Insecticide For Treatment Of Labeled Crop Seed

ACTIVE INGREDIENTS:
Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine . . . . . . 40.7%

OTHER INGREDIENTS: .............................................................................................. 59.3%
TOTAL: .................................................................................................................. 100.0%
Contains 4 lbs. active per gallon (480 grams per liter)

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

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

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

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

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

IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT CALL: CHEMTREC: (800) 424-9300

See inside booklet for additional PRECAUTIONARY STATEMENTS and complete DIRECTIONS FOR USE.

Precautionary Statements
Hazards To Humans And Domestic Animals

CAUTION

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

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For use in commercial seed treaters only, with the exception of application to canola, cotton (deltinted seed), field corn, sorghum, wheat and barley, which may be made either by commercial seed treatment or as an end-use seed treatment on agricultural establishments at, or immediately before, planting.

This product is to be used in liquid or slurry treaters only. 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.

Mix thoroughly before use or use entire container at one time. All tank mixes should be pre-tested to determine physical compatibility between formulations. Take the most restrictive for all cautions and limitations on labeling of all products used in mixtures.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage, disposal, or by cleaning of equipment. Do not reuse empty container. Open dumping is prohibited.

PESTICIDE STORAGE: Store in a cool place. Do not store in direct sunlight. Protect from freezing temperatures.

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

CONTAINER DISPOSAL:
Non-refillable containers (1, 2.5, 30 & 55 gallon): Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.
(non-refillable <5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.
(non refillable >5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows (all sizes): Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Insert pressure rinsing nozzle in the side of the container, and rinse the container with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

Refillable container (250 gallon & bulk): Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

EPA Reg. No. 42750-134
EPA Est. No. 42750-MO-1
Manufactured For:
ALBAUGH, LLC
1525 NE 36th Street
Ankeny, Iowa 50021

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Resonate™

480 ST

Insecticide For Treatment Of Labeled Crop Seed

Manufactured For:
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1525 NE 36th Street
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OTHER INGREDIENTS: ................................................................. 59.3%

TOTAL ................................................................. 100.0%

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EPA Est. No. 42750-M0-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

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• 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.

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

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

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

IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT CALL: CHEMTREC: (800) 424-9300

See inside booklet for additional PRECAUTIONARY STATEMENTS.
Precautionary Statements
Hazards To Humans And Domestic Animals

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

Personal Protective Equipment (PPE)
Applicators and other handlers must wear:
1. Long-sleeved shirt and long pants,
2. Socks and shoes and
3. Chemical-resistant gloves: barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyvinyl chloride (PVC) ≥14 mils, or Viton® ≥14 mils.

Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations
Users should
1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change clothing.

Environmental Hazards
This product is highly toxic to birds and aquatic invertebrates. For terrestrial uses, 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 washwaters. Cover or incorporate spilled treated seeds.
This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Ensure that planting equipment is functioning properly in accordance with manufacturing specifications to minimize seed coat abrasion during planting to reduce dust which can drift to blooming crops or weeds.

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

For use in commercial seed treaters only, with the exception of application to canola, cotton (delinted seed), field corn, sorghum, wheat and barley, which may be made either by commercial seed treatment or as an end-use seed treatment on agricultural establishments at, or immediately before, planting. This product is to be used in liquid or slurry treaters only.
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.
Mix thoroughly before use or use entire container at one time. All tank mixes should be pre-tested to determine physical compatibility between formulations. Take the most restrictive for all cautions and limitations on labeling of all products used in mixtures.

Agricultural Use Requirements
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40CFR 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.
Exception: If the seed is treated with the product and the treated seed is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:
1. Coveralls
2. Chemical-resistant gloves: barrier laminate, butyl rubbers ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyvinyl chloride (PVC) ≥14 mils, or Viton® ≥14 mils (such as nitrile, butyl, neoprene, barrier laminate, polyvinyl chloride or Viton)
3. Shoes plus socks
4. Protective eyewear.
PRODUCT INFORMATION

RESONATE 480 ST is a neo-nicotinoid class insecticide intended to provide post planting residual control of labeled insects during the critical germination stage of growth.

