

VTA Nanofloc A644

High performance flocculation

- Flocculation of **organic and inorganic materials**
- Effective **binding of microflocs**
- Matchless **acceleration of coagulation and sedimentation**
- Flocculation of **organic and inorganic materials**
- **Decrease of phosphor, COD and sulfur**

Stable line operation

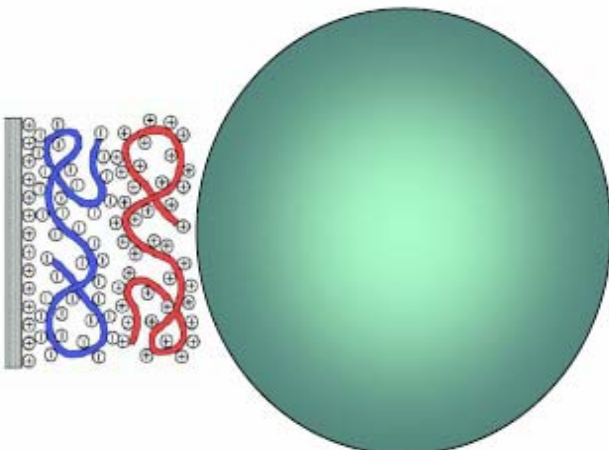
- **Low sludge volume index**
- **High settling velocity**
- **No sludge release** at hydraulic overload
- **Combat against scum**
- Support of **phosphor precipitation and COD degradation**

Sludge thickening and dewatering

- **Higher TSS content** after thickening
- **Better dewatering behaviour**
- Achievement of **shear stable flocs**

VTA Nanofloc A644 is a highly amorphous, nanostructured metal vitamin complex with high cationic charge density. The nanostructure of the product ensures a minimal product application. The product is produced in own manufacture and is free of polyacryl amides.

Adsorption of nanoparticles on surfaces



Enhancement of the effective surface!

The powerful flocculation aid with its amorphous nanostructure is developed in VTA research. It enables the quickest possible initiation of flocculation, because the nanoparticles immediately adhere at the floc surfaces and enlarge the floc surface.

The contained cationic charge carriers destabilise the colloidal form of particles because of neutralising their surface charge. So particles can interact and floc together. Sludge properties are immediately and visibly improved.

The contained vitamins improve metabolism of the microorganisms in the sludge and stabilise carbon and nitrogen elimination.

Applications

- Precipitation in the primary sedimentation
- Improvement of sludge volume index and exclusion of floc release in the final clarification
- Sludge conditioning before thickening and dewatering
- Sulfur binding
- Sludge retention in the digester
- Prevention of digester foaming

Properties

VTA Nanofloc A644 is a highly viscous, greenish, clear liquid. It is mixable with water in all ratios. The freezing point is $-20\text{ }^{\circ}\text{C}$. **VTA Nanofloc A644** is usable in a broad pH range without losing its efficiency.

Handling

Highly effective is **VTA Nanofloc A644** at a slightly higher starting dose of approximately 25 g/m^3 . Once the desired mud Index is reached, the operation dose can be reduced approximately to 10 g/m^3 , respectively the optimal dosage can be adjusted.

Stability of the flocculation agent

VTA Nanofloc A644 is stable for 12 month without losing its activity. Slight clouding does not affect the efficiency of the product. Diluted solutions should be used within a week.

Delivery

One-way container (IBC) at 1.200 kg
Tank lorry

One drop of **VTA Nanofloc A644** has a big effect!



After one minute visible effects!