Biobased aqueous ammonia

Ecoson Energy treats at their site in Kallo (Port of Antwerp) organic by- and rest products to produce green energy and resources for industry and agriculture. The aqueous ammonia solution is produced by upgrading the digestate fraction of green energy production by anaerobic fermentation. An evaporator is used to produce clean water, aqueous ammonia and nutrients for agriculture. The resulting aqueous ammonia solution is 100% based on the treatment of organic by- and rest products. For this only green heat and energy produced on site is used. This makes the aqueous ammonia a sustainable alternative for fossil based ammonia- and urea products.

> "A 100% proven and biobased alternative for fossil based ammonia- and urea products"

Legislation

- The product meets the end-of-waste criteria iaw. art. 6 of the European Waste Framework Directive.
- The product status is confirmed in a declaration by the Vlaamse Openbare Afvalstoffenmaatschappij OVAM (ref. 21601) and an independent certification by Vlaco (ref. . 2240057716).
- The product meets the REACH-criteria for recovered substances (art. 2.7.D.), and is registered with ref. EC 231-635-3 ; CAS: 7664-41-7.

Application

- Storage and handling of the product is subjected to the requirements for dangerous goods.
- Transport of the product is subjected to the ADR-legislation. The UN-nr. is 2672.

Technical requirements

- The product contains carbonates forming ammonium carbonates, which can crystallize when the products temperature becomes too low. We recommend a product temperature above 15°C by storage in an insulated storage tank, and traced piping. The product is delivered on a temperature around 30°C, and doesn't normally cool down in the time it's being used.

- The product contains trace concentrations of volatile organic components, which can give an extra odor when vapors are released in the environment.
- Frequent quality checks are performed, measuring total N-concentration, carbonates (as total inorganic carbon) and impurities (total organic carbon, total sulfur compounds).
- The products ammonia concentration can vary because of the biological production process. With a measuring loop on the NOx-reduction this will not pose any problems.
- Flow meters, connections, etc. should be in stainless steel, to avoid corrosion. Also, EPDM fittings aren't permanently resistant to the product.
- The product can be mixed with similar products.

Mean composition

Paremeter	Unit	Mean
N	g/l	150
N*H3*	% m/v	18
NH3	% m/m	16
TIC	g/l	50
TOC	g/l	5
S	g/l	0.5
Density	kg/l	1.1