

METSULFURON-METHYL GROUP 2 HERBICIDE

# Merissa

For use on Wheat, Barley, Triticale, Grain Sorghum, and Fallow.

**ACTIVE INGREDIENT:**

Metsulfuron-Methyl: methyl 2-[[[(4-methoxy-6-methyl-1,3,5-triazin-2yl) amino]carbonyl] amino]sulfonyl]benzoate .....

**WT. BY %**

60.0%

**OTHER INGREDIENTS:** .....

40.0%

**TOTAL:** .....

100.0%

Contains 0.60 lb. of metsulfuron-methyl per pound of product.

## 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.)

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

EPA Reg. No. 83529-171

EPA Est. No. **GH** 70815-GA-002; **SC** 39578-TX-001; **MC** 89332-GA-1  
**MA** 83411-MN-001; **TX** 07401-TX-001

The EPA Establishment Number is identified by the circled letters above that match the first two letters in the batch number.

Manufactured For:

Sharda USA LLC 

7217 Lancaster Pike, Suite A  
Hockessin, Delaware 19707

**Net Contents: 16 oz. (0.45 kg)**

<b>FIRST AID</b>	
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 - 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>HOTLINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information concerning this product, call your poison control center at <b>1-800-222-1222</b> .	

## **PRECAUTIONARY STATEMENTS**

### **HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

#### **CAUTION**

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

#### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

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

- Long-sleeved shirt and long pants
- Shoes plus socks
- 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

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

## USER SAFETY RECOMMENDATIONS

### Applicators and other handlers should:

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

## ENVIRONMENTAL HAZARDS

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

### Groundwater Advisory

Metsulfuron-methyl is known to leach through soil into groundwater under certain conditions as a result of label use. Metsulfuron-methyl may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

### Surface Water Advisory

This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several weeks or more after application. 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 loading of this product from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

### Windblown Soil Particles Advisory

This product has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying this product if prevailing local conditions may be expected to result in off-site movement.

### Non-Target Organism Advisory

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing

spray drift. For further guidance and instructions on how to minimize spray drift, refer to the **MANDATORY SPRAY DRIFT MANAGEMENT** section of this label.

## DIRECTIONS FOR USE

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

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

### AGRICULTURAL USE REQUIREMENTS

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

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **4 hours**.

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

- Coveralls
- Shoes plus socks

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**DO NOT** enter treated areas without protective clothing until sprays have dried.

### PRODUCT INFORMATION

**Merissa** is registered for use on land primarily dedicated to the production of wheat, barley, triticale, grain sorghum and fallow.

**Merissa** is registered for use on wheat, barley, triticale, grain sorghum and fallow. Check with your State Extension or Department of Agriculture before use, to be certain **Merissa** is registered in your State. **Merissa** is not registered for use in Alamosa, Conejos, Costilla, RioGrande, and Saquache counties of Colorado.

**Merissa** is a dry-flowable granule that controls weeds in wheat (including durum), barley, triticale, grain sorghum and fallow. **Merissa** is mixed in water or can be pre-slurried in water and added to liquid nitrogen carrier solutions and applied as a uniform broadcast spray. Use a surfactant in the spray mix unless otherwise specified on this label. **Merissa** is noncorrosive, nonflammable, nonvolatile, and does not freeze.

**Merissa** controls weeds by post-emergence activity. For best results, apply **Merissa** to young, actively growing weeds. The use rate depends upon the weed spectrum and size of weeds at application. The degree and duration of control may depend on the following factors:

- Weed spectrum and infestation intensity.
- Weed size at application.
- Environmental condition at and following treatment.

#### **Environmental Conditions and Biological Activity**

**Merissa** is absorbed through the foliage of broadleaf weeds, rapidly inhibiting their growth. Leaves of susceptible plants appear chlorotic from 1 - 3 weeks after application and the growing point subsequently dies. Application of **Merissa** provides the best control in vigorously growing crops that shade competitive weeds. Weed control in areas of thin crop stand or seeding skips may not be as satisfactory. However, a crop canopy that is too dense at application can intercept spray and reduce weed control. **Merissa** may injure crops that are stressed from adverse environmental conditions (including extreme temperatures or moisture), abnormal soil conditions, or cultural practices. In addition, different varieties of the crop may be sensitive to treatment with **Merissa** under otherwise normal conditions. Treatment of such varieties may injure crops. In warm, moist conditions, the expression of herbicide symptoms is accelerated in weeds; in cold, dry conditions, expression of herbicide symptoms is delayed. In addition, weeds hardened-off by drought stress are less susceptible to **Merissa**. Weed control may be reduced if rainfall or snowfall occurs soon after application.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. If the instructions on the tank mix partner label conflicts with this **Merissa** label, **DO NOT** use in a tank mixture with **Merissa**.

#### **Use Restrictions:**

- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** discharge excess material on the soil at a single spot in the field, grove, or mixing/loading station.
- **DO NOT** store pesticides near well sites.
- **DO NOT** apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots extend, or in locations where the product may be washed or moved into contact with their roots, as injury or loss of desirable trees or other plants may result.

- **DO NOT** use on lawns, walks, driveways, tennis courts, golf courses, athletic fields, commercial sod operations, or other high-maintenance, fine turfgrass areas.
- **DO NOT** use on grasses grown for seed.
- **DO NOT** apply to irrigated land where tailwater will be used to irrigate crops other than wheat and barley.
- **DO NOT** apply to frozen ground as surface runoff may occur.
- **DO NOT** apply to snow-covered ground.
- **DO NOT** apply to wheat, barley, or triticale undersown with legumes, as injury to the forage may result.

#### **Use Precautions:**

- Calibrate sprayers only with clean water away from the wellsite.
- Make scheduled checks of spray equipment.
- Assure accurate measurement of pesticides by all operation employees.
- Mix only enough product for the job at hand.
- Avoid overfilling of spray tank.
- Dilute and agitate excess solution and apply at labeled rates/uses.
- Avoid storage of pesticides near well sites.
- When triple rinsing the pesticide container, be sure to add the rinsate to the spray mix.
- Wheat and barley varieties may differ in their response to various herbicides. SHARDA USA LLC advises that you first consult your State Experiment Station, University, or Extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use of **Merissa** to a small area.
- Under certain conditions (including: heavy rainfall, water-saturated soil, prolonged cold weather, wide fluctuations in day/night temperatures pre- or post-application, severe weather conditions, drought, low fertility, disease, or insect damage) temporary discoloration and/or crop injury may occur. Risk of injury is greatest when crop is in the 2- to 5-leaf stage. **DO NOT** apply **Merissa** to wheat or barley under these conditions if this crop response is unacceptable.
- The combined treatment effects of **Merissa** post-emergence preceded by pre-emergence wild oat herbicides may cause crop injury to Spring wheat when crop stress (soil crusting, planting too deep, prolonged cold weather, or drought) causes poor seedling vigor.
- In the Pacific Northwest, to prevent cold weather-related crop injury, avoid making applications during Winter months when weather conditions are unpredictable and can be severe.
- To reduce the potential for movement of treated soil due to wind erosion, avoid applying to powdery dry or light sandy soils until they have been stabilized by rainfall, trashy mulch, reduced tillage, or other cultural practices.

Injury to immediately adjacent crops may occur when treated soil is blown onto land used to produce crops other than cereal grains or pasture/rangeland.

- For ground applications applied to weeds when dry, dusty field conditions exist, control of weeds in wheel track areas may be reduced. The addition of 2,4-D or MCPA may improve weed control under these conditions.
- Pre-plant or pre-emergence applications of 2,4-D or herbicides containing 2,4-D made within 2 weeks of planting Spring cereals may cause crop injury when used in conjunction with early post-emergence applications of **Merissa**. For increased crop safety, delay **Merissa** treatment until crop tillering has begun.

