



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

May 4, 2020

S. K. Theodorakis  
Registration Manager  
Corteva Agriscience  
Chestnut Run Plaza LR735/4160-8  
974 Centre Road  
Wilmington, DE 19805

Subject: Registration Review Label Mitigation for Rimsulfuron  
Product Name: Realm Q Herbicide  
EPA Registration Number: 352-837  
Application Date: 12/21/2017  
Decision Number: 545083

Dear Mr. Theodorakis:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the Sulfonylurea (SU) Herbicides Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.


Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

Page 2 of 2  
EPA Reg. No. 352-837  
Decision No. 545083

If you have any questions about this letter, please contact Erik Kraft by phone at 703-308-9358, or via email at [Kraft.Erik@epa.gov](mailto:Kraft.Erik@epa.gov).

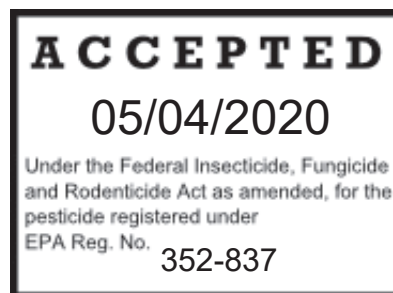
Sincerely,

A handwritten signature in black ink, appearing to read "Erik Kraft". The signature is fluid and cursive, with the first name "Erik" being more prominent than the last name "Kraft".

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

Enclosure

(base label):

**REALM<sup>®</sup> Q**  
**HERBICIDE****[Alternate Brand Name: Realm Q]**

<b>RIMSULFURON</b>	<b>GROUP</b>	<b>2</b>	<b>HERBICIDE</b>
<b>MESOTRIONE</b>	<b>GROUP</b>	<b>27</b>	<b>HERBICIDE</b>

**For Postemergence Use in Field Corn Grown for Grain or Silage**

<b>Active Ingredients</b>	<b>By Weight</b>
Rimsulfuron	
N-((4,6-dimethoxypyrimidin-2-yl) aminocarbonyl)-3-(ethylsulfonyl)-2-Pyridinesulfonamide	7.50%
Mesotrione	31.25%
<b>Other Ingredients</b>	<b>61.25%</b>
<b>TOTAL</b>	<b>100.0%</b>

**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.)

**Precautionary Statements****Hazards to Humans and Domestic Animals****CAUTION**

**Causes moderate eye irritation.**

**Avoid contact with eyes or clothing.**

**PERSONAL PROTECTIVE EQUIPMENT (PPE)****Applicators and other handlers must wear:**

- Long-sleeve shirt and long pants.
- Chemical resistant gloves made of any waterproof material including nitrile rubber, natural rubber, neoprene rubber, or butyl rubber.
- Shoes plus socks.

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

## USER SAFETY RECOMMENDATIONS

### USERS SHOULD:

- Wash thoroughly with soap and water after handling and 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.

## First Aid

**IF IN 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 eye. Call a poison control center or doctor for treatment advice.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water by mouth if able to swallow. **DO NOT** induce vomiting unless told to do so by the poison control center or doctor. **DO NOT** give anything by mouth to an unconscious person.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

## ENVIRONMENTAL HAZARDS

**DO NOT** apply directly to water, or 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. **DO NOT** apply where/when conditions could favor runoff.

### Surface Water Advisory

This product may impact surface water quality due to runoff of rain water. 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 months 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 Spray Drift Management section of this label.

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store product in original container only. Store in a cool, dry place.

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

**CONTAINER HANDLING: Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.**

**Nonrefillable Plastic and Metal 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 incineration. **DO NOT** burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Plastic and Metal 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 incineration. **DO NOT** burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Plastic and Metal 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 incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or 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 paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by state and local ordinances.

**Refillable Fiber Drums with Liners:** Refillable container (fiber drum only). Refilling Fiber Drum: Refill this fiber drum with DuPont Realm® Q herbicide containing rimsulfuron and mesotrione 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 incineration. **DO NOT** burn, unless allowed by state and local ordinances.

**All Other Refillable Containers:** Refillable container. Refilling Container: Refill this container with DuPont Realm® Q containing rimsulfuron and mesotrione only. **DO NOT** reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, **DO NOT** use the container, contact DuPont at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, **DO NOT** reuse or transport container, contact DuPont at the number below for instructions. Disposing of Container: **DO NOT** reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use 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 incineration. **DO NOT** burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**DO NOT** transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact DuPont at 1-800-441-3637, day or night.

See back and side panels for additional precautionary statements.

Refer to accompanying labeling for additional precautions, complete Directions for Use, and Storage and Disposal.

NOTICE TO BUYER: Purchase of this material does not convey any rights under patents of countries outside the United States.