RESONATE 480 ST is an aqueous based flowable concentrate formulation with a proprietary formulation that is intended to reduce seed dusting off and help reduce viscosity.

Use Restrictions

- **DO NOT** use as a planter (hopper) box treatment.
- **CALIFORNIA:** Only for use in commercial seed treatment facilities, not allowed for “on farm” use.
- **ON FARM TREATMENT:** DO NOT apply this product through any type of irrigation system.
- **DO NOT** use for feed, food, or oil purpose.
- Excess treated seed may be used for ethanol production only if (1) by-products are not used for livestock feed and (2) no measurable residues of pesticides remain in the ethanol by-products that are used in agronomic practice.
- Store away from feeds and foodstuffs.
- Treated seed must be planted into the soil at a depth greater than 1 inch.
- Treated seeds exposed on soil surface may be hazardous to wildlife. Cover or collect treated seeds that are spilled during handling.
- Dispose of all excess treated seed. Leftover seed may be double-sown around the headland or buried away from water sources in accordance with local requirements.
- **DO NOT** contaminate water bodies when disposing of planting equipment wash water.
- In the event of a crop failure or harvest of a crop grown from RESONATE 480 ST treated seed, the field may be replanted immediately to artichoke, barley, Brassica (cole) leafy vegetables, canola, cilantro, corn (field or sweet), cotton, crambe, cranberry, cucurbits, eggplant, flax, groundcherry, leafy petiole vegetables, leafy vegetables, legume vegetables (succulent or dried), mustard seed, oats, okra, pepinos, pepper, popcorn, potato, rapeseed, sorghum, soybean, strawberry, sugarbeets, sunflower, tomatillo, tomato, triticale, turnip greens, root and tuber vegetables, watercress, and wheat. For cereals including buckwheat, millet, rice and rye and for safflower; the minimum plant-back interval is 30 days from the date RESONATE 480 ST treated seed was planted. Cover crops for soil building or erosion control may be planted at any time; but do not graze or harvest for food or feed. For all other crops not listed on an imidaclopid label, or for crops for which no imidacloprid tolerance for the active ingredient has been established, a 12-month plant-back interval must be observed.
- **DO NOT** allow children, pets, or livestock to have access to treated seed.
- The maximum application rate (all imidacloprid uses: seed treatment, foliar application, soil application) per acre per year for imidacloprid is 0.4 lbs. active. **DO NOT** use more than 0.4 lb (181.44 g) active per acre per year.
- **DO NOT** apply a neonicitinoid insecticide within 45 days of planting seed treated with RESONATE 480 ST.
- **NOTIFICATION** of the crop rotational restriction must be conveyed to the grower by appropriate seed tag labeling or bag printing on all seed units.
- The purchaser of this product is responsible for ensuring that all seed treated with this product are adequately dyed with a suitable color to prevent its accidental use as food for man or feed for animals. Refer to 21 CFR, Part 225. Any dye or colorant added to treated seed must be cleared for use under 40 CFR, Part 180.1001. Federal regulations have established official tolerances for certain pesticide residues. In order that residues on food and forage crops will not exceed established tolerances, use only at labeled rates.
- Treated seed must not be used for or mixed with food or animal feed or processed for oil. Seed commercially treated with RESONATE 480 ST must be labeled in accordance with all applicable requirements of the Federal Seed Act.
- Labels for commercially treated seed should include the following addition to the Environmental Hazards statements:
  - **Exposed treated seed may be hazardous to birds. Dispose of all excess treated seed and seed packaging by burial away from bodies of water. Cover or incorporate spilled treated seeds.**
- Rape greens grown and harvested from RESONATE 480 ST treated seed must not be used for human and feed consumption. Rapeseed grown and harvested from treated seed is only for industrial uses and can not be used for edible oil or any other human/feed consumption.

Tank Mixtures

Pre-test all tank mixes to determine physical compatibility between formulations. It is the pesticide user’s responsibility to ensure that all products in a tank mix are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products within the mixture.

This product can be mixed with fungicide products that are labeled for use on the same crops as RESONATE 480 ST. Do not exceed labeled dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing.