## WEED RESISTANCE MANAGEMENT

METSULFURON-METHYL	GROUP	2	HERBICIDE
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**Merissa** contains metsulfuron and is classified in the sulfonyleurea chemical class as a Group 2 herbicide, Acetolactate Synthase (ALS) or Acetohydroxy Acid Synthase (AHAS) inhibitor. 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 **Merissa** and other Group 2 herbicides. Weed species with acquired resistance to Group 2 herbicides may eventually dominate the weed population if Group 2 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 **Merissa** or other Group 2 herbicides.

To delay herbicide resistance, consider the below best practices for resistance management:

- Plant into weed-free fields and keep fields as weed-free as possible.
- To the extent possible, use a diversified approach toward weed management. Whenever possible, incorporate multiple weed-control practices including mechanical cultivation, biological management practices, and crop rotation.
- Fields with difficult to control weeds must be rotated to crops that allow the use of herbicides with alternative mechanisms of action or different management practices.
- To the extent possible, **DO NOT** allow weed escapes to produce seeds, roots, or tubers. Manage weed seeds at harvest and post-harvest to prevent a buildup of the weed seed-bank.
- Prevent field-to-field and within-field movement of weed seed or vegetative propagules. Thoroughly clean plant residues from equipment before leaving fields.
- Prevent an influx of weeds into the field by managing field borders.

- Identify weeds present in the field through scouting and field history and understand their biology. The weed-control program must consider all of the weeds present.
- Difficult to control weeds may require sequential applications of herbicides with differing mechanisms of action.
- Apply this herbicide at the correct timing and rate needed to control the most difficult weed in the field.
- Use a broad-spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed-control program. **DO NOT** use more than 2 applications of this or any other herbicide with the same mechanism of action within a single growing season unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.
- If resistance is suspected, treat weed escapes with an herbicide with a different MOA or use non-chemical methods to remove escapes.
- Monitor treated weed populations for loss of field efficacy.
- Scout field(s) before and after application.
- Report lack of performance to registrant or their representative.

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.

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.

### INTEGRATED PEST MANAGEMENT

To better manage weed resistance when using **Merissa**, use a combination of tillage and tank mix partners or sequential herbicide applications that have a different mode of action than **Merissa** to control escaped weeds. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate State Agricultural Extension Service representative for specific alternative herbicide treatment available in your area. It is advisable to keep accurate records of pesticides applied to treated areas to help obtain information on the spread and dispersal of resistant biotypes.



## MANDATORY SPRAY DRIFT MANAGEMENT

### Aerial Applications:

- **DO NOT** release spray at a height greater than 10 ft. above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

### Ground Boom Applications:

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a turf, pasture, or rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

### Boom-less Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

## SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### IMPORTANCE OF DROPLET SIZE

A most effective way to reduce spray drift potential is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### Controlling Droplet Size - Ground Boom

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

#### Controlling Droplet Size - Aircraft

- **Adjust Nozzles** - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles must be oriented parallel with the airflow in flight.

#### BOOM HEIGHT - Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom must remain level with the crop and have minimal bounce.

#### RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aurally to crops, **do not** release spray at a height greater than 10 ft. above the crop canopy, unless a greater application height is necessary for pilot safety.

#### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

## WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

## Air Assisted (Air Blast) Field Crop Sprayers

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring. Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

### Boom-less Ground Applications:

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

### Handheld Technology Applications:

- Take precautions to minimize spray drift.

## Drift Control Additives

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read, and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Council of Producers and Distributors of Agrotechnology CPDA).

## MIXING INSTRUCTIONS

1. Fill the tank 1/4 - 1/3 full of water. (If using liquid nitrogen fertilizer solution in place of water, see **Tank Mixtures** sections for additional details.)
2. While agitating, add the required amount of **Merissa**.
3. Continue agitation until the **Merissa** is fully dispersed, at least 5 minutes.
4. Once the **Merissa** is fully dispersed, maintain agitation and continue filling tank with water. **Merissa** must be thoroughly mixed with water before adding any other material.

5. As the tank is filling, add tank mix partners (if desired) then add the necessary volume of nonionic surfactant. Always add surfactant last.
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. Apply **Merissa** spray mixture within 24 hours of mixing to avoid product degradation.
8. If **Merissa** and a tank mix partner are to be applied in multiple loads, pre-slurry the **Merissa** in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the **Merissa**.

**DO NOT** use **Merissa** with spray additives that reduce the pH of the spray solution to below 3.0.

### **Spray Equipment**

For specific application equipment, refer to the manufacturer's directions for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc. Be sure to calibrate air or ground equipment properly before application. Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern with minimum drift. Use higher spray volumes to obtain better coverage when the crop canopy is dense. Avoid swath overlapping, and shut off spray booms while starting, turning, slowing, or stopping to avoid crop injury. **DO NOT** make applications using equipment and/or spray volumes or under weather conditions that might cause spray to drift onto non-target sites. For additional information on spray drift, refer to the **MANDATORY SPRAY DRIFT MANAGEMENT** section of the label. Continuous agitation is required to keep **Merissa** in suspension.

### **Sprayer Cleanup**

Spray equipment must be cleaned before **Merissa** is sprayed. Follow the cleanup procedures specified on the labels of previously applied products. If no directions are provided, follow the 6 steps outlined in the below **After Spraying Merissa** section.

### **At the End of the Day**

When multiple loads of **Merissa** are applied, it is advised that at the end of each day of spraying, the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits that can accumulate in the application equipment.

### **After Spraying Merissa and Before Spraying Crops Other Than Wheat, Barley, Triticale, Grain Sorghum or Fallow**

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of **Merissa** as follows:

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gal. of household ammonia\* (contains 3% active) for every 100 gals. of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 min. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.

3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
  4. Repeat step 2.
  5. Rinse the tank, boom, and hoses with clean water.
  6. If only Ammonia is used as a cleaner, the rinsate solution may be applied back to the crop(s) specified on this label. **DO NOT** exceed the maximum labeled use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.
- \*Equivalent amounts of an alternate-strength ammonia solution or a SHARDA USA LLC-approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions. Consult your agricultural dealer, applicator, or SHARDA USA LLC representative for a listing of approved cleaners.

#### **Attention:**

1. **DO NOT** use chlorine bleach with ammonia, as dangerous gases will form. **DO NOT** clean equipment in an enclosed area. Steam-cleaning aerial spray tanks is advised prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
2. When **Merissa** is tank mixed with other pesticides, examine all required cleanout procedures, and follow the most rigorous procedure.
3. In addition to this cleanout procedure, follow all pre-cleanout guidelines on subsequently applied products as per the individual labels.
4. Where routine spraying practices include shared equipment frequently being switched between applications of **Merissa** and applications of other pesticides to **Merissa**-sensitive crops during the same spray season, it is advised that a sprayer be dedicated to **Merissa** to further reduce the chance of crop injury.

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## **USE INFORMATION**

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### **FALLOW**

#### **Application Information**

**Merissa** may be used as a fallow treatment, in the Spring or Fall when the majority of weeds have emerged and are actively growing. Apply **Merissa** at 0.1 oz. (0.0038 lb. a.i.) per acre. In the states of Colorado, Kansas, Nebraska, New Mexico, Oklahoma, and Texas, apply **Merissa** at 0.1 - 0.2 oz. (0.0038 - 0.0075 lb. a.i.) per acre.

#### **Tank Mixtures in Fallow**

**Merissa** may be used as a fallow treatment, and may be tank mixed with other herbicides that are registered for use in fallow. If the label instructions conflict with this label, **DO NOT** tank mix that product with **Merissa**. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Restriction:**

- For all applications of product, **DO NOT** exceed the following restrictions (including in tank-mixes or sequential applications with other products containing metsulfuron-methyl):

Active Ingredient in Merissa: Metsulfuron-methyl								
Crop/Use	Application Timing	Maximum Product Oz. per Acre per Single Application	Maximum a.i. lb. per Acre per Single Application	Maximum Oz. per Acre of Product per Year	Maximum a.i. lb. per Acre per Year	Maximum Number of Applications per Year	Minimum Treatment Interval (Days)	Pre-Harvest Interval (Days)
Fallow	In the Spring or Fall when the majority of weeds have emerged and actively growing.	0.10	0.0038	0.10	0.0038	2	14	N/A
Fallow (Colorado, Kansas, Nebraska, New Mexico, Oklahoma, Texas)	In the Spring or Fall when the majority of weeds have emerged and actively growing.	0.20	0.0075	0.20	0.0075	1	-	N/A

**WHEAT, BARLEY, AND TRITICALE****Application Information**

Apply 0.1 oz. (0.0038 lb. a.i.) of **Merissa** per acre to wheat, barley, or triticale. Applications to Wheat (including durum), Barley and Triticale are limited to one 0.1 oz. (0.0038 lb. a.i.) per acre application within 1 calendar year.