EPA reg. No. 352-837

EPA Est. No. \_\_\_\_\_

®™ Trademarks of Dow AgroSciences, DuPont or Pioneer and their affiliated companies or respective owners

**Produced for  
E.I du Pont de Nemours & Company  
Chestnut Run Plaza  
974 Centre Road  
Wilmington, DE 19805**

**Nonrefillable Container**

Net: \_\_\_\_\_

*OR*

**Refillable Container**

Net: \_\_\_\_\_

(Cover/shipping label)

**REALM<sup>®</sup> Q**  
**HERBICIDE****[Alternate Brand Name: Realm Q]**

<b>RIMSULFURON</b>	<b>GROUP</b>	<b>2</b>	<b>HERBICIDE</b>
<b>MESOTRIONE</b>	<b>GROUP</b>	<b>27</b>	<b>HERBICIDE</b>

**For Postemergence Use in Field Corn Grown for Grain or Silage**

<b>Active Ingredients</b>	<b>By Weight</b>
Rimsulfuron N-((4,6-dimethoxypyrimidin-2-yl) aminocarbonyl)-3-(ethylsulfonyl)-2-Pyridinesulfonamide	7.50%
Mesotrione	31.25%
<b>Other Ingredients</b>	61.25%
TOTAL	100.0%

**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.)

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

See back and side panels for additional precautionary statements.

Refer to accompanying labeling for additional precautions, complete Directions for Use, and Storage and Disposal.

NOTICE TO BUYER: Purchase of this material does not convey any rights under patents of countries outside the United States.

EPA reg. No. 352-837

EPA Est. No. \_\_\_\_\_

®™ Trademarks of Dow AgroSciences, DuPont or Pioneer and their affiliated companies or respective owners

**E.I du Pont de Nemours & Company**  
Chestnut Run Plaza  
974 Centre Road  
Wilmington, DE 19805

**Nonrefillable Container**

Net: \_\_\_\_\_

OR

**Refillable Container**

Net: \_\_\_\_\_



(Page 1 through end):

---

## Precautionary Statements

---

### Hazards to Humans and Domestic Animals CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Applicators and other handlers must wear:

Long-sleeve shirt and long pants.

Chemical resistant gloves made of any waterproof material including nitrile rubber, natural rubber, neoprene rubber, or butyl rubber.

Shoes plus socks.

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

### USER SAFETY RECOMMENDATIONS

#### USERS SHOULD:

- Wash thoroughly with soap and water after handling and 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.

### First Aid

**IF IN 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 eye. Call a poison control center or doctor for treatment advice.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water by mouth if able to swallow. **DO NOT** induce vomiting unless told to do so by the poison control center or doctor. **DO NOT** give anything by mouth to an unconscious person.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

## ENVIRONMENTAL HAZARDS

**DO NOT** apply directly to water, or 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. **DO NOT** apply where/when conditions could favor runoff.

### Surface Water Advisory

This product may impact surface water quality due to runoff of rain water. 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 months 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 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 in your State responsible for pesticide regulation.

DuPont Realm® Q herbicide, also referred to below as Realm Q herbicide or DuPont Realm Q, must be used only in accordance with instructions on this label, or as otherwise permitted by FIFRA. To the extent consistent with applicable law, DuPont will not be responsible for losses or damage resulting from use of this product in any manner not specifically directed by DuPont. Always read the entire label, including the Limitation of Warranty and Liability.

### **AGRICULTURAL USE REQUIREMENTS**

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

**DO NOT** enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

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

Coveralls

Chemical resistant gloves made of any water proof material including polyethylene or polyvinylchloride

Shoes plus socks

## PRODUCT INFORMATION

DuPont Realm<sup>®</sup> Q is a selective herbicide for burndown and residual control of certain annual grass and broadleaf weeds when applied postemergence to field corn grown for grain or silage.

DuPont Realm Q can be tank mixed with a variety of herbicides to improve burndown and residual control.

DuPont Realm Q is absorbed through the roots and leaf tissue of plants, rapidly inhibiting the growth of susceptible weeds. Rainfall or sprinkler irrigation is needed to move DuPont Realm Q into the soil. Susceptible weeds will generally not emerge from a postemerge application with activating rainfall or sprinkler irrigation (>0.5 inch). In some cases, susceptible weeds may germinate and emerge a few days after application, but growth then ceases, and leaves become chlorotic three to five days after emergence. Death of leaf tissue and growing point will follow in some species, while others will remain green, stunted and noncompetitive.

DuPont Realm Q is best used as part of a sequential application herbicide program, following a before-planting application of ALLUVEX<sup>™</sup>, BASIS<sup>®</sup> Blend, CINCH<sup>®</sup> brands, INSTIGATE<sup>™</sup>, Keystone NXT<sup>®</sup> brands, LEADOFF<sup>®</sup>, PREQUEL<sup>®</sup>, Resicore<sup>®</sup>, RESOLVE<sup>®</sup> Q, SureStart<sup>®</sup> herbicides and/or other pre-applied corn herbicides. Refer to the label of the respective corn herbicide partner for specific use directions.

For post emergence applications of DuPont Realm Q, if activating rainfall or sprinkler irrigation (>0.5 inch) is not received within 5 to 7 days after application, follow with a cultivation or with a sequential application of ACCENT<sup>®</sup> Q herbicide, REVULIN<sup>™</sup> Q herbicide, STEADFAST<sup>®</sup> Q, or glyphosate (including ABUNDIT<sup>®</sup> Edge or Durango<sup>®</sup> DMA<sup>®</sup>) as needed.

