

# Filtrex<sup>®</sup> Nutrient Agent

## Nitrogen Reduction Technology

### NUTRIENT AGENT

#### Description

Nutrient agent is a natural (zeolite based) anionic flocculent that is used with Filtrex<sup>®</sup> *sediment control and pollution prevention* practices, such as Sediment control, Check dams, Concrete washouts, Slope interruption, and Filtration system baffles. It is specifically used to **reduce nitrogen loads in storm runoff**, particularly on fertilized soils, around sensitive watersheds and receiving waters, and near TMDL (303d) listed water bodies. Nutrient agent should not be used without one of these Filtrex<sup>®</sup> management practices. For optimum performance this Support Practice™ should be applied immediately upslope and/or along the inner circumference of the Filtrex<sup>®</sup> practice.

#### Function

Nutrient agent is a natural flocculent that reduces soluble nitrogen (ammonium-N,  $\text{NH}_4^+\text{-N}$ ) in runoff when applied with Sediment control, Check dams, Concrete washouts, Slope interruption, and Filtration system baffles. Nutrient agent is a material that adsorbs positively charged soluble ammonium-N ions to the surface of the Nutrient agent particle, thereby removing the pollutant from runoff transport, preventing it from reaching receiving waters, and reducing the bioavailability of the nitrogen. By rendering the N unavailable to aquatic plants, particularly algae, algae blooms, eutrophication, and reductions in water dissolved oxygen levels that may lead to fish kills can be minimized. Nutrient agent has a mild negative electrostatic charge that

attracts positively charged ammonium-N ions. As ammonium-N ions attach to the Nutrient agent exchange sites on each Nutrient agent particle, soluble N is taken out of the storm water runoff flow and rendered unavailable to algae for an indefinite time period. Nutrient agent can be applied in varying application rates to fit the Nitrogen removal objective of the application. Nutrient agent is not a coagulant and is 100% formulated with all natural materials. For more information on testing and research with Nutrient agent and Filtrex<sup>®</sup> products see Tech Links in the Appendix and performance criteria tables presented with each of the Filtrex<sup>®</sup> products listed with this specification.

#### Installation

1. Where required, Nutrient agent shall be surface applied manually, directly upslope, and along the entire length of the Filtrex<sup>®</sup> sediment control or filtration practice.
2. Nutrient agent shall be applied at a rate of 0.2 lbs/linear ft (0.3 kg/linear m) for optimum performance.

#### Inspection & Maintenance

1. Additional applications of Nutrient agent may be added after storm events to decrease nitrogen loading and contamination of water bodies resulting from future rainfall/runoff events.
2. If Sediment control, Check dams, Concrete washouts, Slope interruption, or Filtration system baffles exhibit significantly reduced hydraulic flow through rates or become clogged, they



should be cleaned out or replaced.

**Method of Measurement**

Bid items shall show measurement as Filtrexx®  
Nutrient agent + Filtrexx® BMP per linear ft or per  
linear m installed.

**ADDITIONAL INFORMATION**

For other references on this topic, including trade  
magazine and press coverage, visit the Filtrexx®  
Website at: [http://www.filtrexx.com/resourcespress.  
htm](http://www.filtrexx.com/resourcespress.htm).

For research reports not included in the Appendix,  
visit: <http://www.filtrexx.com/resourcesreports.htm>.

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See website or call for complete list of international  
installers.

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