Stored Seed Protection

It is the pesticide user’s responsibility to ensure that all products in a tank mix are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products within the mixture.

To protect stored seed of crops listed on this label apply a minimum 1.0 fluid ounces of RESONATE 480 ST per 100 pounds of seed. Pest controlled by this application include Indian Meal Moth (plodia interpunctella), Rice Weevil (sitophilus oryzea), Red Flour Beetle (tribolium castaneum), and Lesser Grain Borer (phizopertha dominica). If seed being treated is known to have existing pest infestation fumigation may be necessary prior to bagging.
**Early Season Protection Against Sucking Insects**

<table>
<thead>
<tr>
<th>CROP</th>
<th>PEST</th>
<th>RATE</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canola, Rapeseed and Mustard Seed</td>
<td>Aphids, Flea beetles</td>
<td>12.8 – 32.0</td>
<td>Use higher listed rate when pest populations are above historical levels.</td>
</tr>
<tr>
<td></td>
<td>Lygus Bugs (including Lygus spp.), Seedpod Weevil larvae (including Ceutorhynchus assimilis) Wireworms</td>
<td>19.2 – 32.0</td>
<td>Suppression only. Use higher listed rate when pest populations are above historical levels.</td>
</tr>
<tr>
<td>Flax, crambe, and borage</td>
<td>Wireworms, Seed Corn maggots, Flea beetles</td>
<td>16.0</td>
<td>Suppression only. For on-farm treatment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16.0 - 32.0</td>
<td>To provide early season protection, apply as a commercial seed treatment facility at 0.25 - 0.50 mg per seed.</td>
</tr>
<tr>
<td>Safflower</td>
<td>Wireworms</td>
<td>16.0 - 32.0</td>
<td>Suppression only. To provide early season protection, apply as a commercial seed treatment at 0.25 – 0.50 mg per seed. (One fl. oz. of RESONATE 480 ST contains 14.2 grams of imidacloprid)</td>
</tr>
<tr>
<td>Sunflower</td>
<td>Wireworms, Seed Corn maggots, Flea beetles</td>
<td>16.0 - 32.0</td>
<td>Suppression only. To provide early season protection, apply as a commercial seed treatment at 0.25 – 0.50 mg per seed. (One fl. oz. of RESONATE 480 ST contains 14.2 grams of imidacloprid)</td>
</tr>
</tbody>
</table>

**Oil Seed Crop Group:** For End-Use Application at Agricultural Establishments:

- Canola, Rapeseed and Mustard Seed (For end use application at agricultural establishments):
  - Shake product well before making slurry and apply using a HCBT or Batch Treater. May be diluted with an approved fungicide for disease control.
  - Treat ½ of seed with ½ of slurry then add remainder of seed and slurry and continue mixing until all seed are covered.
  - Flax, sunflower, crambe, and borage:
    - To provide early season protection of seedlings against wireworms, seed corn maggots and flea beetles apply using an HCBT or a Batch Treater at 16.0 fl. oz. per hundredweight of seed.

**REstrictions**:

- Rape greens grown and harvested from RESONATE 480 ST treated seed must not be used for human and feed consumption. Rapeseed grown and harvested from treated seed is only for industrial uses and cannot be used for edible oil or any other human/feed consumption.
- Do not graze or feed livestock on treated areas for 45 days after planting.
<table>
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<th>CROP</th>
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<tbody>
<tr>
<td>Field corn</td>
<td>Corn root worm (including Northern, Western, Southern and Mexican), (1) Flea beetle, Chinch bug, Southern green stinkbug, White grub, Thrips, Corn leaf aphid, Imported fire ant, Southern corn leaf beetle, Billbug, (2) Grape colaspis, (2) Black cutworm (3) Seed corn maggot* Wireworm*</td>
<td>7.5 (equivalent to 1.34 milligrams ai per kernel)</td>
<td>(1) In areas of heavy to severe corn rootworm populations, protection will not be adequate. Use only in areas of light to moderate corn rootworm populations. Consult your State Agricultural Extension Service on levels of corn rootworm populations. (2) Reduces early season feeding damage. (3) Will reduce feeding damage caused by leaf feeding black cutworms that are 1/2 inch or less in length.</td>
</tr>
<tr>
<td></td>
<td>Flea beetle, Chinch bug, Thrips, Corn leaf aphid Imported fire ant, Grape colaspis, (2) White grub Seed corn maggot* Wireworm*</td>
<td>3.35 (Equivalent to 0.60 milligrams ai per kernel)</td>
<td>(4) Reduces feeding damage during emergence and seedling stages. *Suppression Only</td>
</tr>
<tr>
<td></td>
<td>Flea beetle (through 1 leaf stage), Imported fire ant, White grub (4) Seed corn maggot (seed protection only)* Wireworm (seed protection only)*</td>
<td>0.90 (Equivalent to 0.16 milligrams ai per kernel)</td>
<td></td>
</tr>
</tbody>
</table>