## RESTRICTIONS

- **DO NOT** apply to field corn grown for seed, to popcorn or to sweet corn.
- **DO NOT** make more than one application of DuPont Realm Q per year.
- **DO NOT** apply more than 4.0 oz per acre (0.019 lb rimsulfuron and 0.078 lb mesotrione) of DuPont Realm Q in a single application.
- **DO NOT** apply more than 4.0 oz per acre (0.019 lb rimsulfuron and 0.078 lb mesotrione) of DuPont Realm Q per acre per year.
- **DO NOT** apply more than a total of 0.0625 lb ai per acre of rimsulfuron in a year. This includes postemergence applications of DuPont Realm Q, as well as rimsulfuron from applications of products including ALLUVEX<sup>™</sup>, BASIS<sup>®</sup> Blend, INSTIGATE<sup>™</sup>, LEADOFF<sup>®</sup>, PREQUEL<sup>®</sup>, RESOLVE<sup>®</sup> Q, RESOLVE<sup>®</sup> SG and STEADFAST<sup>®</sup> Q.
- **DO NOT** apply more than a total of 0.24 lb ai per acre of mesotrione in a year. This includes postemergence applications of DuPont Realm Q, as well as mesotrione from application(s) of products including Resicore<sup>®</sup>, INSTIGATE or REVULIN<sup>™</sup> Q. **DO NOT** make the second application of a mesotrione containing product within 14 days of the first application.
- **DO NOT** tank mix DuPont Realm Q with products containing bentazon, or severe crop injury may occur.

- **DO NOT** tank mix DuPont Realm Q with foliar-applied organophosphate or carbamate insecticides including chlorpyrifos, malathion, parathion, etc., as severe crop injury may occur. To avoid crop injury or antagonism, apply these products at least 7 days before or 7 days after the application of DuPont Realm Q.
- **DO NOT** apply DuPont Realm Q within 45 days of crop emergence where the organophosphate insecticide terbufos ("Counter" 20G) was applied since crop injury may occur. Applications made to corn previously treated with chlorpyrifos or other similar organophosphate insecticides may result in unacceptable crop injury. Any crop injury or yield loss resulting from these applications are the responsibility of the grower.
- **DO NOT** apply DuPont Realm Q to corn that exhibits herbicide injury from previous applications made to the current or preceding crop.
- **DO NOT** use liquid nitrogen fertilizer as the total carrier solution for postemergence applications.
- Injury or loss of desirable trees or vegetation may result from failure to observe the following:
  - **DO NOT** apply DuPont Realm Q or drain or flush application equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.
  - **DO NOT** use on lawns, walks, driveways, tennis courts. Prevent drift or spray onto desirable plants.
  - **DO NOT** contaminate any body of water.
- **DO NOT** graze, feed forage, grain or fodder (stover) from treated areas to livestock within 45 days of DuPont Realm Q application.
- **DO NOT** harvest grain within 70 days of DuPont REALM® Q application.
- **DO NOT** harvest forage or stover within 45 days of DuPont REALM® Q application.
- **DO NOT** use aerial application to apply DuPont Realm Q unless specified otherwise under the specific crop section on the label.
- **DO NOT** apply this product through any type of irrigation system.
- This product contains 0.0375 pound of the safener isoxadifen-ethyl per pound of product. Applying the maximum application rate of DuPont Realm Q at 4 ounces per acre will deliver 0.01 pound of isoxadifen-ethyl per acre. When tank mixing for applications to field corn, **DO NOT** apply more than a total of 0.17 pound of isoxadifen-ethyl per acre per year.

## PRECAUTIONS

- DuPont Realm® Q may interact with certain insecticides previously applied to the crop. Crop response varies with field corn type, insecticide used, insecticide application methods, and soil type.
- DuPont Realm Q may be applied to corn previously treated with "Fortress" 5G, "SmartChoice" 5G, "Aztec" 4.67% G, "Aztec 2.1G, "Force" 3G, "Force" CS, or "Force" 6.5G insecticides, or other non-organophosphate soil insecticides regardless of soil type.
- DuPont Realm Q may be applied with pyrethroid type insecticides, including "Asana" XL and "Warrior" or with diamide type insecticides.
- Crop injury may occur following an application of DuPont Realm Q if there is a prolonged period of cold weather and/or in conjunction with wet soils. Prevent drift or spray onto desirable plants.
- Thoroughly clean application equipment immediately after use (See Sprayer Cleanup section of this label).

