STORAGE AND CLEANING GUIDELINES FOR LOW-SALT FERTILIZER TANKS

Quality is the foundation of our products and manufacturing processes. We want to provide you with the highest-quality products to help grow your operation.

Quality management does not end once a product leaves our facility. Our customers play a key role in upholding quality. Once we have produced and shipped a product, it is in our dealers' and distributors' hands to maintain the product's integrity until it reaches the field. To assist with this process, we have developed the following tank storage and cleaning guidelines.

We hope you find these guidelines useful. Thank you for trusting The Andersons to produce high-quality products that will help you reach your goals. Please contact us or your representative from The Andersons if you have questions or comments.

STORAGE GUIDELINES

- ✔ **DO** store low-salt liquid fertilizers utilizing stainless steel, carbon steel (preferred lined/coated), fiberglass, HDPE, or polypropylene tanks.
- ✔ **DO** store low-salt fertilizers **containing any form of copper** (EDTA, Citrate, Nitrate, Sulfate, and Ammoniated) in fiberglass, lined steel, or poly tanks.
- ✔ **DO** empty and sanitize tanks, external hoses, and pumps prior to refilling to reduce the possibility of contaminants.
- ✔ **DO** utilize the full volume of the tank to store product to minimize internal condensation which can contribute to the dilution of the top layer of the tank. This dilution can lead to corrosion and/or different salt-out or stability characteristics.
- ✔ **DO** store low-salt liquid fertilizers in high-volume, flat bottom tanks during winter months.
- ✔ **DO** check your tank before pumping product out following overwintering to ensure you do not have salt-out content. If you appear to have salt-out, agitate and/or recirculate the tank before attempting to pump the product out of the tank. Use caution with recirculation in PVC-lined tanks if salt-out material is present to prevent tearing of the liner.
- ✔ **DO** minimize exposure of low-salt fertilizers containing copper to sunlight, when possible. Low-salt fertilizers containing copper can degrade when exposed to excessive sunlight.
- ✔ **DO** drain clear site gauges after the use of low-salt fertilizers containing copper to minimize fertilizer exposure to sunlight.
- ✔ **DO** refer to the product label for mixing recommendations, directions for use, and application rates.

- ✘ **DON'T** blend The Andersons PureGrade® low-salt fertilizers with other products to ensure the highest quality blend.
- ✘ **DON'T** use shared lines and pumps to avoid cross-contamination.
- ✘ **DON'T** use cone bottom tanks of any volume for winter storage. Cone bottom tanks (skirted or not) allow complete exposure to extreme cold conditions and increase salt-out potential.
- ✘ **DON'T** store low-salt fertilizers containing any form of copper (EDTA, Citrate, Nitrate, Sulfate, and Ammoniated) in carbon steel or stainless steel tanks as all forms of copper react with carbon steel and some stainless steels. This reaction could cause red or black copper to drop out, decreasing the copper analysis.
- ✘ **DON'T** expose low-salt fertilizers containing any form of copper to excessive sunlight. Low-salt fertilizers containing copper can degrade when exposed to excessive sunlight.

FOR MORE INFORMATION

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CLEANING GUIDELINES

SAFETY GUIDELINES

Before starting any preparations or cleaning procedures, be sure to wear the proper personal protective equipment (PPE). Consult the product SDS for any additional PPE requirements or safety precautions. Follow these best practices:

1. Wear appropriate waterproof boots with good traction on the soles
2. Utilize safety goggles with face shield
3. Use chemical-resistant gloves
4. Wear appropriate head and body protection

ADDITIONAL SAFETY PRECAUTIONS

1. Make sure the tank is free of all product up to the manway opening.
2. Be aware of the manway cover weight and use additional help when removing bolts and the cover.
3. Isolate the tank and fill lines before opening manways. Make sure all fill valves are closed and secured.
4. Follow the permit-required confined space entry protocol.
5. Test the air quality. Provide additional mechanical ventilation, if necessary.
6. Make sure all submersible pumps and electrical cords have an appropriate GFCI.
7. Be extra aware of heat exhaustion risk for personnel. Rotate entrants frequently.
8. Maintain control over the pressure washer trigger but do not tape or bypass the trigger in the open position. Ensure appropriate pressure regulation.
9. Beware of carbon monoxide contamination. Make sure the pressure washer is located outside the tank and away from the manway or ventilation intake.

TANK CLEANING PROCEDURE

1. Remove all liquid from the tank.
2. Inspect the interior of the tank for solids. If solids are present, remove loose solids and repurpose. You may use solids/sludge/rinsate to make suspensions or solid fertilizers or apply to a field with a manure spreader using proper agronomic rates.
3. Before cleaning, spray the bottom to remove residue from the sump or cone. Use of a pressure washer is recommended.
4. Starting from the top of the tank and working down, spray the roof and the inside walls of the tank. Be cautious of trip/slip hazards caused by the hoses and slick floor surface.
5. Once the tank has been washed from top to bottom, add enough water to avoid starving the pump and recirculate for 10 minutes, if possible.
6. Use the system pump and drain the tank.
7. Repeat steps 2 through 6 two more times. If residue remains, use hot water and detergent and rinse thoroughly.
8. Clean or replace screens and hoses.
9. Perform a final inspection to ensure the tank and hoses are clean and free of all solids and liquids.
10. Allow the system to dry before filling with another product.

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