**Field Corn** (For end use application at agricultural establishments):
Not registered for use in California

Shake product well before making slurry and apply using a HCBT or Eight-Bag Batch Treater. May be diluted with an approved fungicide for disease control. Mix slurry so that rate is 8 – 10 fluid ounces per 50 pound bag of seed. Treat ½ of seed with ½ of slurry then add remainder of seed and slurry and continue mixing until all seed are covered. After slurry treatment, the addition of dry talc at the rate of ¼ - 1 ounce per 50 pounds of seed is recommended to minimize risk moisture buildup in planter.

**RESTRICTION:**
Do not graze or feed livestock on treated areas for 45 days after planting.
## Sweet Corn Seed:

<table>
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<tr>
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</table>
| Sweet Corn (commercial seed treatment) | Flea beetle, Early season corn leaf aphid, Seed corn maggot, Wireworm | 8.0 | Mix slurry so that it is applied at a rate of 16 - 20 fl. oz. of diluted solution per hundredweight of seed.  
*Suppression only |
| | Imported fire ant, Early season corn leaf aphid  
Suppression only: Seed corn maggot, Wireworm | 4.0 – 8.0 |
| | Imported fire ant  
Suppression only: Seed corn maggot, Wireworm (seed protection) | 2.0 – 4.0 |
| Popcorn (commercial seed treatment) | Flea beetles | 8.0 |

### RESTRICTION:
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## Cereal Grain Seeds:

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</table>
| Wheat, Barley, Oats, Rye, Triticale | Aphids (including Bird cherry-oat, English grain, Greenbug, and Russian wheat aphid), Hessian fly | 1.0 – 3.0 | Reduces possible yellow dwarf virus disease from aphid vectoring.  
Use the higher listed rate to increase time of protection and/or when insect pressure is heavy. |
| | Wireworm | 0.16 – 0.32 | Suppression only.  
Use the higher listed rate to increase time of protection and/or when insect pressure is heavy. |
| | Grasshopper | 1.5 – 3.0 | Treated seed may be planted as a 50 to 60 foot border around the perimeter of the field to help minimize early season damage from grasshoppers.  
Consult your local agricultural extension agent for grasshopper control information specific to your area.  
Use the higher listed rate to increase time of protection and/or when insect pressure is heavy. |

### RESTRICTION:
Do not graze or feed livestock on treated areas for 45 days after planting.
Wheat, Barley, Triticale
(For End-Use Application at Agricultural Establishments):
Make application using a Total Slurry Treater (TST), Farmer Applied Seed Treater (F.A.S.T.), or other on-farm seed treating equipment capable of accurately applying low rates of RESONATE 480 ST. Apply 1.0 – 3.0 fl. oz. per hundredweight of seed. RESONATE 480 ST may be mixed with a fungicide product for protection against disease. RESONATE 480 ST may be applied to seed previously treated with a fungicide. In this case, dilution is necessary.

RESTRICTION:
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Sorghum And Millet Seed:

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</thead>
<tbody>
<tr>
<td>Sorghum, Millet</td>
<td>Aphids (including Corn leaf, English grain, Greenbug, and Yellow sugar cane aphid), Chinch bugs, Imported Fire ants Wireworms*</td>
<td>8.0</td>
<td>Thorough coverage is necessary for optimal control. *Suppression Only</td>
</tr>
</tbody>
</table>

RESTRICTION:
Do not graze or feed livestock on treated areas for 45 days after planting.