## WEED RESISTANCE MANAGEMENT

DuPont Realm Q, which contains the active ingredients rimsulfuron and mesotrione, is both a Group 2 and a Group 27 herbicide based on the mode of action classification system of the Weed Science Society of America.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may

include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To aid in the prevention of developing weeds resistant to this product, users should:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small (less than 4 inches).
- Apply full rates of DuPont Realm Q herbicide for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in control of weed species.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your DuPont representative, local retailer, or county extension agent.
- Contact your DuPont representative, crop advisor, or extension agent 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 sites of actions for each target weed.
- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 2 or 27 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Suspected herbicide-resistant weeds may be identified by these indicators:
- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad-spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative sites of action.
- Rotate the use of this product with non-Group 2 or 27 herbicides.
- Avoid making more than two applications of DuPont Realm Q and any other Group 2 or 27 herbicides within a single growing season unless mixed with an herbicide with a different site of action with an overlapping spectrum for the difficult-to-control weeds.
- Incorporate non-chemical weed control practices, including mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

## **INTEGRATED PEST MANAGEMENT**

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultant or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest / crop systems in your

area.

## MANDATORY SPRAY DRIFT MANAGEMENT

### 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 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.

### Aerial Applications:

- **DO NOT** release spray at a height greater than 10 feet 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 one-half 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.

### 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 MANAGEMENT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### IMPORTANCE OF DROPLET SIZE

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

#### Controlling Droplet Size – Ground Boom

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

- **Spray Nozzle** - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### **Controlling Droplet Size – Aircraft**

- **Adjust Nozzles** - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should 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 should 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.

#### **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.

#### **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.

#### **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 Chemical Producers and Distributors Association (CPDA).

### **APPLICATION INFORMATION**

#### **Rate Summary for DuPont REALM® Q Herbicide**

<b>Rate of DuPont REALM® Q</b>	<b>Pounds of Active Ingredient Rimsulfuorn</b>	<b>Pounds of Active Ingredient Mesotrione</b>
--------------------------------	--	---

<b>4 oz</b>	<b>0.019</b>	<b>0.078</b>
-------------	--------------	--------------

## Field Corn Grown for Grain or Silage - Postemergence

### Application Rate

Apply DuPont Realm<sup>®</sup> Q at 4.0 ounces per acre as a postemergence broadcast application.

### Timing to Crop

DuPont Realm Q may be broadcast to corn up to 20 inches tall or that is exhibiting up to and including 6 leaf collars (V6), whichever is more restrictive.

While DuPont Realm Q has a wide application window, research has shown best results are obtained when applications are made early postemergence when corn and weeds are small. Target postemergence applications to corn generally less than 12" tall for best overall performance.

Applications of DuPont Realm Q made after weed emergence will provide contact control of labeled weeds as well as residual control of later emerging weeds.

### Timing to Emerged Weeds

Apply DuPont Realm Q when grasses and broadleaf weeds are young and actively growing, but before they exceed sizes listed on this label. Applications made to weed sizes greater than those listed on this product label may result in incomplete control. Grass and broadleaf weed competition due to incomplete control may reduce corn yields.

On "Roundup Ready" corn, glyphosate products including ABUNDIT<sup>®</sup> Edge or Durango<sup>®</sup> DMA<sup>®</sup> may be applied with DuPont Realm Q after weeds emerge but before they reach the maximum size listed on the glyphosate herbicide label.

On "Liberty Link" corn, glufosinate may be applied with DuPont Realm Q after weeds emerge but before they reach the maximum size listed on the glufosinate herbicide label.

DuPont Realm Q is rainfast in 4 hours.

### Sequential Application - Preemergence

DuPont Realm Q may be used as a sequential application in a planned postemergence weed control program in corn following a preemergence herbicide.

Apply preemergence herbicide products including ALLUVEX<sup>™</sup>, BASIS<sup>®</sup> Blend, CINCH<sup>®</sup> ATZ, CINCH<sup>®</sup> ATZ Lite, FulTime<sup>®</sup> NXT, INSTIGATE<sup>™</sup>, Keystone<sup>®</sup> NXT, Keystone<sup>®</sup> LA NXT, LEADOFF<sup>®</sup>, PREQUEL<sup>®</sup>, Resicore<sup>®</sup>, RESOLVE<sup>®</sup> Q, and Surpass<sup>®</sup> NXT herbicides. Refer to the preemergence herbicide label for use restrictions, application information, rotational crop guidelines, and cautionary statements prior to applying DuPont Realm Q. Follow the most restrictive product labeling.

**DO NOT** apply DuPont Realm Q to corn that exhibits herbicide injury from previous applications made to the current or preceding crop.

### Spray Adjuvants

For control of emerged weeds, applications of DuPont Realm Q must include a crop oil concentrate or a high surfactant oil concentrate (HSOC).

The use of a nonionic surfactant (NIS) instead of a COC or HSOC is allowed, but the weed control



achieved with COC or HSOC is consistently better than NIS. **The use of methylated seed oil (MSO) adjuvants or MSO blend adjuvants may cause severe crop injury to occur. MSO adjuvants are not advised.**

In addition to COC or HSOC, always add spray grade UAN (e.g., 28%) to the spray solution or AMS, except if precluded elsewhere on this label.

When applied in tank mix combination with a glyphosate that contains a built-in adjuvant including ABUNDIT® Edge or Durango® DMA®, ensure the total adjuvant load is equivalent to the specifications on this label. Select adjuvants authorized for use with both products.

