



**DeNoxDirect**

# Formaldehyde-Free Urea Fixed Price Supply Contracts



## The Reagent of Choice for SCR/SNCR NOx Reduction

### **PARTNERSHIP**

Wahlco has partnered with DeNoxDirect, a national supplier of formaldehyde-free dry urea and urea solution for the SCR and SNCR industries. We offer high quality, ultra-pure urea in super sacks, dry urea in pneumatic trucks, and urea solution at very competitive, long term fixed prices.

### **SERVICE**

Our focus is serving Power Producers and Industrial SCR's with high quality urea reagent for NOx control. Everyday our urea is used in complex environmental control systems throughout the United States. In addition, we can supply advanced dissolving equipment for large capacity urea users to enable competitive advantages of dry urea.

### **VALUE**

We distribute the urea directly from one of the top urea producers in the world—from their door to yours. This allows us to pass on to you fair and fixed pricing.



Dry Urea (prilled)

### **ULTRA PURE**

Ultra high purity, low biuret, low metal, formaldehyde-free urea is our expertise. Whether your facility needs high quality dry prill, the purest urea solution in the US, or state-of-the-art equipment to produce urea solution from dry urea, we can deliver what you need, when you need it.

### **UREA PRODUCTS**

- Dry Urea (prilled)
- 32.5%, 40%, and 50% Solution
- Custom Solution

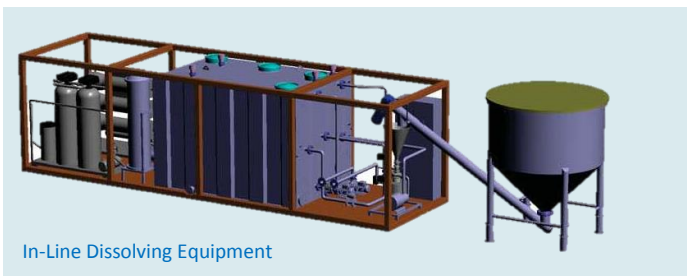
# Formaldehyde-Free Urea for NOx Reduction



## NOx Reduction

Our urea is specifically made for the NOx control market and to the exact specifications and high level of purity needed for today's SCR and SNCR systems.

In addition to some of the highest purity urea used in the NOx control market today, we also supply onsite state-of-the-art urea dissolving technology to prepare urea solution from dry urea.



In-Line Dissolving Equipment

## Fixed Price Contracts

We are focused on providing competitive fixed pricing for NOx control reagent to suit the needs of the individual customer. Largely, the urea and ammonia market in the US is dictated by the agricultural industry, not by those required to control NOx. This means that urea prices can be highly volatile and unpredictable.



We eliminate the cost risk of your urea purchasing by offering long term fixed pricing at the most economical rate in the market.



Urea Super Sacks

## Long Term Focus

Our model is centered not only around providing the customer with an extremely high purity product, but also partnering with them for the long term. Urea supply in the NOx control market can be inconsistent as industry players move to higher margin products from year to year. That is not the way we do business. We provide fixed price contracts, guarantee our quality, and we guarantee the required supply to your plant—when you need it.



Urea Dissolving Facility



[www.denoxdirect.com](http://www.denoxdirect.com)

[sales@denoxdirect.com](mailto:sales@denoxdirect.com)