Sorghum
(For End-Use Application at Agricultural Establishments):
Shake product well before making slurry and apply using a HCBT or Eight-Bag Batch Treater. May be diluted with an approved fungicide for disease control. Mix slurry so that rate is 8 – 10 fluid ounces of slurry per 50 pound bag of seed. Treat ½ of seed with ½ of slurry then add remainder of seed and slurry and continue mixing until all seed are covered. After slurry treatment, the addition of dry talc at the rate of ¾ - 1 ounce per 50 pounds of seed is recommended to minimize risk moisture buildup in planter.

RESTRICTION:
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Cotton Seed Treatment:

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<tbody>
<tr>
<td>Cotton (Delinted Seed Only)</td>
<td>Thrips, Aphids</td>
<td>16.0</td>
<td>Regardless of the type of application (seed treatment, soil or foliar) do not apply more than a total of 0.4 lb. of imidacloprid per acre per cropping cycle.</td>
</tr>
</tbody>
</table>

Cotton (Delinted Seed Only)
(For End-Use Application at Agricultural Establishments):
Shake product well before making slurry and apply using a HCBT or Eight-Bag Batch Treater. May be diluted with an approved fungicide for disease control. Mix slurry so that rate is 8 – 10 fluid ounces of slurry per 50 pound bag of seed. Treat ½ of seed with ½ of slurry then add remainder of seed and slurry and continue mixing until all seed are covered.

RESTRICTION:
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### Sugar Beet Seed Treatment:

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<tr>
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</table>
| Sugar Beets (commercial seed treatment) | Whitefly, Aphids, (1) Leafhoppers, (1) Root aphid, Thrips Wireworms* | 3.0 – 6.25 | (1) On a unit of pelleted sugar beet seed with a weight ratio of 2:1 pelleting mixture to raw seed (seed count 100,000 seed - approximately 1 kilogram by weight).  
(1) Including to reduce risk of spread of Curly top and Yellow mosaic virus  
If applying to non-pelleted raw seed, do not exceed a rate of 3.0 fluid ounces per 100,000 seed (approximately 1 Kg by weight).  
*Suppression only |

**Restriction:**
Do not graze or feed livestock on treated areas for 45 days after planting.

### Soybean Seed Treatment:

<table>
<thead>
<tr>
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</table>
| Soybean | Seed corn maggot* Soybean aphid Bean leaf beetle | 2.0 to 4.0 | For protection of planted seeds. Use the higher listed rates to provide increased length of protection and for heavy insect pressure.  
Will suppress the spread of certain plant viruses.  
RESONATE 480 ST can be used as an over-treatment.  
*Suppression only |

**Restrictions:**
Do not graze or feed livestock on soybean forage or hay.
# Vegetable Seed Treatment:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Adzuki Bean, Asparagus Bean, Broad Bean (Succulent Or Dry), Catjang Bean, Chinese Longbean, Field Bean, Guar Bean, Jackbean, Kidney Bean, Lablab Bean, Lima Bean (Succulent Or Dry), Moth Bean (Succulent Or Dry), Mung Bean, Navy Bean, Pinto Bean, Rice Bean, Runner Bean, Snap Bean, Sword Bean, Tepary Bean, Urd Bean, Wax Bean, Yardlong Bean, Blackeyed Pea (Succulent Or Dry), Chickpea, Cowpea (Succulent Or Dry), Crowder Pea, Dwarf Pea, Edible-Pod Pea, English Pea, Field Pea, Garden Pea, Green Pea, Pigeon Pea (Succulent Or Dry), Snow Pea, Southern Pea (Succulent Or Dry), Sugar Snap Pea, Grain Lupin, Sweet Lupin, White Lupin, White Sweet Lupin, Lentil: *</td>
<td>Bean leaf beetle, Imported fire ant, Aphid Wireworm**</td>
<td>2.0 – 4.0</td>
<td>* Seed-and-pod vegetable seed treated in California must be destined for planting in states other than California and is not to be planted in California. **Suppression only</td>
</tr>
</tbody>
</table>
| Carrot | Seed corn maggot**, Wireworm** | 8.0 | | **