Consult local DuPont fact sheets, technical bulletins or supplemental labels prior to using other adjuvant systems. Products must contain only EPA-exempt ingredients.

**DO NOT** use with spray additives that alter the pH of the spray solution below 5.0 or above 9.0 as rapid product degradation can occur. Spray solutions of pH 6.0 – 8.0 allow for optimum stability of DuPont Realm Q.

#### **Petroleum Crop Oil Concentrate (COC)**

- Apply at 1% (1 gallon per 100-gallon spray solution), or 2% under arid conditions.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) oil with at least 15% surfactant emulsifiers.

#### **High Surfactant Oil Concentrate (HSOC)**

- Apply at 0.5% (2 quarts per 100 gallons spray solution).

#### **Nonionic Surfactant (NIS)**

- Apply at 0.25% v/v (1 quart per 100-gallon spray solution).
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.
- **DO NOT** use liquid nitrogen fertilizer as the total carrier solution for postemergence applications.

#### **Ammonium Nitrogen Fertilizer**

- Use 2 quarts per acre of a high-quality urea ammonium nitrate (UAN) such as 28%N or 32%N, or 2 pounds per acre of a spray-grade ammonium sulfate (AMS).

#### **Special Adjuvant Types**

- Combination adjuvant products may be used at doses that provide the required amounts of NIS, COC, and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.

### **Weeds Controlled/Suppressed**

Refer to the Spray Adjuvants section for additional information on proper adjuvant selection.

**Table 1. Weeds Controlled with a Postemergence Application of DuPont Realm® Q**

<b>Common Name</b>	<b>4.0 oz/A Weeds &lt; 5 Inches Tall</b>	<b>4.0 oz/A + atrazine Weeds &lt;5 Inches Tall</b>
Amaranth, Palmer*	PC <sup>2</sup>	C <sup>2</sup>
Amaranth, Powell	C	C
Amaranth, spiny	C	C
Atriplex	C	C
Barnyardgrass	C	C
Bluegrass, annual	C <sup>2</sup>	C

Broadleaf signalgrass	PC <sup>1</sup>	C <sup>1</sup>
Buckwheat, wild	PC	PC
Buffalobur	C	C
Burcucumber	C <sup>1</sup>	C
Carpetweed	C	C
Carrot, wild	C	C
Chickweed, common	C	C
Cocklebur, common	C	C
Crabgrass, large	C <sup>1</sup>	C <sup>1</sup>
Dandelion	C	C
Dock, curly	PC	PC
Foxtails (bristly, giant, green, yellow)	C <sup>3</sup>	C <sup>3</sup>
Galinsoga	C	C
Hemp	C	C
Horsenettle	C	C
Itchgrass	C	C
Jimsonweed	C	C
Johnsongrass, seedling	PC	C
Knotweed, prostrate	PC	PC
Kochia*	C <sup>1</sup>	C <sup>1</sup>
Lambsquarters, common	C	C
Mallow, Venice	C	C
Marestail (horseweed)*	PC	C
Morningglogy, entireleaf; ivyleaf; pitted	C <sup>1</sup>	C <sup>1</sup>
Mustard, wild	C	C
Nightshade, black, eastern black	C	C
Nightshade, hairy	C	C
Nutsedge, yellow	PC	PC
Panicum, Texas; browntop	C <sup>2</sup>	C <sup>2</sup>
Panicum, fall	C	C
Pigweed, redroot, smooth, tumble	C	C
Pokeweed, common	PC	PC
Potatoes, volunteer	C	C
Pusley, Florida	C <sup>1</sup>	C <sup>1</sup>
Quackgrass	PC	C
Ragweed, common	C <sup>2</sup>	C <sup>2</sup>
Ragweed, giant	C <sup>2</sup>	C <sup>2</sup>
Ryegrass*, Italian, perennial	PC	C
Sandbur, field; longspine	C <sup>2</sup>	C <sup>2</sup>
Sesbania, hemp	C	C
Shattercane	C <sup>3</sup>	C <sup>3</sup>
Sida, prickly (teaweed)	PC <sup>2</sup>	C <sup>2</sup>
Smartweed, ladysthumb, pale, Pennsylvania	C	C
Sorghum album	C	C
Stinkgrass	PC	C
Sunflower, common	C	C
Thistle, Canada	PC	PC
Timothy	C	C

Velvetleaf	C	C <sup>4</sup>
Volunteer cereals	C	C
Waterhemp*	PC <sup>2</sup>	C <sup>2</sup>
Wild oats	C	C
Wild proso millet	PC <sup>3</sup>	C <sup>3</sup>
Wirestem muhly	C	C
Witchgrass	C	C
Woolly cupgrass	C <sup>1</sup>	C <sup>3</sup>

<sup>1</sup> Apply before weed exceeds 2 inches in height

<sup>2</sup> Apply before weed exceeds 3 inches in height

<sup>3</sup> Apply before weed exceeds 4 inches in height

\* ALS resistant biotypes are known to exist.