- **Dryland Wheat, Barley and Triticale (Except Durum Variety):** Make applications after the crop is in the 2-leaf stage but before boot. Applications to Dryland Wheat, Barley and Triticale (except durum variety) are limited to one 0.1 oz. (0.0038 lb. a.i.) per acre application within 1 calendar year.
- **Durum Variety Spring Wheat:** Make applications after the crop is tillering but before boot. Applications to durum variety Spring Wheat are limited to one 0.1 oz. (0.0038 lb. a.i.) per acre application within 1 calendar year.
- **Irrigated Wheat and Barley:** Make applications after the crop begins tillering but before boot. Delay first post-treatment irrigation for at least 3 days after treatment and **DO NOT** exceed 1" of water.

**Restrictions:**

- **DO NOT** apply during boot and early heading, as crop injury may result.
- It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.
- For all applications of product, **DO NOT** exceed the following restrictions (including in tank-mixes or sequential applications with other products containing metsulfuron-methyl):

Crop/Use	Application Timing	Maximum Product Oz. per Acre per Single Application	Maximum a.i. lb. per Acre per Single Application	Maximum Oz. per Acre of Product per Year	Maximum a.i. lb. per Acre per Year	Maximum Number of Applications per Year	Pre-Harvest Interval (Days)
Dryland wheat, barley, and triticale	After the crop is in the 2-leaf stage, but before boot once per year.	0.10	0.0038	0.10	0.0038	1	No grazing restrictions
Durum variety Spring wheat	After the crop is tillering, but before boot once per year	0.10	0.0038	0.10	0.0038	1	No grazing restrictions
Wheat, barley, and triticale - Harvest Aid	In combination with 2,4-D or glyphosate after the crop has reached the hard dough stage, but no later than 10 days before harvest	0.10	0.0038	0.10	0.0038	1	10

## WEEDS CONTROLLED

Unless otherwise directed, treat when weeds are less than 4" tall or in diameter and are actively growing. Effectiveness may be reduced if rainfall occurs within 4 hours after application.

WEEDS CONTROLLED - ALL CROPS		
Blue/Purple Mustard <sup>1</sup>	Groundsel (Common)	Smallseed Falseflax
Bur Buttercup (Testiculate)	Henbit	Smartweed (Green, Ladysthumb, Pale)
Coast Fiddleneck (Tarweed)	Kochia <sup>1</sup>	Snow Speedwell
Common Chickweed	Lambsquarters (Common, Slimleaf)	Tansymustard <sup>1</sup>
Common Purslane	Mayweed Chamomile	Treacle Mustard (Bushy Wallflower)
Conical Catchfly	Miners Lettuce	Tumble/Jim Hill Mustard
Cowcockle	Pigweed (Redroot, Smooth, Tumble)	Volunteer Sunflower
False Chamomile	Plains Coreopsis	Waterpod
Field Pennycress (Fanweed)	Prickly Lettuce <sup>1</sup>	Wild Mustard
Filaree	Russian Thistle <sup>1</sup>	
Flixweed <sup>1</sup>	Shepherd's Purse	
WEEDS SUPPRESSED <sup>1*</sup> - ALL CROPS		
Canada Thistle <sup>1</sup>	Corn Gromwell <sup>1</sup>	Sowthistle (Annual) <sup>1</sup>
Common Sunflower <sup>1</sup>	Knotweed (Prostrate) <sup>1</sup>	Wild Buckwheat <sup>1</sup>
<sup>1</sup> See the <b>Specific Weed Problems</b> section. <sup>*</sup> Weed suppression is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of suppression varies with the rate used, the size of the weeds, and the environmental conditions following treatment.		

### Specific Weed Instructions

Thorough spray coverage of all weed species listed below is very important.

- **Blue Mustard, Flixweed, and Tansymustard:** For best results, apply **Merissa** tank mixtures with 2,4-D or MCPA post-emergence to mustards, but before bloom.



- **Canada Thistle and Sowthistle:** Apply either **Merissa** plus surfactant or **Merissa** plus 2,4-D or MCPA in the Spring after the majority of thistles have emerged and are small (rosette stage to 6" elongating stems) and actively growing. The application will inhibit the ability of emerged thistles to compete with the crop.
- **Corn Gromwell and Prostrate Knotweed:** Apply **Merissa** plus surfactant when weeds are actively growing, are no larger than 2" tall, and when crop canopy will allow thorough coverage. Tank mixing 2,4-D or MCPA with **Merissa** can improve results.
- **Kochia, Russian Thistle, and Prickly Lettuce:** Naturally occurring resistant biotypes of these weeds are known to occur. For best results, apply **Merissa** in a tank mix with dicamba and 2,4-D, or bromoxynil and 2,4-D containing products. **Merissa** must be applied in the Spring when kochia, Russian thistle, and prickly lettuce are less than 2" tall or 2" across and are actively growing (refer to the **Tank Mixtures** section of this label for additional details).
- **Sunflower (Common/Volunteer):** Apply either **Merissa** plus surfactant or **Merissa** plus 2,4-D or MCPA after the majority of sunflowers have emerged, are 2" - 4" tall and are actively growing. Use spray volumes of at least 3 gals. by air or 5 gals. by ground.
- **Wild Buckwheat:** For best results, apply **Merissa** plus 2,4-D or MCPA when plants have no more than 3 true leaves (not counting the cotyledons). If plants are not actively growing, delay treatment until environmental conditions favor active weed growth.

#### **Tank Mixtures in Wheat, Barley, and Triticale**

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. If the instructions on the tank mix partner label conflicts with this **Merissa** label, **DO NOT** use in a tank mixture with **Merissa**. **Merissa** may be tank mixed with other suitable registered herbicides to control weeds listed under Weeds Suppressed, weeds resistant to **Merissa**, or weeds not listed under **WEEDS CONTROLLED**.

- **2,4-D (amine or ester) or MCPA (amine or ester):** **Merissa** can be used as a tank-mix treatment with 2,4-D or MCPA (ester formulations provide best results) herbicides after weeds have emerged. For best results, use 0.1 oz. (0.0038 lb. a.i.) of **Merissa** per acre; add 2,4-D or MCPA herbicides to the tank at labeled rates. Surfactant may be added to the mixture at 0.5 - 1 qt. per 100 gals. of spray solution; however, adding surfactant may increase the potential for crop injury. Apply **Merissa** plus MCPA after the 3- to 5-leaf stage but before boot (with durum varieties **DO NOT** apply before tillering). Apply **Merissa** plus 2,4-D at labeled rates, after tillering, but before boot.
- **Dicamba:** For best results, apply **Merissa** at 0.1 oz. (0.0038 lb. a.i.) per acre with products containing the a.i. dicamba. Surfactant may be added to the mixture at 0.5 - 1 qt. per 100 gals. of spray solution; however, adding surfactant may increase the potential for crop injury. Refer to the tank mix partner label for rates and use instructions.