**RESTRICTION:**
Do not graze or feed livestock on treated areas for 45 days after planting.
Rotational Crops

Treated areas may be replanted with any crop specified on an imidacloprid label, or any crop for which a tolerance exists for the active ingredient, as soon as practical following the last application. The following plant-back intervals must be observed for listed crops:

<table>
<thead>
<tr>
<th>ROTATIONAL PLANT-BACK INTERVALS*</th>
<th>30-DAY PLANT-BACK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IMMEDIATE PLANT-BACK</strong></td>
<td></td>
</tr>
<tr>
<td>Artichoke</td>
<td>Cranberry</td>
</tr>
<tr>
<td>Barley</td>
<td>Cucurbits</td>
</tr>
<tr>
<td>Brassica (cole)</td>
<td>Eggplant</td>
</tr>
<tr>
<td>Leafy vegetable</td>
<td>Flax</td>
</tr>
<tr>
<td>Borage</td>
<td>Ground cherry</td>
</tr>
<tr>
<td>Canola</td>
<td>Leaf petiole vegetable</td>
</tr>
<tr>
<td>Citantro</td>
<td>Leafy vegetable</td>
</tr>
<tr>
<td>Corn, Field</td>
<td>Legume vegetable</td>
</tr>
<tr>
<td>Corn, Sweet</td>
<td>(succulent or dried,</td>
</tr>
<tr>
<td>Cotton</td>
<td>including soybean)</td>
</tr>
<tr>
<td>Crambe</td>
<td></td>
</tr>
<tr>
<td>Soybean</td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td></td>
</tr>
<tr>
<td>Okra</td>
<td></td>
</tr>
<tr>
<td>Pepinos</td>
<td></td>
</tr>
<tr>
<td>Pepper</td>
<td></td>
</tr>
<tr>
<td>Popcorn</td>
<td></td>
</tr>
<tr>
<td>Potato</td>
<td></td>
</tr>
<tr>
<td>Rapeseed</td>
<td></td>
</tr>
<tr>
<td>Sorghum</td>
<td></td>
</tr>
<tr>
<td><strong>Safflower,</strong></td>
<td></td>
</tr>
<tr>
<td>Cereals, including:</td>
<td></td>
</tr>
<tr>
<td>Buckwheat</td>
<td></td>
</tr>
<tr>
<td>Millet</td>
<td></td>
</tr>
<tr>
<td>Rye</td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td></td>
</tr>
</tbody>
</table>

* Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed.

* For all other crops not listed on an Imidacloprid label, or for crops for which no tolerance for the active ingredient has been established, a 12-month plantback interval must be observed.

Potato Seed Piece Treatment

<table>
<thead>
<tr>
<th>Pests Controlled</th>
<th>APPLICATION INSTRUCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pests Controlled</strong></td>
<td>Rate: Fluid ounces per 100 lbs. of Seed</td>
</tr>
<tr>
<td>Aphids, Colorado potato beetle, Flea beetles, Leafhoppers, Potato psyllid, Wireworms (seed-piece protection)</td>
<td>0.2 - 0.4</td>
</tr>
<tr>
<td>Symptoms of: Potato leaf roll virus (PLRV), Potato yellows, Net necrosis</td>
<td>0.4</td>
</tr>
</tbody>
</table>

**RESTRICTIONS:**
- Do not apply more than 10.0 fluid ounces per acre (0.31 lb active ingredient per acre) IMIDACLOPRID 4FL ST per crop season when making seed piece treatment applications.
- Do not use treated seed-pieces for food, feed, fodder or processing for oil.
- Do not apply any subsequent in-furrow application of any imidacloprid product following a seed-piece treatment.
- Do not graze or feed livestock on treated areas for 45 days after planting.