C = Control      PC = Partial Control

## TANK MIXTURES

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.

### DuPont Realm<sup>®</sup> Q Applied 4.0 oz/acre with Glyphosate

Glyphosate may be tank mixed with postemergence applications of DuPont Realm Q when made to glyphosate resistant corn hybrids. Refer to the Spray Adjuvants section for additional information on proper adjuvant selection.

When used in a tank mixture with glyphosate herbicide, 4.0 ounces DuPont Realm Q will deliver improved burndown and/or residual activity on the following weeds.

Alfalfa, volunteer	Quackgrass
Canada thistle	Ryegrass, Italian
Chamomile, false	Sandbur (field, longspine)
Crabgrass	Shepherd's purse
Filaree, redstem	Signalgrass, broadleaf
Henbit	Stinkgrass
Johnsongrass, seedling	Waterhemp, (smooth, tall)
Millet, Wild Proso	Wild buckwheat
Morningglory, ivyleaf	Wild oat
Mustard (birdsrape, black, wild)	Yellow Nutsedge
Purslane, common	

### DuPont Realm Q Applied 4.0 oz/acre with Glufosinate

Realm Q may be tank mixed with glufosinate herbicide if applications are made to glufosinate resistant corn hybrids. Consult with your seed supplier to confirm the corn hybrid is glufosinate resistant before applying any herbicide containing glufosinate.

### Tank Mixtures - Additional Control of Broadleaf and Grass Weeds

DuPont Realm Q may be tank mixed with other post-emergence labeled grass and broadleaf herbicides such as atrazine, dicamba, CINCH<sup>®</sup>ATZ, CINCH<sup>®</sup>ATZ Lite, FulTime<sup>®</sup> NXT, Keystone<sup>®</sup> NXT, Keystone<sup>®</sup> LA NXT, ACCENT<sup>®</sup> Q, Resicore<sup>®</sup>, and DuPont<sup>™</sup> REVULIN<sup>™</sup> Q to provide added residual or burndown activity on emerged weeds. Consult tank mix partner labeling for rate and soil-type restrictions. Read and follow all manufacturers' label instructions for the companion herbicide(s). **DO NOT** use a tank mix partner product if its label conflicts with this DuPont Realm Q label.

Ensure the tank mix product is labeled for the same timing, method of application, adjuvants, and use

restrictions as DuPont Realm Q, as well as other products used in the tank mixture.

As EC formulations, acetochlor or metolachlor products including CINCH® or Surpass® NXT, can act like an adjuvant in certain combinations and thus increase the risk of crop injury. If these tank mixtures are used, the user must leave the crop oil concentrate (COC) out of the adjuvant mix.

DuPont Realm Q may be tank mixed with atrazine formulations including CINCH® ATZ, CINCH® ATZ Lite, FulTime® NXT, Keystone® NXT, Keystone® LA NXT or products that contain the same active ingredients, but special attention must be paid to adjuvant selection and/or application method. If any of these tank mixtures are used the user must leave the urea ammonium nitrate (UAN) out of the mix. There is still a risk of temporary crop injury in the form of leaf burn with these mixtures. To further reduce the risk of crop injury, also leave out the crop oil concentrate (COC) and replace it with a nonionic surfactant (NIS).

The control of emerged weeds may be reduced due to less than optimum adjuvant effect or weed coverage and there is still a risk of temporary crop injury in the form of leaf burn with these mixtures.

The crop safety of all possible tank mixture combinations with DuPont Realm Q which may include physically compatible pesticides, fertilizers, adjuvants and/or additives has not been tested.

To the extent consistent with applicable law, DuPont will not be responsible for any crop injury arising from the use of a tank mixture that is not specifically described on the DuPont Realm Q product labeling or in other DuPont product use instructions.

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.

## **Tank Mix Compatibility Testing**

Perform a jar test prior to tank mixing to ensure compatibility of DuPont Realm Q and other pesticides. Use a clear quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-ups, forms flakes, sludge, gel, oily film or layers, or other precipitates, it is not compatible, and the tank mix combination cannot be used.

## **Mixing Instructions**

### **Water Carrier Instructions**

1. Fill the tank 1/4 to 1/3 full of water
2. While agitating, add the required amount of DuPont Realm® Q
3. Continue agitation until the DuPont Realm Q is fully dispersed
4. Once dispersed, maintain agitation and continue filling tank with water
5. As tanks fills, add desired tank mix partners
6. If not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using
7. Apply mixture within 48 hours of mixing for best results

If the selected companion herbicide has a ground or surface water advisory, consider this advisory when using the companion herbicide.

## **Application and Spray Volumes**

**Ground Application** (Also refer to the **SPRAY DRIFT MANAGEMENT** section)

Use a minimum of 15 gallons of water per acres (GPA) to ensure thorough coverage of the weeds and the best performance.

Use a minimum of 10 GPA for light, scattered stands of weeds.

#### **Aerial Application** (Also refer to the **SPRAY DRIFT MANAGEMENT** section)

DuPont Realm Q may be applied aerially for preemergence or postemergence weed control only in the following states: Alabama, Arkansas, Colorado, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, and Texas.

