



Improve Bird Health & Performance

The original Al+Clear® product developed in 1997

The Litter Amendment of Choice: Al+Clear® Dry is preferred for use on wet litter associated with short down times, extended grow-outs, water management issues and wet seasonal weather conditions.

Reduced Water Activity: Al+Clear® Dry binds water, reducing water activity (Aw) better than other litter acidifiers and salt.

Effective in Combination Programs: Al+Clear® Dry can be used effectively in combination programs with Sodium Bisulfate and Acidified Clay, providing good early activation along with excellent extended ammonia control.

Easy Application: Al+Clear® Dry can either be self-applied or applied by a Chemtrade custom applicator.

Simple Ingredients: Al+Clear® Dry does not contain sodium like sodium bisulfate and is the product of choice where litter is applied to pastures.

Available Nationwide: Al+Clear® Dry is available at convenient locations throughout the United States through a network of animal health distributors, cooperatives, farm stores, and custom applicators.

How Al+Clear® Dry Works

Al+Clear® Dry is a dry Lewis acid that reduces pH (neutralizes alkalinity) and converts ammonia (NH_3) to ammonium (NH_4^+). Reducing ammonia levels in broiler houses improves bird health and performance. The hydrolysis of aluminum sulfate results in controlled generation of acid (pH 3.5) through a series of buffered chemical reactions.

Al+Clear® effectively binds phosphorus, qualifying it for both air and water EQIP standards. Al+Clear® reduces water activity (Aw) of litter by chemically binding available water during the acid formation process. (Table 2). Each molecule of Al+Clear® generates six acid ions (H^+) compared to only one acid ion (H^+) provided by sodium based salts (sodium acid sulfate, sodium bisulfate). Al+Clear® Dry provides the highest level of acid ion (H^+) generation in the industry compared to all other approved litter amendments.

Al+Clear® Dry Best Management Practices

Pre Al+Clear® Dry Application

- Close house as soon as birds are removed from the house – retaining litter temperature is important for ammonia release
- Run minimum ventilation while out of birds to control ammonia being released and moisture buildup
- Litter should be managed per integrator guidelines (de-caking, windrowing) within 48 hours of bird removal
 - Overworking litter will negatively impact the performance of Al+Clear® (pulverizing)
- Litter should be undisturbed three days prior to Al+Clear® application
- Schedule Al+Clear® to be applied 3-5 days prior to placement
 - If floors are excessively dry 5-7 days prior is recommended
 - Windrowed houses require additional product - increase rate by 25%
- Equipment (feed and water), hoses, cords, sensors and feed drop tubes should be raised for application
 - Product can be applied over top equipment as long as equipment is not wet
- Purge house of ammonia prior to application with house lights on and doors open for applicator

Post Al+Clear® Dry Application

- Close house up and set fans to run on minimum ventilation
 - If floors were damp/wet additional ventilation is required (continuous – weather permitting)
 - When ventilating – pull air away from your brood chamber (don't pull untreated air to treated area)
- Set up for chick placement and preheat house per integrator guidelines
 - Litter will release ammonia during the preheat process – increase fan time to clear the air as needed
- Minimum ventilation must be run during preheat – even if there is no ammonia

Product	Range for Different Litter Conditions				EQIP	
	Low Challenge*		High Challenge*			
	Summer	Winter	Summer	Winter		
Al+Clear® Dry: lbs	75	100	100	125	125	250
Low Challenge* = Normal summer conditions; low disease challenge; < 6 lb. bird						
High Challenge* = Winter conditions; high disease challenge; > 6 lb. bird						

Add 25 pounds per 1000 ft² when windrowing or disease challenges are present

Amendment	Water Binding/100 lbs. of Product ¹
Al+Clear® Dry	Binds 12 lbs. of water

¹ General Chemical. 2008. *Wet floors affect performance of all litter amendments*

Amendment	pH @ Placement	pH: 3 d	pH: 7 d	pH: 14 d	pH: 21 d
Al+Clear® Dry	3.7	4.2	4.3	6.5	7.4
Acidified Clay	3.9	5.4	5.5	6.7	7.5
Sodium Bisulfate	3.2	6.2	6.6	6.6	7.7



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