N-Serve® 24 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

Due to flash point, N-Serve installations should meet requirements for Hazardous Zones, e.g. “explosion proof” or intrinsically safe components unless the local Authority Having Jurisdiction allows otherwise.

Product Density vs. Temperature

Temperature °F (°C)	30 (-1)	40 (4)	50 (10)	60 (16)	70 (21)	80 (27)	90 (32)
Density (lb./gal.)	8.31	8.26	8.21	8.15	8.10	8.05	7.99

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		
104 (40)	2	2	0	28 (-2) See note	Warning

See “Product Information & Safety” section of ***Bulk Storage & Handling Guide*** for more information.
May form crystals if stored below minimum storage temperature or solvent is allowed to evaporate. If crystals form, circulate tank contents until crystals are dissolved.

Material / Product Compatibility	Rating	Comment
Stainless Steel, Mild Steel	OK	Air dryer required on bulk tanks to limit corrosion from moisture
Tin, Copper	OK	
Teflon, Nylon, Vellumoid Gasketing, Polyethylene (high-density and crosslinked)	OK	
Yellow Brass, Zinc	CAUTION	OK for most applications. Moderate corrosion in liquid phase. (0.02 mil-inches/yr)
Aluminum	CAUTION	No corrosion with straight N-Serve, but N-Serve plus NH3 may corrode aluminum.
Plasticized PCV (Tygon)	CAUTION	Moderate swelling
Polyethylene (low-density), Polypropylene, Viton	CAUTION	OK for most applications. Moderate swelling
Buna N, Neoprene, EPDM, Silicone Red Rubber, Rigid PVC, Nitrile	NO	DO NOT USE. Severe swelling or deterioration

---

[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.

N-Serve® 24 Nitrogen Stabilizer

Supplement to Bulk Storage and Handling Guide

Bulk Tank Material of Construction and Requirements

Material of Construction	Metal tanks must be welded construction, designed and built in accordance with good engineering standards. Tank must be built and marked to a recognized appropriate engineering standard, such as API or UL. As an alternative, the owner may provide a letter from a certified Professional Engineer stating that the tank meets requirements of use, and a letter from the state fire marshal or authority having jurisdiction approving use. Stainless steel is preferred. Do not use aluminum. Polyethylene bulk tanks are not allowed due to National Fire Protection Association Code 30 "Flammable and Combustible Liquids Code".
Venting Requirements	**Self-closing ERV capability[2] and PVRV required** due to flash point. Indoor tanks must have ERV and PVRV piped to outside the building. **Air Dryer or Nitrogen Pad** required to avoid moist air in the tank to minimize corrosion.
Couplers	2" male Civacon Kamvalok[3] Adapter with cap, or 2" male PT Couplings Company Maxi-Dry[4] MD20A adaptor with cap. (The Kamvalok and Maxi-Dry systems can be mated to each other, therefore either may be used.)
Mixing Requirement	Wait until temperatures are above 40ºF, then circulate until crystals are dissolved. The active ingredient is in solution and may crystallize below the minimum storage temperature. Circulation is not needed if no crystallization occurs, but use tanks with circulation capability.
Self-Closing Valve	A self-closing, fire-safe valve or other approved device must be attached next to the tank for any opening below liquid level. This is a fire-code requirement for indoor tanks and a Corteva requirement for outdoors.

Refillable Container Handling

DOT / EPA	This product is regulated by US Department of Transportation for certain volumes and modes. See the Transportation section of the MSDS. Use only refillable containers listed in Corteva Agriscience Description of Acceptable Containers.
Material of Construction	Stainless steel is preferred. Plastic containers are allowed. Plastic IBCs 118.9 gals or greater need to be roto-molded, thick- walled, with fluorination recommended to reduce odor. Cage totes can only be used for short-term, temporary, onsite storage.
Mixing	Wait until temperatures are above 40ºF, then circulate until crystals are dissolved. The active ingredient is in solution and may crystallize below the minimum storage temperature. Circulation is not necessary if no crystallization occurs.
Couplers	Dry break liquid connections are recommended in use for dispensing from refillable containers.

N-Serve® 24 is not registered for sale or use in all states. Contact your state pesticide regulatory agency to determine if a product is registered for sale or use in your state.

Rev. 08/2020

CORTEVA™
agriscience