Applications must be made in a minimum of 2 gallons of water per acre.

### **ROTATIONAL CROP GUIDELINES**

Rotational crops vary in their crop response to low concentrations of DuPont Realm Q remaining in the soil. The amount of DuPont Realm Q that may be present in the soil depends on soil moisture, soil temperature, application rate, elapsed time since application and other environmental factors. When DuPont Realm Q is used in combination with other products, always follow the most restrictive rotational crop requirements.

The following rotational intervals must be observed when using DuPont Realm Q:

#### **4.0 OZ USE RATE PER ACRE PER YEAR**

<b>Rotational Crop</b>	<b>Interval (months)</b>
Corn, Field	Anytime
Cereals, Winter	4
Cereals, Spring (wheat, oats, barley)	9
Alfalfa*†	10
Canola†	10
Corn, pop, seed or sweet	10
Cotton†	10
Flax	10
Peas	10 <sup>1,2</sup>
Peanuts	10
Potatoes	10
Rice	10
Snap beans	10 <sup>1,2</sup>
Sorghum†	10
Soybeans	10
Sunflower	10
Sweet potatoes/yams**	10
Tobacco	10
Cucurbits	18
Dry beans	18
Red clover	18
Sugar beets	18
Crops not listed	18

\*On sprinkler irrigated fields in Idaho, Utah, and Northern Nevada it is best to use deep fall tillage such as plowing prior to planting alfalfa. Product degradation may be less on furrow irrigated soils and may result in some crop injury.

\*\* On soils with pH 6.5 or less.

†18 months in the Red River Valley region of ND and MN. In all other areas, the rotation intervals must be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless sprinkler irrigation has been applied and totals greater than 15" during the growing season.

<sup>1</sup> Plant these rotational crops only if the following criteria below have been met. If all criteria are not met, plant peas and snap beans a minimum of 18 months following DuPont Realm Q application.

- A minimum of 20" of rainfall plus irrigation has been received between application and planting of the rotational crop.
- Soil pH is 6.0 or greater.
- Application of DuPont Realm Q applied no later than June 30 the year preceding rotational crop planting.
- No other HPPD herbicides were applied the year prior to planting peas and snap beans.

<sup>2</sup> **DO NOT** plant peas or snap beans on sand, sandy loam or loamy sands in Minnesota or Wisconsin.

- Planting unspecified rotational crops, or those rotational crops that are specified at shorter than listed intervals may result in injury to the rotational crop.

## SPRAYER PREPARATION/CLEANUP

It is important that spray equipment is clean and free of previous pesticide deposits before using DuPont Realm Q, and then properly cleaned out following application. Clean all application equipment before applying DuPont Realm Q. Follow the cleanup procedures specified on the label of the product previously sprayed. If no cleanup procedure is provided, use the procedure that follows. Immediately following applications of DuPont Realm Q, thoroughly clean all mix and spray equipment to avoid subsequent crop injury.

Note:

When cleaning spray equipment before applying DuPont Realm Q, read and follow label directions for proper rinsate disposal of the product previously sprayed.

When spraying or mixing equipment will be used over an extended period to apply multiple loads of DuPont Realm Q, partially fill the tank with fresh water at the end of each day of spraying, flush the boom and hoses, and allow to sit overnight.

### Cleanup Procedure

1. Drain the tank and hose down the interior surfaces with clean water
2. Partially fill the tank with clean water and add one gallon of household ammonia\* (containing 3% active) for every 100 gallons of water. Finish filling tank with water, then flush the cleaning solution through the hoses, boom, and nozzles. Add more water to completely fill the tank and allow agitating / re-circulating for at least 15 minutes. Again, flush the hoses, boom, and nozzles with the cleaning solution, then drain the tank.
3. Repeat Step 2
4. Remove the nozzles, screens and the end caps of sprayer booms and clean separately in a bucket containing the cleaning agent and water.
5. Thoroughly rinse the tank with clean water for a minimum of 5 minutes, flushing the water through the hoses and boom.

\*Equivalent amount of an alternate strength ammonia solution or a tank cleaner specified in the DuPont bulletin "Sulfonylurea Herbicides, A Guide to Equipment Cleanout" may be used.

### IDENTIFICATION INFORMATION FOR OTHER PRODUCTS INCLUDED IN THIS LABEL

USEPA REGISTERED PRODUCTS MENTIONED IN THIS LABEL FOR USE IN TANK MIXTURES OR OTHER REASONS		
PRODUCT BRAND NAME	ACTIVE INGREDIENT(S)	EPA REGISTRATION NUMBER
Cinch® ATZ Lite Herbicide	atrazine + S-metolachlor + atrazine related compounds	352-623
Cinch® ATZ Herbicide	atrazine + S-metolachlor + atrazine related compounds	352-624
Cinch® Herbicide	S-metolachlor	352-625