- **2,4-D (amine or ester) and Dicamba: Merissa** may be applied in a 3-way tank mix with formulations of dicamba and 2,4-D. Observe all applicable directions, restrictions, and precautions on tank mix partner labels. Make applications at 0.1 oz. (0.0038 lb. a.i.) of **Merissa** plus products containing the a.i. dicamba plus products containing the active 2,4-D ester or amine at labeled rates per acre. Use higher rates when weed infestation is heavy. Add 1 - 2 pts. of surfactant to the 3-way mixture, where necessary, as deemed by local advisories. Use of additional surfactant may not be needed with the higher phenoxy rates and ester phenoxy formulations. Refer to the tank mix partner labels for rates and further use instructions. Apply this 3-way combination to Winter wheat after the crop is tillering and prior to jointing (first node). In Spring wheat (including durum wheat) apply after the crop is tillering and before it exceeds the 5-leaf stage. **DO NOT** apply this 3-way mixture at high rates more than once a year or more than twice per year at the low rates.
- **Bromoxynil-Containing Products: Merissa** may be tank mixed with bromoxynil containing herbicides registered for use on wheat, barley, or fallow. For best results, add bromoxynil containing herbicides to the tank at labeled rates per acre.
- **"Starane":** For improved control of Kochia (2" - 4" tall), Russian thistle, mustard species, and wild buckwheat, **Merissa** may be tank mixed with "Starane", (Starane<sup>®</sup> Flex Herbicide, Starane<sup>®</sup> NXT Herbicide).
- **Colt<sup>®</sup> + Salvo<sup>®</sup> Herbicide:** For improved control of Kochia (2" - 4" tall), Russian thistle, mustard species and wild buckwheat, **Merissa** may be tank mixed Colt<sup>®</sup> + Salvo<sup>®</sup> Herbicide.
- **Colt<sup>®</sup> + Sword<sup>®</sup> Herbicide:** For improved control of Kochia (2" - 4" tall) Russian thistle, mustard species and wild buckwheat, **Merissa** may be tank mixed Colt<sup>®</sup> + Sword<sup>®</sup> Herbicide.
- **Outrider<sup>®</sup> Herbicide: Merissa**, can be tank mixed with Outrider<sup>®</sup> Herbicide for improved control of weeds in wheat.
- **AIM<sup>®</sup> EC Herbicide: Merissa**, can be tank mixed with AIM<sup>®</sup> EC Herbicide for improved control of weeds in wheat and barley.
- **Stinger<sup>®</sup> Herbicide, Curtail<sup>®</sup> Herbicide, or Curtail<sup>®</sup> M Herbicide or Widematch<sup>®</sup> Herbicide: Merissa**, can be tank mixed with Stinger<sup>®</sup>, Curtail<sup>®</sup>, or Curtail<sup>®</sup> M Herbicides for improved control of weeds in wheat and barley.
- **EXPRESS<sup>®</sup> Herbicide (with TotalSol<sup>®</sup> Soluble Granules): Merissa** may be tank mixed with EXPRESS<sup>®</sup> Herbicide (with TotalSol<sup>®</sup> Soluble Granules) based on local advisories.
- **HARMONY<sup>®</sup> Extra SG (with TotalSol<sup>®</sup> Soluble Granules): Merissa** may be tank mixed with HARMONY<sup>®</sup> Extra SG (with TotalSol<sup>®</sup> Soluble granules) based on local advisories.
- **Grass Control Products:** Tank mixtures of **Merissa** and grass control products may result in poor grass control. Sharda USA LLC advises that you first consult your State Experiment station, university, or extension agent, Agricultural dealer, or Sharda USA LLC representative as to the potential for antagonism before using the mixture. If no information is available, limit the initial use of **Merissa** and the grass product to a small area. Restrictions: **DO NOT** tank mix **Merissa** with Outrider<sup>®</sup> Herbicide, as grass control may be reduced.

- **With Discover® NG Herbicide: Merissa**, can be tank mixed with Discover® NG Herbicide for improved control of weeds in Spring wheat.
- **“Everest” (Everest® 2.0 Herbicide, Everest® 3.0 AG, Everest® 3.0) Herbicide: Merissa**, can be tank mixed with Everest herbicides for improved control of weeds in Spring wheat.
- **With Insecticides and Fungicides: Merissa** may be tank mixed or used sequentially with insecticides and fungicides registered for use on cereal grains. However, under certain conditions (drought stress, cold weather, or if the crop is in the 2- to 4-leaf stage), tank mixes or sequential applications of **Merissa** with organophosphate insecticides may produce temporary crop yellowing or, in severe cases, crop injury. The potential for crop injury is greatest when wide fluctuations in day/night temperatures occur just prior to or soon after application. Test these mixtures in a small area before treating large areas. **Restrictions: DO NOT** apply **Merissa** within 60 days of crop emergence where an organophosphate insecticide has been applied as an in-furrow treatment, as crop injury may result. **DO NOT** use **Merissa** plus products containing malathion, as crop injury will result.
- **Liquid Nitrogen Solution Fertilizer:** Liquid nitrogen fertilizer solutions may be used as a carrier in place of water. Run a tank mix compatibility test before mixing **Merissa** in fertilizer solution. **Merissa** must first be slurried with water and then added to liquid nitrogen solutions (e.g., 28-0-0, 32-0-0). Ensure that the agitator is running while the **Merissa** is added. Use of this mixture may result in temporary crop yellowing and stunting. If using low rates of liquid nitrogen fertilizer in the spray solution (less than 50% of the spray solution volume), the addition of surfactant is necessary. Add surfactant at 0.5 pt. - 1 qt. per 100 gals. of spray solution (0.06 - 0.25% v/v) based on local advisories. When using high rates of liquid nitrogen fertilizer in the spray solution, adding surfactant increases the risk of crop injury. Consult your agricultural dealer, consultant, fieldman, or Sharda USA LLC representative for specific advice before adding an adjuvant to these tank mixtures. If 2,4-D or MCPA is included with **Merissa** and fertilizer mixture, ester formulations tend to be more compatible (see manufacturer's label). **Note:** In certain areas east of the Mississippi river unacceptable crop response may occur with use of straight or dilute nitrogen fertilizer carrier solutions where cold temperatures or widely fluctuating day/night temperatures exist. In these areas, consult your agricultural dealer, consultant, field advisor, or Sharda USA LLC representative for specific advice before using nitrogen fertilizer carrier solutions. Liquid nitrogen fertilizer solutions that contain sulfur can increase crop response.
  - **Restrictions:**
    - **DO NOT** add surfactant when using **Merissa** in tank mix with 2,4-D ester or MCPA ester and liquid nitrogen fertilizer solutions.
    - **DO NOT** use low rates of liquid fertilizer as a substitute for a surfactant.
    - **DO NOT** use with liquid fertilizer solutions with a pH less than 3.0.

**MERISSA WITH MCPA, 2,4-D AND/OR DICAMBA FOR SUPPRESSION  
OF WINTER ANNUAL BROADLEAF WEEDS IN WINTER WHEAT TO BE GRAZED OUT IN  
THE STATES OF TEXAS, OKLAHOMA, NEW MEXICO, AND KANSAS**

**Application Information**

**Merissa** may be tank mixed with MCPA, 2,4-D and/or dicamba for suppression of Winter annual broadleaf weeds in Winter wheat to be grazed out and not harvested for grain, in the States of Texas, Oklahoma, New Mexico and Kansas. For the suppression of Winter annual broadleaf weeds (including henbit and mustards) in Winter wheat in the states of Texas, Oklahoma, New Mexico, and Kansas, mix **Merissa** at 0.05 oz. (0.0019 lb. a.i.) per acre with MCPA, 2,4-D and/or dicamba at labeled rates. Winter annual broadleaf weeds must be less than 1" tall or in the rosette stage for suppression. Add a Sharda USA LLC advised nonionic surfactant having at least 80% a.i. at 1 - 2 qts. per 100 gals. of spray solution (0.25 - 0.5% v/v).

