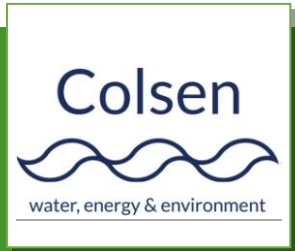


Ammonium nitrate/sulphate from raw digestate with "AMFER" stripping process



Keywords: Circular • Nitrogen • Fertilizer • Recovery

Key facts:

- **Product Category:** PFC 1(C)(I)(b): Liquid inorganic macronutrient fertiliser
- **Input material:** Digestate, liquid fraction, pre-treated manure
- **General appearance:** Liquid
- **Nutrient Content (N-P-K %):** 18-0-0 | 7-0-0
- **Product market status:** prior to market introduction
- **Limitation of application:** NA
- **MS Authority permit availability:** NA
- **Geographical area:** Around operational AMFER installations
- **Product price:** (€/ha, € / kg N; € / kg P₂O₅): Market pricing



Summary:

The AMFER[®] stripping technology is able to treat all kind of waste streams up to 10% DM. The system is operated as a batch process or as a semi-continuous process. Both can pass the validation requirements for animal by-products. Therefore the raw digestate is treated in the AMFER before solid/liquid separation. The remaining is a liquid fraction low in N and P and a pasteurized solid fraction rich in P.

Ammonia is removed from the liquid and washed with an acid solution to produce an ammonium salt like ammonium nitrate or ammonium sulphate. These recovered nitrogen products are expected to be listed as 'mineral fertilizer' from 2021 for the whole EU. That means those nitrogen products can be applied in the 250 kg N / ha space. On a farm level, this reduces the fertilizer purchase to a minimum. Application of the fertilizer is identical to liquid nitrogen fertilizers from the major fertilizer companies.

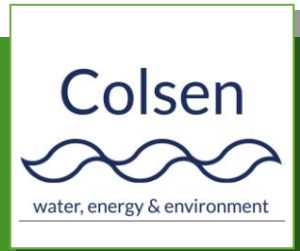
How to use:

- **Type of farming:** any, conventional, organic (depending on local situation)
- **Cultivation methods:** open field, greenhouse
- **Recommended crops:** Nitrogen demanding crops, or Nitrogen and Sulphur demanding crops.
- **Application doses :** crop and soil depending

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Key product features:

- Liquid nitrogen fertilizer
- Known concentration, so suitable for precision farming
- Recovered nitrogen from manure

Key product benefits:

- Recovered from manure
- Circular
- Low emission

Competitive position and advantages:

AMFER technology is able to recovery nitrogen from digestate, even before it's separated. This can be done at farm scale, for the optimal circular farming concept. But AMFER also fits to large scale manure treatment facilities.

The option to choose between ammonium nitrate or sulphate give more flexibility to produce what the crops or the market needs. This can vary over the season. The huge benefit of ammonium nitrate is the absence of other minerals than nitrogen.