

Instinct® II Nitrogen Stabilizer

Supplement to Bulk Storage and Handling Guide

This product-specific information supplements the Corteva Agriscience™ “Bulk Storage and Handling Guide”. Use these documents together to understand the requirements for a bulk storage facility of this product. To obtain additional copies of this Bulk Storage & Handling Guide, or this product-specific Supplement, see <https://BulkHandlingGuides.corteva.us> or contact your Corteva Territory Manager or Sales Representative.

General Storage Comments

Instinct® II nitrogen stabilizer is a capsule suspension of nitrapyrin. Encapsulation enables use in surface applied nitrogen by protecting the nitrapyrin against volatilization until rain or incorporation moves the nitrogen and stabilizer into the soil.

As with most suspensions, slight settling can occur. Settling is indicated by a visible dark layer at the top of the liquid. Storage tanks, including stationary bulk tanks and portable refillable containers require circulation capability.

The product may form a soft gel when stored in heat for extended time, such as over the summer in a warm warehouse. Pumping immediately thins and blends the material. The gel appearance does not affect dispersion in UAN or efficacy.

Instinct II nitrification inhibitor may be stored in ag industry standard stainless steel tanks. Because the flash point is greater than 200 °F emergency venting and “explosion proof” electrical components are not required.

Product Density vs. Temperature

Temperature °F (°C)	20 (-7)	32 (0)	41 (5)	50 (10)	59 (15)	68(20)	77 (25)	86 (30)
Density (lb./gal.)		9.45	9.43	9.41	9.38	9.36	9.33	9.31

Flash Point, NFPA Rating, Storage Temperature, and Signal Word

Flash Point ¹ °F (°C)	NFPA 704 Diamond Ratings			Min. Storage Temperature °F (°C)	EPA Signal Word
	Health	Flammability	Reactivity		
>200	1	1	0	None*	Caution

*Formulation contains water and will freeze at 12°F, but has no history of problems under thaw. The formulation can expand sufficiently at -15°F to burst pipes that are full of product. See “Product Information & Safety” section of Bulk Storage & Handling Guide for more information.

Material / Product Compatibility	Rating	Comment
Stainless Steel	OK	Required for bulk tanks. Recommended for portable refillable containers
Silicone, Teflon	OK	Recommended for gaskets and seals
Viton	OK	Slight swelling. Grades vary in performance but standard Viton OK for most uses. High temperature Viton or

¹ The flash point of a liquid is the minimum temperature at which it gives off sufficient vapor to form an ignitable mixture with the air near the surface of the liquid or within the test vessel used.

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		Highly Fluorinated Viton grades likely to perform better than Low Temperature Viton.
Delrin, neoprene, polyurethane, butyl, SBR, Nylon, PVC, Neo-Nyl, SBR	NO	Will likely absorb product and lose tensile strength. Swelling or disintegration possible.
Aluminum, Zinc, Tin	NO	Corrosion
Hypalon	NO	Potential severe swelling and absorption
Polyethylene	CAUTION	High density likely to perform slightly better than low density. Likely acceptable for most applications, including hose lining.
Buna FDA, Buna N, EPDM	CAUTION	Swells moderately and absorbs product. Likely OK for short term exposure or trapped gasket applications.
Mild Steel	CAUTION	Do not use steel bulk tanks. Stainless steel piping is preferred. Use mild steel piping with caution only.
High density polypropylene	CAUTION	Some distortion and swelling. Some loss of tensile strength.
Low density polypropylene	CAUTION	Swells and loses tensile strength.
Copper, brass, bronze	CAUTION	Slight corrosion

Bulk Tank Material of Construction and Requirements

Material of Construction	Stainless steel bulk tanks required. Polyethylene and fiber glass bulk tanks are being tested for possible future use
Venting Requirements	Normal pressure / vacuum relief venting (PVRV) is required. Emergency vent not required. An air drier is not required.
Couplers	Standard couplings are acceptable.
Mixing Requirement	Instinct II is a capsule suspension and a good circulation system is required. Circulate at least twice the tank volume once before the season, or when product temperature reaches 40°F. Mixing at colder temperatures will do no harm, but will be more difficult due to increased viscosity.

Refillable Container Handling

DOT / EPA	This product is regulated by US Department of Transportation for various modes of transport. Container must meet EPA Pesticide Container and Containment Rule requirements. Use UN/DOT approved containers. See DAS bulk guide for additional general requirements.
Material of Construction	Stainless Steel and Polyethylene refillable containers are both acceptable.
Mixing	Instinct II should be mixed well just prior to the use season. It is recommended that the refillable containers are not stored full during the off-season as mixing will become more difficult. The need to mix in-season is required when a dark layer at the top of the formulation is > 1" thick.
Couplers	Standard couplers are acceptable.

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