**Rotation Intervals for Crops in Non-Irrigated Land Following Use of Merissa at 0.05 oz. (0.0019 lb. a.i.) per Acre on Wheat that will be Grazed Out**

<b>Crop</b>	<b>Soil pH</b>	<b>Minimum Cumulative Precipitation (Inches)</b>	<b>Minimum Rotation Interval (Months)</b>
Sorghum, Grain	7.9 or lower	No restrictions	4
Cotton	7.9 or lower	No restrictions	10
Alfalfa	6.8 or lower	No restrictions	10
	6.9 - 7.9	No restrictions	22
Beans, Dry	6.8 or lower	No restrictions	10
	6.9 - 7.9	No restrictions	22

Rotation Intervals for crops not covered above following the use of **Merissa** at 0.05 oz. (0.0019 lb. a.i.) per acre on wheat that will be grazed out.

The minimum rotation interval is 22 months with at least 18" of cumulative precipitation during the period:

- To any crop not listed in the Rotation Intervals table above.
- If the soil pH is not in the specified range.

To rotate to a crop at an interval shorter than specified, a field bioassay must be successfully completed to rotate to that crop. See section on **Field Bioassay** for further information.

**Restriction:**

- This treatment is for use on Winter wheat that will be grazed out and will not be harvested for grain.

**Precautions - Merissa** suppresses weeds by post-emergence activity. For best results, apply **Merissa** to young, actively growing weeds. The degree and duration of suppression at 0.05 oz. (0.0019 lb. a.i.) per acre may depend upon the following factors:

- Weed spectrum and infestation intensity.
- Weed size at application.
- Environmental condition at and following treatment.

**WHEAT, BARLEY AND TRITICALE - HARVEST AID**

Apply 0.1 oz. (0.0038 lb. a.i.) of **Merissa** per acre in combination with 2,4-D or glyphosate containing products to aid in dry down of many broadleaved weeds, thereby aiding grain harvest. Make applications after the crop has reached the hard dough stage, but no later than 10 days before harvest.

**Restriction:**

- For all applications of product, **DO NOT** exceed the following restrictions (including in tank-mixes or sequential applications with other products containing metsulfuron-methyl):

Crop/Use	Application Timing	Maximum Product Oz. per Acre per Single Application	Maximum a.i. lb. per Acre per Single Application	Maximum Oz. per Acre of Product per Year	Maximum a.i. lb. per Acre per Year	Maximum Number of Applications per Year	Pre-Harvest Interval (Days)
Wheat, barley, and triticale - Harvest Aid	In combination with 2,4-D or glyphosate after the crop has reached the hard dough stage, but no later than 10 days before harvest.	0.10	0.0038	0.10	0.0038	1	10

**Tank Mixtures in Harvest Aid**

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. If the instructions on the tank mix partner label conflicts with this **Merissa** label, **DO NOT** use in a tank mixture with **Merissa**. A tank mix of **Merissa** plus 2,4-D and surfactant, or glyphosate, will typically aid in dry down of many broadleaved weeds, thereby aiding grain harvest. Make post-emergence application to actively growing

weeds after the crop is in the hard dough stage. If weeds are not dry within 10 days after application, delay harvest until weeds are dry. See weeds listed in **WEEDS CONTROLLED** chart of this label.

- **2,4-D:** Use 0.1 oz. (0.0038 lb. a.i./A) of **Merissa** plus label rates of 2,4-D per acre on moderate weed infestations. Higher rates of 2,4-D may be used on large weeds if permitted by the 2,4-D brand labeling. Include 1 - 2 qts. surfactant per 100 gals. spray solution. In addition to the weeds listed in **WEEDS CONTROLLED** chart of this label, the 2,4-D combination will also dry down common cocklebur, marestail, puncturevine and common and wild sunflower. In areas where 2,4-D use is restricted, apply **Merissa** with surfactant only; however, this treatment may be less effective.
- **Glyphosate:** Use 0.1 oz. (0.0038 lb. a.i./A) of **Merissa** plus the locally directed rate of glyphosate. **Merissa** requires the use of an adjuvant for optimum activity. Consult the glyphosate label or local directions for the amount of adjuvant to include.

### GRAIN SORGHUM

**Merissa** is registered for use on irrigated or dryland grain sorghum in Colorado, Kansas, Nebraska, Oklahoma, and Texas (North of I-20).

- **Use Rates:** Apply **Merissa** at 0.05 oz. (0.0019 lb. a.i.) per acre plus 2,4-D amine at labeled rate per acre. **DO NOT** use surfactant or crop oil.
- **Crop Stage:** For optimum performance and crop safety, apply **Merissa** plus 2,4-D amine when grain sorghum is 3" - 15" in height. If sorghum is taller than 10" to the top of the canopy, use drop nozzles and keep spray off the foliage. Apply only before the boot stage. Read and follow all other use instructions, warnings, and precautions on companion herbicide labels. Sorghum varieties vary in sensitivity to 2,4-D amine. Spray only varieties known to be resistant to 2,4-D amine. Contact seed company and local county extension service for this information.
- **Pest Stage:** Make application of **Merissa** plus 2,4-D amine when all, or a majority, of the weeds have germinated and emerged. For best results, spray when weeds are less than 6" tall.

**Weeds Controlled with Tank Mix of Merissa plus 2,4-D amine:** Pigweed species, Puncture vine, and Velvetleaf

### Application Information

**Merissa** must be applied to grain sorghum by properly calibrated ground or aerial equipment. **Merissa** may be used on either dryland or irrigated grain sorghum. If application is made to irrigated sorghum, delay first post-treatment irrigation for at least 3 days after treatment. The first post-treatment irrigation must not exceed 1". Use cultivation prior to **Merissa** plus 2,4-D amine treatment to cover exposed brace roots of grain sorghum to minimize injury from 2,4-D amine.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. If the instructions on the tank mix partner label conflicts with this **Merissa** label, **DO NOT** use in a tank mixture with **Merissa**.

**Restrictions:**

- **DO NOT** use on grain sorghum grown for seed production or syrup.
- **DO NOT** use on forage sorghum.
- **DO NOT** use for forage or silage within 30 days of application.
- **DO NOT** include a surfactant or crop oil to the tank mix.
- **DO NOT** apply this treatment under cold, wet weather conditions or to grain sorghum growing under stress caused by weather, insects or disease as crop injury may result.
- **DO NOT** apply to long season grain sorghum varieties or grain sorghum that is planted after July 1, as crop injury or delayed maturity may occur.
- **DO NOT** exceed 1 application per year.

**Merissa** must be used with 2,4-D; in areas where 2,4-D use is restricted, follow requirement of the restriction. If 2,4-D use is prohibited, **DO NOT** use **Merissa** on grain sorghum.

For all applications of product, **DO NOT** exceed the following restrictions (including in tank-mixes or sequential applications with other products containing metsulfuron-methyl):

Crop/Use	Application Timing	Maximum Product Oz. per Acre per Single Application	Maximum a.i. lb. per Acre per Single Application	Maximum Oz. per Acre of Product per Year	Maximum a.i. lb. per Acre per Year	Maximum Number of Applications per Year	Pre-Harvest Interval (Days)
Grain Sorghum (dryland or irrigated in the states Colorado, Kansas, Nebraska, Oklahoma, and Texas - North of I-20)	With 2,4-D. If application is made to irrigated sorghum, delay first post-treatment irrigation for at least 3 days and limit irrigation to not exceed 1".	0.05	0.0019	0.05	0.0019	1	<b>DO NOT</b> use for forage or silage within 30 days of application.

**Precaution:**

- Temporary crop yellowing and/or stunting may occur soon after application, especially when crop is under stress conditions.

## Spray Adjuvants

Applications of **Merissa** must include either a nonionic surfactant or a crop oil concentrate, except for grain sorghum. In addition, an ammonium nitrogen fertilizer may be used. Consult local Sharda USA LLC fact sheets, technical bulletins, and service policies prior to using other adjuvant systems. If another herbicide is tank mixed with **Merissa**, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients. Antifoaming agents may be needed. Consult your Ag dealer, applicator, or Sharda USA LLC representative for a listing of advised surfactants.

