

Specimen Label



Dow AgroSciences



NITROGEN STABILIZER

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Use to delay nitrification of ammoniacal and urea nitrogen fertilizer compositions in the soil by controlling the nitrification process in all corn and wheat.

Active Ingredient:

nitrapyrin: 2-chloro-6-(trichloromethyl) pyridine.....	25.97%
Other Ingredients.....	74.03%
Total.....	100.00%

Contains 2.50 lb of active ingredient per gallon.

Precautionary Statements

Hazards to Humans and Domestic Animals

EPA Reg. No. 62719-692

CAUTION

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

Avoid contact with eyes or clothing.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride (PVC) ≥ 14 mils, and viton ≥ 14 mils.

Mixers, loaders, applicators and other handlers must wear:

- Coveralls worn over short-sleeved shirt and short pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- When mixing and loading, or cleaning equipment, wear a chemical-resistant apron

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:

- 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 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 by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on skin: 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.

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

This pesticide is toxic to oysters/shrimp. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate.

This product may contaminate water through runoff. This product has a high potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

A level well-maintained vegetative buffer strip between areas to which this product is applied and surface water such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

Directions for Use

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

Read all Directions for Use carefully before applying.

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

Agricultural Use Requirements

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

Exception: If the product 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.

For early entry into 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, wear:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

Storage and Disposal

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

Pesticide Storage: Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

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

Nonrefillable containers 5 gallons or less:

Container Handling: Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into

Storage and Disposal (Cont.)

application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refillable containers 5 gallons or larger:

Container Handling: Refillable container. 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 this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state or local authorities, by burning. If burned, stay out of smoke.

Nonrefillable containers 5 gallons or larger:

Container Handling: Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Product Information

Instinct® HL nitrogen stabilizer is a water-based microencapsulated formulation of nitrapyrin that may be used in the application of ammoniacal dry fertilizers (such as urea, AMS, MAP, DAP), aqua ammonia, other liquid ammoniacal or urea nitrogen fertilizer compositions (such as 28%, 30% or 32% UAN), or manure. Instinct HL is not a substitute for fertilizer.

Incorporation may occur at any time up to 10 days after application and may be either by mechanical means or by moisture (rainfall or overhead irrigation). For moisture incorporation, a minimum of 0.5 inch of moisture is necessary. If 0.5 inch of moisture does not occur within the 10-day window, incorporate mechanically with light tillage.

Precautions and Restrictions

Instinct HL is no more corrosive to standard liquid fertilizer equipment than liquid fertilizer alone or liquid manure alone.

Ground Application Instinct HL may be applied through ground application equipment that may be used in the application of ammoniacal dry or liquid fertilizers, or manure.

Chemigation In corn, Instinct HL may be applied through properly equipped chemigation systems at a preplant or postplant application timing prior to crop emergence. In wheat, Instinct HL may be applied through properly equipped chemigation systems preplant up to the 1st detectable joint (Feekes 6 or Zadock 31) growth stage. Unless otherwise indicated in specific use directions, the application rates for chemigation are the same as those specified for broadcast applications.

Directions for Chemigation Instinct HL may be applied through the following irrigation systems: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, micro sprinkler, drip, hand move, or other systems that provide uniform application. Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.

Chemigation Equipment Preparation Thoroughly clean the chemigation system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injection system with soap and/or a cleaning agent and water. Determine the amount of Instinct HL needed to cover the desired acreage. Mix according to instructions in the Mixing Direction section and bring mixture to desired volume. Maintain continuous agitation during mixing and throughout the application period.

Chemigation Equipment Calibration In order to calibrate the irrigation system and injector to apply the mixture containing Instinct HL, calculate or determine the following.

- Calculate the number of acres to be irrigated by the system.
- Calculate the amount of Instinct HL required and other crop inputs such as fertilizers, insecticides, or herbicides.
- Determine the irrigation rate and determine the number of minutes for the system to cover the intended treatment area.
- Divide the total gallons of Instinct HL mixture needed by the number of minutes (minus time to flush out) to cover the treatment area. The following value equals the gallons per minute output that the injector or educator must deliver. Convert the gallons per minute to milliliters or ounces per minute, if needed.
- Calibrate the injector pump with the system in operation at the desired irrigation rate. It is suggested that the timed output of the injector pump be checked at least twice before operation and the system monitored during operation.

Chemigation Equipment Requirements

- The system must contain an air gap, an approved backflow prevention device, a functional check valve, vacuum relief valve (including inspection port), and/or low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. Refer to the American Society of Agricultural Engineer's Engineering Practice 409 for more information or state specific regulations.
- The Instinct HL mixture injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The Instinct HL mixture injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the Instinct HL mixture injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch that will stop the water pump when the water pressure decreases to the point where the Instinct HL mixture distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with the Instinct HL mixture and capable of being fitted with a system interlock.
- To ensure uniform mixing of the Instinct HL mixture into the water line, inject the mixture through a nozzle placed in the fertilizer injection port or just ahead of an elbow or tee in the irrigation line so that the turbulence will assist in mixing. The injection point must be located after all back-flow prevention devices on the water line.
- The tank holding the Instinct HL mixture must be free of rust, sediment and foreign material and equipped with an in-line strainer situated between the tank and the injector point.

