Instinct NXTGEN™

Optinyte™ technology

NITROGEN STABILIZER

Impregnation tips when blending with a dry fertilizer

General Impregnation Procedure (steps)

1. Add dry fertilizer, (N, P, K, drying agents) components to the blender. If adding Instinct® nitrogen stabilizer while filling the blender, it is recommended that at least 50% of the fertilizer is in the blender before adding Instinct.
2. **Pressurized container**
   Close all valves and add the required amount of Instinct to the impregnation container. Close the lid on the container. With the discharge valve closed, pressurize the container. 30 psi is a good initial operating pressure.

   Automated systems
   Make sure all lines are tight and sealed. If air is allowed to leak from the system, the transfer of the Instinct to the tower blender may be slowed down. Increased air pressure from a larger compressor will assist in compensating for air loss.
3. With the fertilizer blender running, open the discharge valve on the pressurized container to add Instinct to the fertilizer mixer. The spray time for the Instinct should be no less than 30 seconds and no longer than 3 minutes.
4. If a drying agent is required, it is recommended to be added to the fertilizer just prior to or during the addition of Instinct. Too early can result in most of the drying agent remaining at the bottom of the blender. Additional drying agent can be added to help improve flowing and spreading properties.
5. Allow the final blend to mix for at least three minutes before discharging the batch from the mixer. It is a good practice to check the first batch of impregnated fertilizer for flowability before discharging the entire batch from the mixer. This will provide an opportunity to adjust the amount of drying agent if necessary.

Is a drying agent needed?

A drying agent is recommended when Instinct NXTGEN™ nitrogen stabilizer is being applied on 250 pounds/acre or less of fertilizer. This is a general recommendation and is subject to external factors including relative humidity, moisture level of the urea, fertilizer blend and addition of other products. As the rate per acre of fertilizer increases, the need for drying agent decreases.

What amount of drying agent is needed?

The amount of drying agent required is dependent on the above factors. A good starting point for the quantity of drying agent is to use 1 pound of drying agent per 1 pint or 16 ounces of Instinct NXTGEN added to the fertilizer. Based on the properties of this blend, the amount of drying agent may be increased or decreased to achieve the desired results.

Can I store these blends?

Storage of fertilizer that has been impregnated with Instinct NXTGEN is not recommended. While holding impregnated batches of fertilizer for up to 24 hours due to equipment failures or weather is acceptable, impregnated batches of fertilizer should be spread as quickly as possible to ensure flowability of the mixture.

Cleaning the lines?

The spray lines and vessels should be cleaned if no additional batches of Instinct impregnated fertilizer are planned for the same day and periodically throughout the use period. Cleaning can be done by rinsing the walls of the vessel with 2 quarts of warm tap water or UAN or chasing with a pre-emerge herbicide.

TIP - Keep a coffee pot nearby which makes the right amount of hot water for rinsing the lines.

Drying agents

Drying agents are materials that are used to improve the flow properties of dry blend fertilizers. Depending of the time of year, weather conditions, amount and type of components in the fertilizer blend and the current condition of the components, drying agents may be required to improve the flow properties of even non-impregnated fertilizers to allow application.

Common drying agents include materials such as MP-79 from EP Minerals, Hi-Sil, from PPG, RVM or LVM clay granules from Agsorb, corn cob grits, pelletized or limestone granules. The sorptive types of dryers such as the Hi-Sil, MP-79, corn cob grits, clay and pelletized limestone work by soaking up the excess liquid from the surface of the coated fertilizer allowing it to be more free flowing. Materials like limestone granules work by providing more surface area for the Instinct to coat, resulting in a lighter coating on the granules which have a lower liquid content and flow more readily.

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Impregnating Instinct NXTGEN™ nitrogen stabilizer plus urea tips and tricks for better applications

- Smaller openings such as airflow tubes appear to be more impacted/easily plugged verses a spinner spreader.
  - » It is recommended that applicators need to plan to wash their equipment on a regular basis. Any downtime such as while waiting for tender trucks, etc. are good opportunities to inspect and clean equipment.
  - » It is helpful to add a mini-wash system to application machines to help prevent buildup during the application season.
- When investigating plugged applicator equipment, obtain a copy of the applicator record. This record should include:
  - » Total pounds of the blend
  - » Other liquid or dry components in the batch
  - » Amount of drying agent
  - » Batch size
  - » Acres treated, etc.
- Be aware of the difference in rates of Instinct NXTGEN (24 oz.) vs. Instinct® II (37 oz.).
- Be aware that fertilizer quality will affect the flowability of Instinct NXTGEN.
  - » Dusty bulk fertilizers will cause more plugging issues.
  - » Adding products like elemental sulfur or bulk zinc that contains very fine particles can create a paste when combined with liquids. This paste can accumulate on spinners and deflectors.
  - » The amount of waxy coating on urea can have an effect on how much Instinct NXTGEN can be absorbed.
  - » Water based products should always be added prior to oil based products.
  - » Adding as little as 50 lbs of potash helps to keep equipment clean during application.
- Increase blending time at the fertilizer plant to allow more even coating of the entire blend. Batches treated with Instinct NXTGEN should be blended for a minimum of 10 minutes. The minimum time can be reduced with small batches.
- Use a tote mixer to mix the Instinct NXTGEN prior to use.
- Humid weather alone can greatly affect the flow of urea and could potentially cause the urea to bridge up in tender trucks or application machines.
- The use of drying agent cannot be over emphasized. Diatomaceous earth is recognized as a high quality drying agent because of its increased surface area. Begin with a higher rate of drying agent and reduce the amount as the dryness of the batch improves or weather conditions are less humid, etc.
  - » Begin with 1 pound drying agent per 1 pint or 16 ounces Instinct NXTGEN
- Mix the blends in smaller batches to allow more room for tumbling in the blender. Filling the blender to 85% capacity allows better tumbling/mixing action.

For more information about Instinct NXTGEN nitrogen stabilizer visit **NitrogenMaximizers.com**, call 800-258-3033 or contact your local Corteva Agriscience territory manager.

Visit us at **corteva.us**

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