Tel: (800) 362-8399

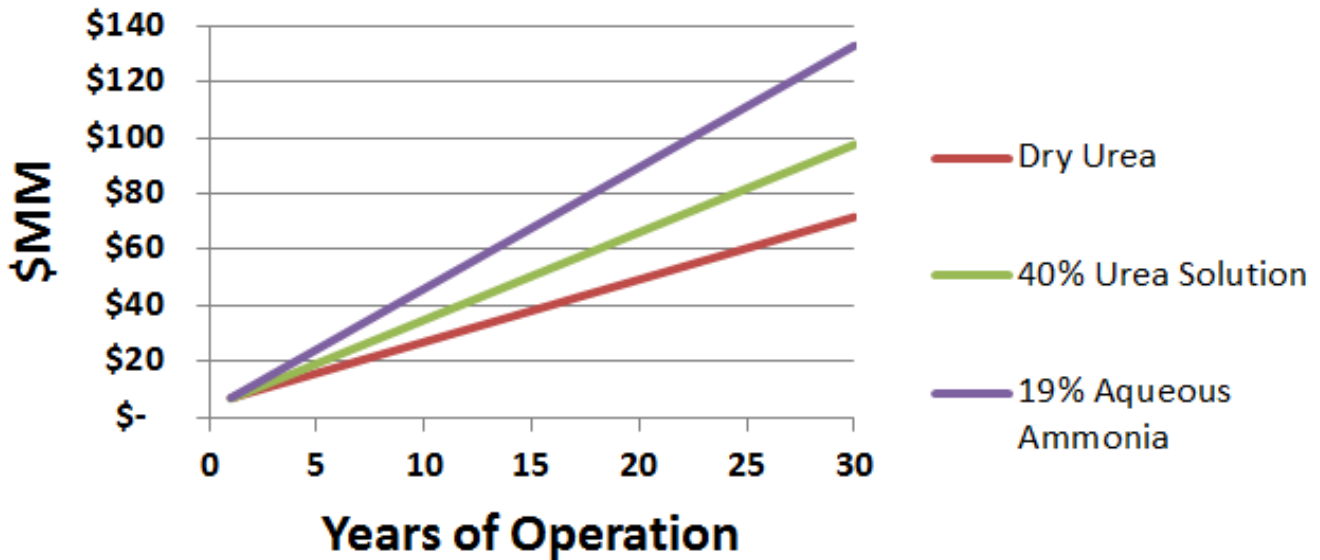


[www.wahlco.com](http://www.wahlco.com)

[sales@wahlco.com](mailto:sales@wahlco.com)

Tel: (714) 979-7300

## System Total Cost vs. Expected Years of Operation - 525 lb/hr NH<sub>3</sub>



### Urea to Ammonia (U2A<sup>®</sup>) Technology for DeNO<sub>x</sub> Applications

Wahlco's U2A<sup>®</sup> technology offers the safest alternative to anhydrous ammonia for DeNO<sub>x</sub> SCR applications. Urea generally is much less expensive than 19% Aqueous Ammonia and will offset the difference in capital costs between the two types of technology in less than a few years for even small applications. For large applications dry urea offers even greater cost savings with capital cost recovery often in less than one year.



U2A<sup>®</sup> Hydrolyzer Skid

Wahlco serves the power, refinery and chemical industries through the manufacture and supply of ammonia systems for SCR including U2A<sup>®</sup> systems for DeNO<sub>x</sub> and industrial applications, small NO<sub>x</sub> reduction systems, and FGC systems.



## Urea Quality Specs

Quality Parameters		Limit	Found
Total Nitrogen (N)	% min	46.0	46.50
Biuret	% max	0.8	0.72
Alkalinity as NH3	% max	0.6	0.016
Aldehyde	mg/kg max	15	<4
Insolubles	mg/kg max	30	8.2
Phosphate	mg/kg max	0.75	0.04
Calcium	mg/kg max	0.75	0.125
Iron	mg/kg max	0.75	0.225
Copper	mg/kg max	0.3	Undetected
Zinc	mg/kg max	0.3	Undetected
Chromium	mg/kg max	0.4	0.35
Nickel	mg/kg max	0.3	0.195
Magnesium	mg/kg max	0.75	Undetected
Sodium	mg/kg max	0.75	Undetected
Potassium	mg/kg max	0.75	Undetected
Aluminum	mg/kg max	0.75	0.090
Moisture		0.50	0.41
Particles .85-2.8mm	% min	90.0	97.6

\*All Urea is gas based, uncoated, and free flowing.