- **Nonionic Surfactant (NIS):** Apply 0.06 - 0.50% v/v (0.5 - 4 pts. per 100 gals. of spray solution) - See **Tank Mixtures** section for additional information. Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12. Exceptions: On all Spring wheat and Spring or Winter barley use 0.5 - 1 qt. per 100 gals.
- **Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO):** Apply at 1% v/v (1 gal. per 100 gals. spray solution) or 2% under arid conditions. Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.
- **Ammonium Nitrogen Fertilizer:** Use 2 qts. per acre of a high-quality urea ammonium nitrate (UAN), including 28%N or 32%N, or 2 lbs. per acre of a spray-grade ammonium sulfate (AMS). Use 4 qts. per acre UAN or 4 lbs. per acre AMS under arid conditions. **DO NOT** use liquid nitrogen fertilizer as the total carrier solution.
- **Special Adjuvant Types:** Combination adjuvant products may be used at doses that provide the required amount of NIS, COC, MSO and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions. In addition to the adjuvants specified above, other adjuvant types may be used if they provide the same functionality and have been evaluated and approved by Sharda USA LLC product management. Antifoaming agents may be used if needed. **DO NOT** use low rates of liquid fertilizer as a substitute for surfactant.

## Ground Application

To obtain optimum spray distribution and thorough coverage, use flat-fan or low-volume flood nozzles. For flood nozzles on 30" spacings, use at least 10 gals. per acre (GPA), flood nozzles no larger than TK10 (or equivalent), and a pressure of at least 30 lbs. per square inch (PSI). For 40" nozzle spacings, use at least 13 GPA; for 60" spacings, use at least 20 GPA. It is essential to overlap the nozzles 100% for all spacings.

With "Raindrop RA" nozzles, use at least 30 GPA and ensure that nozzle spray patterns overlap 100%.

For flat-fan nozzles, use at least 3 GPA for applications to wheat or barley. Use 50-mesh screens or larger.

## Aerial Application

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage.

Wheat, Barley, Triticale and Fallow, use 1 - 5 GPA. Use at least 3 GPA in Idaho, Oregon, or Utah.



When applying **Merissa** by air in areas adjacent to sensitive crops, use solid stream nozzles oriented straight back. Adjust the swath to avoid spray drift damage to sensitive crops downwind and/or use ground equipment to treat the border edge of fields. See the **MANDATORY SPRAY DRIFT MANAGEMENT** section of this label.

### **Product Measurement**

**Merissa** is measured using the **Merissa** volumetric measuring cylinder. The degree of accuracy of this cylinder varies by +/- 7.5%. For more precise measurement, use scales calibrated in ounces.

### **With Liquid Nitrogen Solution Fertilizer**

Liquid nitrogen fertilizer solutions may be used as a carrier in place of water. Run a tank mix compatibility test before mixing **Merissa** in fertilizer solution.

**Merissa** must first be slurried with water and then added to liquid nitrogen solutions (e.g., 28-0-0, 32-0-0). Ensure that the agitator is running while the **Merissa** is added. Use of this mixture may result in temporary crop yellowing and stunting. If using low rates of liquid nitrogen fertilizer in the spray solution (less than 50% of the spray solution volume), the addition of surfactant is necessary. Add surfactant at 0.25 pt. per 100 gals. of spray solution (0.03% v/v).

When using high rates of liquid nitrogen fertilizer in the spray solution, adding surfactant increases the risk of crop injury. Consult your agricultural dealer, consultant, fieldman, or Sharda USA LLC representative for specific advisories before adding an adjuvant to these tank mixtures.

If 2,4-D or MCPA is included with **Merissa** and fertilizer mixture, ester formulations tend to be more compatible (see manufacturer's label). **DO NOT** add surfactant when using **Merissa** in tank mix with 2,4-D ester and liquid nitrogen fertilizer solutions.

**Note:** In certain areas east of the Mississippi river unacceptable crop response may occur with use of straight or dilute nitrogen fertilizer carrier solutions where cold temperatures or widely fluctuating day/night temperatures exist. In these areas consult your agricultural dealer, consultant, field advisor, or Sharda USA LLC representative for specific advisories before using nitrogen fertilizer carrier solutions.

Liquid nitrogen fertilizer solutions that contain sulfur can increase crop response. **DO NOT** use low rates of liquid fertilizer as a substitute for a surfactant.

**DO NOT** use with liquid fertilizer solutions with a pH less than 3.0.

### **CROP ROTATION**

Before using **Merissa**, carefully consider your crop rotation plans and options. For rotational flexibility, **DO NOT** treat all of your wheat, barley, triticale, or fallow acres at the same time.

### **Minimum Rotational Intervals**

Minimum rotation intervals\* are determined by the rate of breakdown of **Merissa** applied. **Merissa** breakdown in the soil is affected by soil pH, presence of soil microorganisms, soil temperature, and soil moisture. Low soil pH, high soil temperature, and high soil moisture increase **Merissa** breakdown in soil, while high soil pH, low soil

temperature, and low soil moisture slow **Merissa** breakdown. Of these 3 factors, only soil pH remains relatively constant. Soil temperature, and to a greater extent, soil moisture, can vary significantly from year to year and from area to area. For this reason, soil temperatures and soil moisture must be monitored regularly when considering crop rotations. The minimum rotation interval represents the period of time from the last application to the anticipated date of the next planting.

### Soil pH Limitations

**DO NOT** use **Merissa** on soils having a pH above 7.9, as extended soil residual activity could extend crop rotation intervals beyond normal. Under certain conditions, **Merissa** could remain in the soil for 34 months or more, injuring wheat and barley. In addition, other crops planted in high-pH soils can be extremely sensitive to low concentrations of **Merissa**.

### Checking Soil pH

Before using **Merissa**, determine the soil pH of the areas of intended use. To obtain a representative pH value for the test area, take several 0" - 4" samples from different areas of the field and analyze them separately. Consult local extension publications for additional information on advised soil sampling procedures.

### Bioassay

A field bioassay must be completed before rotating to any crop not listed (see the **Rotation Intervals** table), or if the soil pH is not in the specified range, or if the use rate applied is not specified in the table, or if the minimum cumulative precipitation has not occurred since application.

### Field Bioassay

To conduct a field bioassay, grow test strips of the crop or crops you plan to grow the following year in fields previously treated with **Merissa**. Crop response to the bioassay will indicate whether or not to rotate to the crop(s) grown in the test strips. If a field bioassay is planned, check with your local Agricultural dealer or Sharda USA LLC representative for information detailing the field bioassay procedure.

### Rotational Intervals for Cereals

#### All Areas - Following Use of Merissa

Crop	Soil pH	Minimum Cumulative Precipitation (Inches)	Minimum Rotation Interval (Months)
Winter and Spring Wheat	7.9 or lower	No restrictions	1
Durum Wheat, Barley, Spring/Winter Oat	7.9 or lower	No restrictions	10

### Rotation Intervals for Crops in Non-Irrigated Land Following Use of Merissa

Location		Crop	Soil pH	Minimum Cumulative Precipitation (Inches)	Minimum Rotation Interval (Months)
State	County or Area				
Colorado	Statewide	Grain Sorghum, Proso Millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
		Field Corn	7.9 or lower	15	12
		BOLT® Technology Soybeans, STS Soybeans	7.9 or lower	No restrictions	4
Idaho	Southern Idaho	Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	Statewide	Peas, Lentils, Canola	6.8 or lower	18	10
		Peas	6.9 - 7.9	18	15
		Lentils	6.9 - 7.9	18	34
		Canola	6.9 - 7.9	18	22
		Condiment Mustard	7.3 or lower	10	10
		Condiment Mustard	7.4 or higher	28	34
		Chickpeas	7.3 or lower	10	10
		Chickpeas	7.4 or higher	28	34

(continued)

