product in the tank mixture.

#### Pre-Emergence Tank Mixtures (Applied Before the Crop Has Emerged)

The tank-mix partners listed in Table 4 may be used in conventional, reduced, or no-till systems and be applied by the same methods and at the same timings as **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** unless otherwise specified in the tank-mix product label. Follow all tank-mix product labels for use rates and restrictions. Perform a compatibility test prior to spraying the tank mixture. Tank mixtures with 2,4-D are allowed, but should only be done with extreme care with regard to ensuring compatibility before mixing a load. 2,4-D products and even batches vary greatly with regard to compatibility and should be checked each time a water or carrier source, water or carrier temperature, product source, or tank mixture recipe is changed. 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 precautionary statements of each product in the tank mixture.

Table 4: Tank Mixtures for Pre-Emergence Applications With Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE

Tank-Mix Partner*	Objective
atrazine	Improved broadleaf and grass weed control.
paraquat	Burndown existing weeds.
metribuzin	Improved broadleaf control.
simazine	Improved broadleaf and grass weed control.
glyphosate	Burndown existing weeds.
lambda-cyhalothrin	To control insects, such as cutworm.
*Refer to tank-mix product label for use rates.	

#### Early Post-Emergence Tank Mixtures (Applied After the Crop Has Emerged)

The tank-mix partners listed in Table 5 may be used in conventional, reduced, or no-till systems and can be applied by the same

methods and at the same timings as **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** unless otherwise specified in the tank-mix product label. Follow all tank-mix product labels for use rates and restrictions. Perform a compatibility test prior to spraying the tank-mix application. Do not apply **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** tank mixtures to emerged sweet corn or yellow popcorn. 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 precautionary statements of each product in the tank mixture.

Table 5: Tank Mixtures for Post-Emergence Weed Control with Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE

Tank-Mix Partner*	Objective
atrazine	Broadleaf and annual grass weed control.
nicosulfuron	Emerged grass control.
rimsulfuron + thifensulfuron-methyl	Emerged grass control.
glufosinate-ammonium	See instructions under "Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione
giuiosiliate-allilioniulii	2.44% ZE Programs for LibertyLink® Corn" section of this label.
primisulfuron-methyl + dicamba	Improved broadleaf and grass weed control.
prosulfuron	Improved broadleaf and grass weed control.
	See instructions under "Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione
glyphosate	2.44% ZE Programs With Glyphosate for Glyphosate Resistant Corn" section of this
	label.
primisulfuron-methyl + prosulfuron	Improved broadleaf and grass weed control.
dicamba + diflufenzopyr	Emerged broadleaf weed control.
nicosulfuron + rimsulfuron	Improved grass control.
lambda-cyhalothrin	To control insects, such as cutworm.
*Refer to tank-mix product label for use ra	tes.

Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE Programs With Glyphosate for Glyphosate Resistant Corn Application of Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE may be made pre-emergence at a rate down to 2.25 qts./acre (0.96 lbs. a.i. atrazine; 0.96 lbs. a.i. metolachlor and 0.12 lbs. a.i. mesotrione/A) as part of a two-pass weed control system when followed by a post-emergence application of a glyphosate based product in glyphosate resistant corn (e.g. Roundup Ready or Agrisure™ GT Corn). When applied in this way, Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE will provide reduced competition of the weeds listed in Table 1 for a period of 30 or more days, thus improving the timing flexibility and effectiveness of the glyphosate based product application. Follow all directions for use and restrictions on the glyphosate product label. 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 precautionary statements of each product in the tank mixture.

Application of Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE may also be made early post-emergence at a rate down to 2.25 qts./acre (0.96 lbs. a.i. atrazine; 0.96 lbs. a.i. metolachlor and 0.12 lbs. a.i. mesotrione/A) in tank mixture with a solo glyphosate product (e.g. Touchdown or Roundup brands) that is registered for use over-the-top in glyphosate resistant field corn (e.g., Roundup Ready or Agrisure GT Corn). To minimize weed competition with the crop, target the application of this mixture to weeds in the 1- to 2-inch range. Do not apply this mixture to corn that is greater than 12" tall. If the glyphosate product has a built-in adjuvant system (i.e. the product label does not ask for additional adjuvant), only spray-grade ammonium sulfate (AMS) at 8.5 lbs./100 gals. should be added to this mixture. If the glyphosate product label calls for an adjuvant in addition to AMS, add a non-ionic surfactant (NIS) at 0.25% v/v and AMS to this spray mixture. Do not add urea ammonium nitrate (UAN), crop oil concentrate (COC), or methylated seed oil (MSO) type adjuvants to these mixtures or crop injury may occur. Follow all directions for use and restrictions on the glyphosate product label. 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 precautionary statements of each product in the tank mixture