Chemigation Operation Start the water pump and irrigation system and let the system achieve the desired pressure and speed before starting the injector. Check for leaks and uniformity and make repairs before any chemigation takes place. Start the injector system and calibrate according to manufacturer's specifications. The following procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, flush and clean the entire irrigation and injector system prior to shutting down the system to remove any Instinct HL, herbicide, insecticide or fertilizer residue from the system.

Chemigation Precautions

- Crop injury, lack of effectiveness, or illegal pesticide residues in crop can result from non-uniform distribution of treated water.
- If you have questions about calibration, contact state extension service specialist, equipment manufacturers or other experts.

- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall operate the system and make necessary adjustments should the need arise and continuously monitor the injection.

Chemigation Restrictions

- The Instinct HL mixture pipeline must contain a functional, automatic quick-closing check valve to prevent the flow fluid back toward the injection
- The Instinct HL mixture injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the Instinct HL mixture injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where Instinct HL mixture distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with the Instinct HL mixture and capable of being fitted with a system interlock.
- Do not allow irrigation water to collect or runoff and pose a hazard to livestock, wells or adjoining crops.
- Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Mixing Directions

Liquid Fertilizers

Use Instinct HL at the rate of 24 to 48 fl oz per acre when applied with liquid fertilizers such as aqua ammonia, or other liquid ammoniacal or urea nitrogen fertilizers. Instinct HL can be added to urea ammonium nitrate liquid fertilizer without a compatibility agent, although when mixing Instinct HL with fertilizer plus herbicides or insecticides, a jar test may indicate that a compatibility agent is needed.

There are two methods which may be used to create a stable emulsion with Instinct HL plus a compatibility agent in liquid fertilizer:

Premix Method: The compatibility agent and Instinct HL may be mixed together in a separate container and then added to the liquid fertilizer. Continuously agitate as the mixture is added to the fertilizer.

Sequential Method: The compatibility agent may be added to the fertilizer and thoroughly agitated. While the agitation continues, the required amount of Instinct HL may be added to the tank.

Most phosphate ester types of compatibility agents are suitable for use in these mixtures. Follow the label directions for the compatibility agent to determine rates and any use precautions.

Liquid Manure

Use Instinct HL at the rate of 24 to 48 fl oz per acre when applied with liquid manure.

Granular Ammonium and Urea

Apply Instinct HL at a rate of 24 fl oz per acre impregnated on urea, most dry ammoniacal fertilizers, or fertilizer blends containing ammoniacal fertilizers. Uniform impregnation on fertilizer and uniform application in the field is necessary to insure optimum results.

Various types of equipment can be used to impregnate Instinct HL onto dry fertilizers, including vertical and horizontal mixers. Once impregnated, fertilizer may be applied with either spinner, airflow, or other suitable equipment.

Use a minimum of 100 lb of dry fertilizer per acre. With lower rates of fertilizer (higher concentrations of Instinct HL), the fertilizer may not readily absorb all of the liquid. For a suitable free-flowing mixture, add a drying agent to the mixture. Use a minimum of 1 lb of drying agent per pint of Instinct HL unless experience indicates a different amount works well. Do not apply more than 1 lb active ingredient (ai) nitrapyrin per acre per year.

Apply bulk fertilizers impregnated with Instinct HL within 24 hours of impregnation. Do not store the impregnated fertilizer. All individual state regulations, including those related to dry bulk blending registration, labeling and application, are the responsibility of the individual and/or company selling mixtures of Instinct HL and fertilizer.

Do not mix seed with dry fertilizers impregnated with Instinct HL.

Tank Mixing

Instinct HL may also be applied in tank mixtures with preplant incorporated or preemergence herbicides or insecticides registered for use on corn or wheat. The tank mixes may be in water or in

most urea-ammonium nitrate solutions, N-P-K solutions, slurries, or suspensions. Check the physical compatibility of tank mixtures as indicated below before mixing in the tank. Maintain constant agitation during both the mixing and application processes to ensure uniform spray mixture. Read and carefully follow all applicable directions including dosage rates, restrictions, and precautions on labeling for the other products used in combination with Instinct HL.

Tank Mix Compatibility Test: To test the compatibility of Instinct HL with liquid fertilizers and/or herbicide or insecticide mixes, add proportionate amounts of each ingredient to a small jar, cap, shake, and let stand for 15 minutes. Formation of precipitates or layers that do not readily redisperse indicates an incompatible mixture and should not be used. Note: Instinct HL has shown compatibility issues with some ammonium thiosulfate and liquid fertilizers containing boron.