**Application:**
Apply specified dosage as a diluted spray onto seed-pieces using a shielded spray system. Dilute with 3 parts water, or less, to 1 part RESONATE 480 ST. Agitate or stir spray solution as needed. Fungicidal or inert absorbent dusts may be applied after RESONATE 480 ST application. Apply only in areas with adequate ventilation or in areas that are equipped to remove spray mist or dust. Plant seed pieces as soon as possible after treating avoiding prolonged exposure of RESONATE 480 ST treated seed-pieces to sunlight and in accordance with the specifications of your local Extension service.

* Based on a seeding rate of 2000 lbs. per acre.
SEED BAG LABELING REQUIREMENTS

Seed commercially treated with this product must be labeled in accordance with all applicable requirements of the federal seed act. The user of this product is responsible for ensuring that the seed bag meets all requirements under the federal seed act.

THE FEDERAL SEED ACT REQUIRES THAT BAGS CONTAINING TREATED SEEDS SHALL BE LABELED WITH THE FOLLOWING STATEMENTS.

- This seed has been treated with imidacloprid insecticide.
- DO NOT use for feed, food, or oil purpose.

THE U.S. ENVIRONMENTAL PROTECTION AGENCY REQUIRES THE FOLLOWING STATEMENTS ON BAGS CONTAINING SEEDS TREATED WITH RESONATE 480 ST:

- **Pollinator Precautions**: Imidacloprid is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Ensure that planting equipment is functioning properly in accordance with manufacturer specification to minimize seed coat abrasion during planting to reduce dust which can drift to blooming crops or weeds.
- Do not graze or feed livestock on treated areas for 45 days after planting Oil Seed Crops (canola, rapeseed, mustard seed, flax, crambe, borage, safflower), Corn (field, sweet and popcorn), Cereal Grains (wheat, barley, oats, rye, triticale), Sorghum and Millet, Cotton, Sugar Beet, Vegetable Seed (beans, peas, carrots) and Potatoes. For soybeans, do not graze or feed livestock forage or hay.
- Store away from feeds and foodstuffs.
- Wear long-sleeved shirt, long pants and chemical resistant gloves when handling treated seed.
- Treated seeds exposed on soil surface may be hazardous to wildlife. Cover or collect treated seeds that are spilled during handling.
- Treated seed must be planted into the soil at a depth greater than 1 inch.
- Dispose of all excess treated seed. Leftover seed may be doublesown around the headland or buried away from water sources in accordance with local requirements.
- DO NOT contaminate water bodies when disposing of planting equipment wash water.
- Dispose of seed packaging in accordance with local requirements.
- In the event of a crop failure or harvest of a crop grown from RESONATE 480 ST treated seed, the field may be replanted immediately to artichoke, barley, Brassica (cole) leafy vegetables, canola, cilantro, corn (field or sweet), cotton, crambe, cranberry, cucurbits, eggplant, flax, groundcherry, leafy petiole vegetables, leafy vegetables, legume vegetables (succulent or dried), mustard seed, oats, okra, pepinos, pepper, popcorn, potato, rapeseed, sorghum, soybean, strawberry, sugarbeets, sunflower, tomatillo, tomato, triticale, turnip greens, root and tuber vegetables, watercress, and wheat. For cereals including buckwheat, millet, rice and rye and for safflower; the minimum plant-back interval is 30 days from the date RESONATE 480 ST treated seed was planted. Cover crops for soil building or erosion control may be planted at any time; but do not graze or harvest for food or feed. For all other crops not listed on an imidacloprid label, or for crops for which no imidacloprid tolerance for the active ingredient has been established, a 12-month plant-back interval must be observed.
- DO NOT allow children, pets, or livestock to have access to treated seed.
- The maximum application rate (all imidacloprid uses: seed treatment, foliar application, soil application) per acre per year for imidacloprid is 0.4 lbs. active. DO NOT use more than 0.4 lb (181.44 g) per acre per year.
- This seed has been treated with \[ \text{X} \] mg imidacloprid per seed.
- DO NOT apply a neonicitinoid insecticide within 45 days of planting seed treated with RESONATE 480 ST.
- Excess treated seed may be used for ethanol production only if (1) by-products are not used for livestock feed and (2) no measurable residues of pesticides remain in the ethanol by-products that are used in agronomic practice.
- Rape greens grown and harvested from RESONATE 480 ST treated seed must not be used for human and feed consumption. Rapeseed grown and harvested from treated seed is only for industrial uses and can not be used for edible oil or any other human/feed consumption.
STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage, disposal, or by cleaning of equipment. Do not reuse empty container. Open dumping is prohibited.

