

# Technical Bulletin

## Proper Storage for Cryotech NAAC® Solid Deicer

Adequate storage ensures enough NAAC is available and in the proper condition to fight winter storms. There should be storage room for half of the average winter's requirement, because replenishment can be difficult during stormy weather.

### STORAGE SIZE

To calculate NAAC storage space, use a product weight of 50-54 pounds per cubic foot. Thus, each metric ton (2205 pounds) requires about 44 cubic feet. The angle of repose is approximately 35 degrees.

### SITE SELECTION

- Must be safe, meaning good visibility for operators, access away from heavily traveled road or aircraft pathways, warning signs at entrances, security (fencing, lighting, etc.), and safety for the surrounding environment.
- Must be accessible, with easy access to airport grounds for equipment and delivery trucks, space big enough for front-end loaders to maneuver, room enough for a 20-foot pad in front, and doors large enough to accommodate equipment.
- Must be legal, complying with discharge and zoning requirements.
- Must have good drainage away from storage building.
- Must ensure the roof is leak-free, and that doors will not allow water from heavy precipitation events to get inside to the storage area.

### DESIGN CONSIDERATIONS

Design should be by a qualified design or construction firm. Choose a flat storage design (avoid silos) without interior supporting posts or beams that may hinder operations. Avoid galvanized materials and mild steel when building.

- Use high quality concrete, which is watertight, has low water permeability, and is air-entrained. It should be treated with a quality sealant to prevent spalling. Generally, the less water used in concrete mixtures the better the concrete; so, high quality concrete has a low water-to-cement ratio.
- Pads should be impermeable and contain a moisture barrier to prevent water entry through the floor.
- Pads should be sloped at approximately two percent.
- Dumping trailers may rise 30 feet above ground level. Allow for this when planning overhangs and locating power lines and lights.
- Delivery trucks may require 13-14 foot tall doors in order to unload in the building.
- If conveyors are needed they should use belts, not augers - augers (and air blowers) may crush the product resulting in excessive dust.
- Areas around the building must be adequately lighted for nighttime operations. Inside lighting should be well sealed and high enough to keep deicers from touching wires. Moist NAAC dust is conductive and may enter poorly sealed conduits and cause wiring to short circuit.
- Electrical conduit can be plastic or aluminum per local electric codes.
- Humidity control - a plastic cover over dry NAAC piles will significantly improve longer-term storage. Air conditioning systems should be designed to keep relative humidity below 50%. A well-designed dehumidification system should have proper filtration to keep dust from entering the coils.
- Proper ventilation systems will allow vehicle exhaust fumes and dust to escape, preventing obnoxious or hazardous conditions.
- Tidiness is important to maintaining product quality. NAAC should not be contaminated with dirt or other foreign materials. Bulk pile edges should be kept neatly swept.

Contact Cryotech for further details at (800)346-7237.