**Rotation Intervals for Crops in Non-Irrigated Land Following Use of Merissa (continued)**

Location		Crop	Soil pH	Minimum Cumulative Precipitation (Inches)	Minimum Rotation Interval (Months)
State	County or Area				
Kansas	Statewide	BOLT® Technology Soybeans	7.9 or lower	No restrictions	4
		Grain Sorghum, Proso Millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	Central and Western Kansas (West of the Flint Hills)	Field Corn	7.9 or lower	15	12
	Western Kansas W. of Hwy. 183	Soybeans	7.5 or lower	22	22
			7.6 - 7.9	33	34
	Central Kansas; generally E. of Hwy. 183 and W. of the Flinthills	Soybeans	7.9 or lower	15	12
STS Soybeans		7.9 or lower	15	4	
Montana	Statewide	Grain Sorghum, Proso Millet, Field Corn	7.9 or lower	22	22
		Alfalfa (Hay Only)	7.6 - 7.9	No restrictions	34
			7.5 or lower	No restrictions	22
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22

(continued)

**Rotation Intervals for Crops in Non-Irrigated Land Following Use of Merissa (continued)**

Location		Crop	Soil pH	Minimum Cumulative Precipitation (Inches)	Minimum Rotation Interval (Months)
State	County or Area				
Nebraska	Statewide	Grain Sorghum, Proso Millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
		BOLT® Technology Soybeans, STS Soybeans	7.9 or lower	No restrictions	4
	Generally W. of Hwy. 77 and E. of the Panhandle	Field Corn	7.9 or lower	15	12
		Soybeans	7.5 or lower	22	22
			7.6 - 7.9	33	34
New Mexico	Statewide	Grain Sorghum, Proso Millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	Eastern New Mexico	Cotton (Dryland Only)	7.9 or lower	30	22
North Dakota	W. of Hwy. 1	BOLT® Technology Soybeans	7.9 or lower	No restrictions	4
		Grain Sorghum, Proso Millet, Field Corn, Dry Beans, Flax, Safflower, Soybean, Sunflower	7.9 or lower	22	22
	E. of Hwy. 1	Grain Sorghum, Proso Millet, Field Corn, Dry Beans, Flax, Safflower, Soybean, Sunflower	7.9 or lower	34	34

*(continued)*

**Rotation Intervals for Crops in Non-Irrigated Land Following Use of Merissa (continued)**

Location		Crop	Soil pH	Minimum Cumulative Precipitation (Inches)	Minimum Rotation Interval (Months)
State	County or Area				
Oklahoma	Statewide	Grain Sorghum, Proso Millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
		Field Corn	7.9 or lower	15	12
		BOLT® Technology Soybeans, STS Soybean	7.9 or lower	No restrictions	4
	Panhandle	Cotton (Dryland Only)	7.9 or lower	30	22
	E. of the Panhandle	Cotton (Dryland Only)	7.9 or lower	25	14
Oregon	Statewide	Peas, Lentils, Canola	6.8 or lower	18	10
		Peas	6.9 - 7.9	18	15
		Lentils	6.9 - 7.9	18	34
		Canola	6.9 - 7.9	18	22
		Condiment Mustard	7.3 or lower	10	10
		Condiment Mustard	7.4 or higher	28	34
		Chickpeas	7.3 or lower	10	10
		Chickpeas	7.4 or higher	28	34

(continued)

**Rotation Intervals for Crops in Non-Irrigated Land Following Use of Merissa (continued)**

Location		Crop	Soil pH	Minimum Cumulative Precipitation (Inches)	Minimum Rotation Interval (Months)
State	County or Area				
South Dakota	Statewide	BOLT® Technology Soybeans	7.9 or lower	No restrictions	4
		Flax, Safflower, Soybean, Sunflower	7.9 or lower	No restrictions	22
	S. of Hwy. 212 & E. of the Missouri River, & S. of Hwy. 34 & W. of Missouri River	Grain Sorghum, Proso Millet	7.9 or lower	13	12
	Generally E. of Missouri River & S. of Hwy. 14, & W. of Missouri River	Field Corn	7.9 or lower	15	12
Texas	Statewide	BOLT® Technology Soybeans	7.9 or lower	No restrictions	4
		Grain Sorghum, Proso Millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Soybean, Sunflower	7.9 or lower	No restrictions	22
	Panhandle	Field Corn	7.9 or lower	15	12
		Cotton (Dryland Only)	7.9 or lower	30	22
	N. Central Texas*	Field Corn	7.9 or lower	15	12
		Cotton (Dryland Only)	7.9 or lower	25	14
	*The counties of N. Central Texas are: Archer, Baylor, Bell, Bosque, Bowie, Callahan, Camp, Cass, Clay, Collin, Cooke, Coryell, Dallas, Delta, Denton, Eastland, Ellis, Falls, Fannin, Foard, Franklin, Grayson, Hardeman, Haskell, Hill, Hood, Hopkins, Hunt, Jack, Johnson, Kaufman, Knox, Lamar, Limestone, McLennan, Milam, Montague, Morris, Nafarro, Palo Pinto, Parker, Rains, Red River, Robertson, Rockwall, Shackelford, Somervell, Stephens, Tarrant, Throckmorton, Titus, Upshur, Van Zandt, Wilbarger, Wichita, Williamson, Wise, Wood, Young.				

(continued)

**Rotation Intervals for Crops in Non-Irrigated Land Following Use of Merissa (continued)**

Location		Crop	Soil pH	Minimum Cumulative Precipitation (Inches)	Minimum Rotation Interval (Months)
State	County or Area				
Washington	Statewide	Peas, Lentils, Canola	6.8 or lower	18	10
		Peas	6.9 - 7.9	18	15
		Lentils	6.9 - 7.9	18	34
		Canola	6.9 - 7.9	18	22
		Condiment Mustard	7.3 or lower	10	10
		Condiment Mustard	7.4 or higher	28	34
		Chickpeas	7.3 or lower	10	10
		Chickpeas	7.4 or higher	28	34
Utah	Statewide	Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
Wyoming	Statewide	Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	Southern Wyoming	Grain Sorghum, Proso Millet	7.9 or lower	No restrictions	10
	Southern Wyoming (Goshen, Laramie, and Platte counties only)	Field Corn	7.9 or lower	15	12
	Northern Wyoming	Grain Sorghum, Proso Millet, Field Corn	7.9 or lower	22	22



### Rotation Intervals Not Covered Above

The minimum rotation interval is 34 months with at least 28" of cumulative precipitation during the period:

- To any major field crop not listed (see the **Rotation Intervals** table).
- If the soil pH is not in the specified range.
- or if the minimum cumulative precipitation has not occurred since application.

To rotate to a major field crop at an interval shorter than specified, a field bioassay must be successfully completed to that crop. A field bioassay must be successfully completed before rotation to any minor crops (as determined by the USDA criteria). See section on **Field Bioassay** for further information.

### RECROPPING INTERVALS FOR GRASSES ON CONSERVATION RESERVE PROGRAM (CRP)

Whenever **Merissa** has previously been used in wheat, barley, triticale or fallow, the following grasses may be planted after the intervals specified in the tables below. The planting of grass and legume mixtures is not advised as injury to the legume may occur: Bentgrasses, Blue grama, Bluestems (Big, Little, Plains, Sand, WW Spar), Buffalograss, Galleta, Green needlegrass, Green sprangletop, Indian ricegrass, Lovegrasses (Sand, Weeping), Orchardgrass (excluding Paiute), Prairie sandreed, Sand dropseed, Sheep fescue, Sideoats grama, Switchgrass, Wild ryegrasses (Beardless, Russian), and Wheatgrasses (Crested, Intermediate, Pubescent, Slender, Streambank, Tall, Thickspike, Western).