PESTICIDE STORAGE: Store in a cool place. Do not store in direct sunlight. Protect from freezing temperatures.

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

CONTAINER DISPOSAL:
Non-refillable containers (1, 2.5, 30 & 55 gallon): Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

(non-refillable <5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

(non refillable >5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows (all sizes): Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use for disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable container (250 gallon & bulk): Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

CONDITIONS OF SALE AND LIMITED WARRANTY STATEMENT

Treatment of highly mechanically damaged seed, or seed of known low vigor and poor quality, may result in reduced germination and/or reduction of seed and seedling vigor. Treat and conduct germination tests on a small portion of seed before committing the total seed lot to a selected chemical treatment. Due to seed quality conditions beyond the control of Albaugh, no claims are made to guarantee germination of carry-over seed.

As its sole express warranty, Albaugh warrants that this product conforms to the chemical description on the label and is reasonably fit for purposes stated on the label only when used in accordance with directions and instructions specified on the label, subject to the inherent risks set forth above. ONLY AS PERMITTED BY APPLICABLE LAW, IN THE EVENT OF A BREACH OF THIS LIMITED WARRANTY, ALBAUGH SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES. SUBJECT TO APPLICABLE LAW, ALBAUGH NEITHER MAKES NOR AUTHORIZES ANY OF ITS AGENTS OR REPRESENTATIVES TO MAKE ANY WARRANTY OF FITNESS OR MERCHANTABILITY, GUARANTY OR REPRESENTATION, EXPRESS OR IMPLIED, CONCERNING THIS MATERIAL. Buyer assumes the responsibility to handle, use, and store this product in accordance with safety instructions and use directions contained on the label.

Buyer/User purchases this product subject to the foregoing Conditions of Sale and Limited Warranty which, subject to applicable law, may be varied only by a written agreement signed by a duly authorized representative of Albaugh. If these terms are not acceptable, return all products to the place of purchase, unopened for a full refund.
**Cimarron Label**
Experts in Extended Text Labeling
4201 North Westport Ave. • Sioux Falls, SD 57107
Phone: (605) 978-0451 • Fax: (605) 978-0463

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### PROOF

**THIS PROOF IS TO BE CHECKED FOR ACCURACY**

Please review and approve **Text, Spelling, Copy Placement, Size, Shape, Colors and Dieline.**

**Authorized signature** accepts responsibility for accuracy of all copy, color break and artwork. Cimarron Label is not liable for any discrepancies subsequently identified.

**PLEASE NOTE:** Due to color variance between printers monitors, the colors represented by this proof cannot be deemed accurate. Please refer to a color matching system such as the Pantone Matching System for a truer representation of spot colors.

**THIS PROOF IS NOT ACCURATE FOR COLOR-MATCH.** Dieline does not print.

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<table>
<thead>
<tr>
<th>DATE</th>
<th>JOB NUMBER</th>
<th>CUSTOMER</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/20/16</td>
<td>120934</td>
<td>Albaugh</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LABEL SIZE</th>
<th>BOOKLET SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.75” X 6.75”</td>
<td>6.5” X 6.0”</td>
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</tbody>
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<table>
<thead>
<tr>
<th>LABEL COLORS</th>
<th>BOOKLET COVER COLORS</th>
<th>BOOKLET INSIDE COLORS</th>
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<tbody>
<tr>
<td>![BLK]</td>
<td>![BLK] ![287]</td>
<td>![BLK]</td>
</tr>
</tbody>
</table>

**PATTERN VARNISH:**  
- YES  
- NO  

Form: CS 006B - 11/8/2011

☐ ARTWORK IS APPROVED  
☐ REVISED PROOF NEEDED

WE CANNOT PROCESS **THIS ORDER WITHOUT AN AUTHORIZED SIGNATURE**

Signed ________________________________  Date __________________________