Resolve® Q Herbicide	rimsulfuron + thifensulfuron methyl	352-777
Prequel® Herbicide	isoxaflutole + rimsulfuron	352-779
Leadoff® Herbicide	rimsulfuron + thifensulfuron methyl	352-853
Basis® Blend Herbicide	rimsulfuron + thifensulfuron methyl	352-854
Instigate® Herbicide	mesotrione + rimsulfuron	352-873
Surpass® NXT Herbicide	acetochlor	62719-672
Keystone® NXT Herbicide	acetochlor + atrazine	62719-671
Keystone® LA NXT Herbicide	acetochlor + atrazine	62719-670
FulTime® NXT Herbicide	acetochlor + atrazine	62719-668
Resicore® Herbicide	acetochlor + mesotrione + clopyralid	62719-693
Abundit® Edge Herbicide	glyphosate	352-922
Durango® DMA® Herbicide	glyphosate	62719-556
Force® 3G Insecticide	tefluthrin	100-1075
Force® CS Insecticide	tefluthrin	100-1253
Warrior® II Insecticide	lambda-cyhalothrin	100-1295
Force® 6.5G Insecticide	tefluthrin	100-1625
Counter® 20G Insecticide	terbufos	5481-562
Aztec® 4.67% Granular Insecticide	tebupirimphos + cyfluthrin	5481-9028
Aztec® 2.1G Insecticide	tebupirimphos + cyfluthrin	5481-9030
Fortress® 5G Insecticide	Chlorethoxyfos	5481-493
Smartchoice™ 5G Insecticide	bifenthrin + chlorethoxyfos	5481-561
Asana® XL Insecticide	esfenvalerate	59639-209

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store product in original container only. Store in a cool, dry place.

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

**CONTAINER HANDLING:** Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

### **Nonrefillable Plastic and Metal 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 incineration. **DO NOT** burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

### **Nonrefillable Plastic and Metal 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 incineration. **DO NOT** burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Plastic and Metal 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 incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or 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 paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by state and local ordinances.

**Refillable Fiber Drums with Liners:** Refillable container (fiber drum only). Refilling Fiber Drum: Refill this fiber drum with DuPont Realm® Q herbicide containing rimsulfuron and mesotrione 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 incineration. **DO NOT** burn, unless allowed by state and local ordinances.

**All Other Refillable Containers:** Refillable container. Refilling Container: Refill this container with DuPont Realm® Q containing rimsulfuron and mesotrione only. **DO NOT** reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, **DO NOT** use the container, contact DuPont at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, **DO NOT** reuse or transport container, contact DuPont at the number below for instructions. Disposing of Container: **DO NOT** reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use 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 incineration. **DO NOT** burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**DO NOT** transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, call 1-800-992-5994 , day or night.

**NOTICE TO BUYER:** Purchase of this material does not confer any rights under patents of countries outside of the United States. This product includes ingredients that are covered under one or more of the following Bayer CropScience patents: 6,486,096; 6,569,805; 5,922,646; and 5,516,750. Purchase of this product includes a license for use only as specified on this label. Any use, mixture or formulation of this product other than as described on this label is expressly not authorized.

®™ Trademarks of Dow AgroSciences, DuPont or Pioneer and their affiliated companies or respective owners

"LibertyLink" is a registered trademark of Bayer

"Fortress"; "SmartChoice", "Aztec" and "Counter" are registered trademarks of AmVac Chemical Corporation.

"Force" and "Warrior" are registered trademarks of a Syngenta Group Company.

"Asana" is a registered trademark of Sumitomo Chemical Company, Limited.

### LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read this Limitation of Warranty and Liability before buying or using this product. DuPont will not be responsible for losses or damages resulting from the use of this product in any manner not specifically directed by DuPont. User assumes all risks associated with such non-directed use. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product, crop injury, or injury to non-target crops or plants. **WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.**

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the directions for use, subject to the inherent risks described above, when used in accordance with the directions for use under normal conditions.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, DUPONT MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL DUPONT OR SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BUYER'S OR USER'S BARGAINED-FOR EXPECTATION IS CROP PROTECTION. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER AND THE EXCLUSIVE LIABILITY OF DUPONT OR SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, TORT OR STRICT LIABILITY), WHETHER FROM FAILURE TO PERFORM OR INJURY TO CROPS OR OTHER PLANTS, AND 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 DUPONT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

To the extent consistent with applicable law that allows such requirement, DuPont or its Ag Retailer must have prompt notice of any claim so that an immediate inspection of buyer's or user's growing crops can be made. Buyer and all users shall promptly notify DuPont or a DuPont Ag Retailer of any claims, whether based on contract, negligence, strict Liability, other tort or otherwise, or be barred from any remedy.

This Limitation of Warranty and Liability may not be amended by any oral or written agreement.

**For product information call: 1-800-992-5994**

**E. I. du Pont de Nemours and Company, Chestnut Run Plaza, 974 Centre Road, Wilmington, DE  
19805 U.S.A.**

**All rights reserved.**

®™ Trademarks of Dow AgroSciences, DuPont or Pioneer and their affiliated companies or respective owners

EPA accepted 06/19/13