Allow time for complete dispersion/mixing before adding another product to the spray mixture. Add products to the tank mixture in the following order.

- To start, add one-half of the required amount of liquid fertilizer, water, or other urea-ammonium nitrate solutions. Begin agitation.
- Add Instinct HL (Compatibility agent if needed)
- Products in water soluble packaging. Important: Products in water soluble packaging must be premixed with water (slurried) prior to addition to the spray tank
- Wettable powders or dry flowables (slurry if recommended by tank-mix product label)
- Liquid flowables
- Emulsifiable concentrates
- Suspension concentrates
- Soluble liquids
- Add other nutrients
- Finish filling spray tank to required spray volume.

Note: For all tank-mixtures, maintain agitation during mixing and throughout application to ensure spray mixture remains, uniformly suspended. If spray mixture is allowed to settle at anytime, thorough agitation is required to re-suspend the mixture before spraying is resumed.

Directions for Use

Corn (field corn, production seed corn, silage corn, sweet corn, popcorn)

Instinct HL may be mixed alone or in combination with dry fertilizers (urea, AMS, MAP, DAP), liquid manures, liquid fertilizers, such as UAN, aqua ammonia, other liquid ammoniacal or urea nitrogen fertilizers, insecticides, herbicides and/or water.

Preplant, Preemergence, At-Plant Row or Band Injection Application

Use Instinct HL at the rate of 24 to 48 fl oz per acre

Liquid Fertilizers: Use Instinct HL at the rate of 24 to 48 fl oz per acre at a preplant, preemergence, or band injection application. Instinct HL can also be applied in a postplant (sidedress) application at the rate of 24 fl oz from crop emergence up to V6. Reduced rates of Instinct HL at 12 to 18 fl oz per acre may also be applied when corn is in the V4 to V6 growth stage when severe nitrate leaching and or denitrification is not as likely to occur. These applications may be injected, dribbled, or applied as a sidedress band with liquid fertilizers

Liquid Manures: Use Instinct HL at the rate of 24 to 48 fl oz per acre when fall applied. For spring applications with liquid manure apply Instinct HL at 24 fl oz per acre. Apply Instinct HL and manure as a preplant, preemergence, or band injection application.

The best practice for fertilization using manure is to inject the liquid manure into the soil ensuring soil coverage or surface application followed by immediate incorporations. Check local laws and regulations on acceptable manure practices and for the area where manure is to be applied.

Dry Fertilizers: Use Instinct HL at a the rate of 12 to 24 fl oz per acre impregnated on dry fertilizers and may be applied preplant, preemergence, at-plant or post-plant up to V6. Applications can be applied broadcast, injected (knived) or banded.

Restrictions:

- Do not apply more than a 1 lb ai nitrapyrin per acre per year on corn.
- Any application of Instinct HL must be applied prior to the V6 stage of growth.
- **Replant restriction:** All crops (except for leafy vegetables and root and tuber crops) may be planted 30 days or more after last Instinct HL application. Do not plant leafy vegetable crops less than 120 days after last application. Do not plant root and tuber crops less than one year after last application.

Wheat (including Spring and Winter)

Instinct HL may be mixed alone or in combination with dry ammoniacal fertilizers (such as urea, AMS, MAP, DAP), liquid manures, liquid ammoniacal fertilizers (such as UAN, aqua ammonia, or urea fertilizers), insecticides, fungicides, herbicides, and/or water.

Preplant, Preemergence, At-Plant Row or Band Injection Application
Use Instinct HL at the rate of 24 to 48 fl oz per acre.

Liquid Fertilizers: Use Instinct HL at the rate of 24 to 48 fl oz per acre at a preplant, preemergence, or band injection application. Instinct HL may also be applied at 24 to 48 fl oz per acre to actively growing wheat from emergence through 1st detectable joint (Feekes 6 or Zadock 31 growth stage). These applications may be injected, dribbled, or broadcast applied to the crop. Liquid fertilizers broadcast across actively growing wheat can cause leaf necrosis.

Restrictions:

- Do not apply more than a 1 lb ai nitrapyrin per acre per year on wheat.
- Any postplant application of Instinct HL must be applied prior to 1st detectable joint (Feekes 6 or Zadock 31 growth stage).
- **Replant restriction:** All crops (except for leafy vegetables and root and tuber crops) may be planted 30 days or more after last application. Do not plant leafy vegetable crops less than 120 days after last application. Do not plant root and tuber crops less than one year after last application.

Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. To the extent permitted by law, otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. To the extent permitted by law, Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. To the extent permitted by law, all such risks shall be assumed by buyer.

Limitation of Remedies

To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used

To the extent permitted by law, Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

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