### Rotation Intervals

MN, MT, ND, SD, and Northern WY		
Soil pH	Use Rate (Oz. per Acre)	Minimum Interval for Planting Grasses
7.5 or lower	0.1 (0.0038 lb. a.i.)	4 months (all grasses)
7.6 - 7.9	0.1 (0.0038 lb. a.i.)	4 months (Wheatgrasses only)
AR, CO, ID, KS, LA, NE, NM, OK, OR, TX, UT, WA, and Southern WY		
Soil pH	Use Rate (Oz. per Acre)	Minimum Interval for Planting Grasses
7.9 or lower	0.1 (0.0038 lb. a.i.)	2 months (all grasses)

**FOR USE IN THE STATES OF COLORADO, IDAHO, MINNESOTA, MONTANA, NEBRASKA,  
NORTH DAKOTA, OREGON, SOUTH DAKOTA, AND WASHINGTON**

**Application Information**

Apply **Merissa** at 0.033 oz. (0.0012 lb. a.i.) per acre when combined with at least 1 additional herbicide registered for use on the same crop including EXPRESS® with TotalSol®, Dicamba XP, and GR1™. Fields treated with **Merissa** at 0.033 oz. (0.0012 lb. a.i.) per acre may be rotated to the following crops at the specified intervals when located in the states of Colorado, Idaho, Montana, Nebraska, Oregon, South Dakota, and Washington; and outside of the Red River Valley in the states of North Dakota and Minnesota. Read and follow all label instructions for rotational crops and intervals for any companion products before using these mixtures. Follow the most restrictive labeling.

**Crop Rotation**

Follow the rotational intervals for **Merissa** at 0.1 oz. (0.0038 lb. a.i.) per acre listed in the following sections: **Rotational Intervals for Cereals All Areas - Following Use of Merissa** at 0.1 oz. (0.0038 lb. a.i.) per acre, and **Rotational Intervals for Crops in Non-Irrigated Land Following Use of Merissa** at 0.1 oz. (0.0038 lb. a.i.) per acre for the states of Colorado, Idaho, Montana, Nebraska, North Dakota (outside of the Red River Valley), Oregon, South Dakota, and Washington. For the State of Minnesota outside of the Red River Valley the rotational intervals listed below must be followed:

<b>Crop</b>	<b>Soil pH</b>	<b>Minimum Rotation Interval (Months)</b>
Sorghum, Grain	7.9 or lower	11
Peas, Dry/Green	7.9 or lower	11
Canola	7.9 or lower	11
Flax	7.9 or lower	11
Lentils	6.8 or lower	11
	6.9 - 7.9	22
Alfalfa	6.8 or lower	11
	6.9 - 7.9	22
Beans, Dry	6.8 or lower	11
	6.9 - 7.9	22

*(continued)*

Crop	Soil pH	Minimum Rotation Interval (Months)
Sunflower	7.9 or lower	11
Field Corn	7.9 or lower	12
BOLT® Technology Soybeans	7.9 or lower	4
Soybean	7.9 or lower	12
Wheat (Spring, Durum, or Winter), Triticale, or Spring Barley	7.9 or lower	1 day

#### Rotation Intervals for Crops, and/or Soil pH Not Listed Above:

Refer to the EPA-registered package label for the appropriate rotational crop interval. To rotate to a major field crop at an interval shorter than specified, a field bioassay must be successfully completed for that crop. Also, a field bioassay must be successfully completed before rotation to any minor crops (as determined by the USDA criteria). See section on **Field Bioassay** on the **Merissa** EPA-registered package label for further information.

#### Restrictions:

- When **Merissa** is applied at 0.033 oz. (0.0012 lb. a.i.) per acre, **DO NOT** use liquid fertilizer in addition to, or as a substitute for, a surfactant.
- **DO NOT** use on soils with pH greater than 7.9 (for example, highly calcareous soils) if the following rotated crop is sensitive to **Merissa**. Extended soil residual activity could adversely affect minimum rotation intervals for all crops.
- **Grazing/Haying:** There are no grazing restrictions on **Merissa**. Treated vegetation may be cut for forage or hay. Coveralls, shoes plus socks, must be worn if cutting within 4 hours of treatment.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage and disposal.

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

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

### **CONTAINER HANDLING:**

**Nonrefillable Plastic Containers (Capacity Equal to or Less Than 50 Pounds):** Nonrefillable 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. 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. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

**Nonrefillable Plastic Containers (Capacity Greater Than 50 Pounds):** Nonrefillable 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. Fill the container 1/4 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, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

**Nonrefillable Plastic Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down):** Nonrefillable container. **DO NOT** reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom, and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

## STORAGE AND DISPOSAL *(continued)*

### CONTAINER HANDLING: *(continued)*

**Nonrefillable Fiber Drums with Liners:** Nonrefillable container. **DO NOT** reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty fiber drum and liner in a sanitary landfill, or by other procedures approved by State and local authorities.

**Refillable Fiber Drums with Liners: Refillable container (fiber drum only). Refilling Fiber Drum:** Refill this fiber drum with metsulfuron-methyl only. **DO NOT** reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Disposing of Fiber Drum and/or Liner: **DO NOT** reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by State and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

## 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.**

Sharda USA LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Sharda USA LLC.

All trademarks are the property of their respective owners.

**Identification Information for Products Referenced in This Label**

<b>Product Name</b>	<b>Active Ingredient(s)</b>	<b>EPA Registration Number</b>
AIM® EC Herbicide	Carfentrazone-ethyl	279-3241
Colt® + Salvo® Herbicide	2,4-D + Fluroxypyr	34704-1010
Colt® + Sword® Herbicide	MCPA + Fluroxypyr	34704-1011
Curtail® Herbicide	2,4-D + Clopyralid	62719-48
Curtail® M Herbicide	Clopyralid + MCPA	62719-86
Dicamba XP	Dicamba	7969-140-352
Discover® NG Herbicide	Clodinafop-Propargyl	100-1173
EXPRESS® Herbicide (with TotalSol® Soluble Granules)	Tribenuron-methyl	279-9594
Everest® 2.0 Herbicide	Flucarbazone-Sodium	70506-497
Everest® 3.0 AG	Flucarbazone-Sodium	70506-509
Everest® 3.0 Herbicide	Flucarbazone-Sodium	70506-506
GR1™	Pyroxsulam	279-9623
HARMONY® Extra SG (with TotalSol® Soluble Granules)	Thifensulfuron-methyl, Tribenuron-methyl	279-9602
Hoelon 3EC	Doclofop-methyl	264-641
Outrider® Herbicide	Sulfosulfuron	59639-223
Stinger® Herbicide	Clopyralid	62719-73
Starane® Flex Herbicide	Florasulam + Fluroxypyr	62719-604
Starane® NXT Herbicide	Fluroxypyr + Bromoxynil	62719-557
Widematch® Herbicide	Clopyralid + Fluroxypyr	62719-512

## NOTES



METSULFURON-METHYL GROUP 2 HERBICIDE

# Merissa

For use on Wheat, Barley, Triticale, Grain Sorghum, and Fallow.

ACTIVE INGREDIENT:	WT. BY %
Metsulfuron-Methyl: methyl 2-[[[4-methoxy-6-methyl-1,3,5-triazin-2-yl]amino]carbonyl] amino[sulfonyl]benzoate	60.0%
OTHER INGREDIENTS:	40.0%
TOTAL:	100.0%

Contains 0.60 lb. of metsulfuron-methyl per pound of product.

## 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
<p><b>IF SWALLOWED:</b> • 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 by mouth to an unconscious person.</p>
<p><b>IF ON SKIN OR CLOTHING:</b> • 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.</p>
<p><b>IF IN EYES:</b> • 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 eye. • Call a poison control center or doctor for treatment advice.</p>
HOTLINE NUMBER
<p>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.</p>

## PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

### CAUTION

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

## DIRECTIONS FOR USE

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

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage and disposal. **PESTICIDE STORAGE:** Store product in original container only. **DO NOT** contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place. **PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. **CONTAINER HANDLING: Nonrefillable Plastic Containers (Capacity Equal to or Less Than 50 Pounds):** Nonrefillable 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. 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. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

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

### Manufactured For:

Sharda USA LLC, 7217 Lancaster Pike, Suite A, Hockessin, Delaware 19707

EPA Reg. No. 83529-171

EPA Est. No. **GH** 70815-GA-002; **SC** 39578-TX-001; **MC** 89332-GA-1;

**MA** 83411-MN-001; **TX** 07401-TX-001

The EPA Establishment Number is identified by the circled letters above that match the first two letters in the batch number.

Net Contents: 16 oz. (0.45 kg)

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