Application of **Sharda Atrazine 18.65%** + **Metolachlor 19%** + **Mesotrione 2.44% ZE** may be made pre-emergence at 1.5-1.75 qts./acre (0.64 lbs. a.i. atrazine; 0.64 lbs. a.i. metolachlor and 0.08 lbs. a.i. mesotrione/A to 0.75 lbs. a.i. atrazine; 0.75 lbs. a.i. metolachlor and 0.10 lbs. a.i. mesotrione/A) as part of a two-pass weed control system when followed by a metolachlor + glyphosate + mesotrione containing product applied post-emergence in glyphosate resistant corn (e.g. Roundup Ready or Agrisure GT Corn). Apply **Sharda Atrazine 18.65%** + **Metolachlor 19%** + **Mesotrione 2.44% ZE** at 1.5 qts./acre (0.64 lbs. a.i. atrazine; 0.64 lbs. a.i. metolachlor and 0.08 lbs. a.i. mesotrione/A) on soils with <3% OM and 1.75 qts./acre (0.75 lbs. a.i. atrazine; 0.75 lbs. a.i. metolachlor and 0.10 lbs. a.i. mesotrione/A) on soils with >3% OM. Follow all directions for use and restrictions on each product label. 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 precautionary statements of each product in the tank mixture.

#### Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE Programs for LibertyLink Corn

Application of Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE may be made pre-emergence at a rate down to 2.25 qts./acre (0.96 lbs. a.i. atrazine; 0.96 lbs. a.i. metolachlor and 0.12 lbs. a.i. mesotrione/A) as part of a two-pass weed control system when followed by a post-emergence application of a solo glufosinate-ammonium product in field corn designated as LibertyLink. When used in this way, Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE will provide reduced competition of the weeds listed in Table 1 for a period of 30 or more days, thus improving the timing flexibility and effectiveness of the glufosinate-ammonium application. Follow all directions for use and restrictions on the glufosinate-ammonium product label. 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 precautionary statements of each product in the tank mixture.

Application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** may be made early post-emergence at a rate down to 2.25 qts./acre (0.96 lbs. a.i. atrazine; 0.96 lbs. a.i. metolachlor and 0.12 lbs. a.i. mesotrione/A) in tank mixture with a solo glufosinate-ammonium product and applied over-the-top in field corn designated as LibertyLink. To minimize weed competition with the crop, target the application of this mixture to weeds in the 1- to 2-inch range. Do not make application of this mixture to corn that is greater than 12" tall. Ammonium sulfate (AMS) may be added as a spray adjuvant as directed on the glufosinate-ammonium product label. However, AMS should be the only adjuvant added to this tank mixture. Do not add urea ammonium nitrate (UAN), crop oil concentrate (COC), non-ionic surfactants (NIS), or methylated seed oil (MSO) type adjuvants to these mixtures, or crop injury may occur. Follow all directions for use and restrictions on the glufosinate-ammonium product label. 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 precautionary statements of each product in the tank mixture.

#### **Precautions for All Corn Uses**

- Applying Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE post-emergence (emerged corn) to corn that has received an at-plant application of Counter<sup>®</sup> insecticide can result in severe corn injury. Temporary corn injury may occur if Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE is applied to emerged corn where organophosphate insecticides (other than Counter) were applied at planting.
- Do not make post-emergence (emerged corn) applications of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** in a tank mix with any organophosphate or carbamate insecticide or severe corn injury may occur.
- Post-emergence (emerged corn) application of any organophosphate or carbamate insecticide within 7 days before or 7 days after a **Sharda Atrazine 18.65%** + **Metolachlor 19%** + **Mesotrione 2.44% ZE** application may result in severe corn injury.

#### **Restrictions for All Corn Uses**

- Do not exceed a total of 3.75 pounds of metolachlor a.i. or 2.5 pounds of atrazine a.i. per acre, if products containing metolachlor or atrazine have been applied prior to application of this product.
- Do not apply more than 3.5 qts./acre (1.5 lbs. a.i. atrazine; 1.5 lbs. a.i. metolachlor and 0.19 lbs. a.i. mesotrione/A) of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** per growing season.
- Field corn may be treated up to 12" tall.
- Do not harvest forage, grain, or stover within 60 days after last application.
- Do not graze or feed forage from treated areas for 45 days following last application.

#### **GRAIN SORGHUM - USE DIRECTIONS**

Application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** can be made pre-plant non-incorporated (up to 21 days prior to planting) up through pre-emergence for weed control in sorghum that was seed-treated with a safener that provides tolerance to metolachlor. For a listing of weeds controlled or partially controlled, refer to Table 1.

Make application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** at a rate of 3.0 qts./acre (1.3 lbs. a.i. atrazine; 1.3 lbs. a.i. metolachlor and 0.17 lbs. a.i. mesotrione/A) as a broadcast non-incorporated spray beginning at 21 days before planting and up through planting but prior to sorghum emergence. Applying **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** less than 7 days prior to sorghum planting will increase the risk of crop injury, especially if irrigation or rainfall is received following the application. Injury symptoms include temporary bleaching of newly emerging sorghum leaves or, in extreme conditions, stunting or partial stand loss. Applying **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** more than 7 days (but not more than 21) prior to sorghum planting will reduce the risk of crop injury.

If Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE is applied before planting, minimize disturbance of the herbicide-treated soil barrier during the planting process in order to lessen the potential for poor weed control in the disturbed soil zone.

Application of Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE may also be made as a split application to grain sorghum. For a split application program, make application at 1.5-1.75 qts./acre (0.64 lbs. a.i. atrazine; 0.64 lbs. a.i. metolachlor and 0.08 lbs. a.i. mesotrione/A to 0.75 lbs. a.i. atrazine; 0.75 lbs. a.i. metolachlor and 0.10 lbs. a.i. mesotrione/A) of Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE as a non-incorporated early pre-plant (7-21 days before planting), followed by a second Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE application at a rate of 1.25-1.5 qts./acre (0.53 lbs. a.i. atrazine; 0.53 lbs. a.i. metolachlor and 0.07 lbs. a.i. mesotrione/A to 0.64 lbs. a.i. atrazine; 0.64 lbs. a.i. metolachlor and 0.08 lbs. a.i. mesotrione/A) as a pre-emergence application prior to sorghum emergence. Do not exceed more than 3.0 qts./A (1.3 lbs. a.i. atrazine; 1.3 lbs. a.i. metolachlor and 0.17 lbs. a.i. mesotrione/A) of Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE in a split application program.

If weeds are present at the time of application, it is recommended that a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v or a crop oil concentrate (COC) at a rate of 1% v/v be added to the spray solution. In addition to COC or NIS, a spray grade UAN at a rate of 2.5% v/v or AMS at a rate of 8.5 lbs./100 gals. of spray may be added to the solution for improved control of emerged weeds. If weeds are not emerged at the time of application, no additives are recommended.

#### **Restrictions for Grain Sorghum**

• Do not apply more than 3.0 qts. (1.3 lbs. a.i. atrazine; 1.3 lbs. a.i. metolachlor and 0.17 lbs. a.i. mesotrione/A) of Sharda Atrazine

[Text in brackets denotes optional or informational text to EPA reviewer]

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18.65% + Metolachlor 19% + Mesotrione 2.44% ZE per growing season.

- Do not make application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** to sorghum grown on sandy soils (sand, sandy loam, or loamy sand).
- Do not make application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** to emerged grain sorghum or severe injury will occur.
- Do not use **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** in the production of forage sorghum, sweet sorghum (sorgo), sudangrass, sorghum-sudangrass hybrids, or dual-purpose sorghum.
- Sorghum seed must be seed-treated with a safener that provides tolerance to metolachlor prior to planting, or severe crop injury may occur.
- In the state of Texas, do not make application of **Sharda Atrazine 18.65% + Metolachlor 19% + Mesotrione 2.44% ZE** to sorghum grown south of Interstate 20 (I-20) or east of Highway 277.

#### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Keep container tightly closed when not in use. Do not store near seeds, fertilizers, or foodstuffs. Keep away from heat and flame. Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

**PESTICIDE DISPOSAL:** Open dumping is prohibited. Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Rinse spray equipment. 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 as described above, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING [Less Than or Equal to 5 Gallons]:** Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank. 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 mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or other procedures allowed by state and local authorities.

**CONTAINER HANDLING [Greater Than 5 Gallons]:** Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill.

**CONTAINER HANDLING [For Bulk and Mini-Bulk Containers]:** Refillable container. Refill this container with pesticide only. Do not use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.

#### CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

#### **CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Sharda USA LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Sharda USA LLC and Seller harmless for any claims relating to such factors.

Sharda USA LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or Sharda USA LLC and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, Sharda USA LLC, MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, neither Sharda USA LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SHARDA USA LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SHARDA USA LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

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