

Filter Additives

BECOFLOC® Product Overview

Filter Flakes

BECOFLOC filter flakes combine strong positive electro-kinetic charges for the adsorption of turbidity particles with ideal material structure reinforce the filter cake and increase its volume of pre-coat filtration.

The filtration of turbidities from liquids is a decisive step of production in many areas. Pre-coat filtration in horizontal plate filters or DE frame filters using filter aids such as diatomaceous earth, perlites, and filter cellulose is of a very high technological standard. Large quantities of liquid with a relatively high turbidity content can be clarified economically.

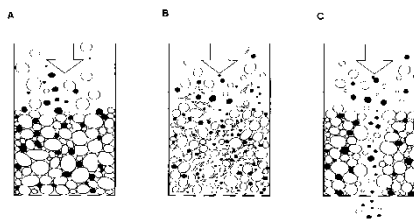
In pre-coat filtration the filter aids continuously renew the porosity of the filter cake during filtration for the adsorption of turbidity and in order to maintain high flow rates.

The common filter aids such as diatomaceous earth and perlites are of fine grain structure. Thus fine cracks and craters can form in the filter cake. Turbidity particles and fine filter aid particles can enter the filtrate. The use of BECOFLOC filter flakes can avoid such break through.

The specific advantages of BECOFLOC filter flakes:

- **Brilliant clarity by high adsorptive capacity:** The strong positive zeta potential of BECOFLOC filter flakes binds colloids, the finest turbidity particles as well as filter aid particles. These finest turbidities are retained in the filter cake.
- **Safety by fibre-reinforced filter cakes:** The specifically adjusted material structure of BECOFLOC filter flakes ensures a good distribution in the filter aid suspension to be pre-coated
- BECOFLOC filter flakes ensure a good interlinking and bridging in the filter cake. Cracks and craters cannot form. The Break-through of turbidities is safely prevented.
- **High economy because of lower filter consumption:** BECOFLOC filter flakes substantially reduce the consumption of diatomaceous earth in the pre-coat and body feed. The filtration costs per 1,000 gal (1 hl) of filtrate are thus considerably reduced.

- BECOFLOC filter flakes stabilize the filter cake. Furthermore a quick and easy cleaning of the filter system is guaranteed.
- Extended filtration cycles with slow pressure build-up. The improved pore structure and volume lead to a higher retention of capacity the filter cake. A uniform throughput at low pressure increase can be maintained over longer periods of time. The filtration cycles of pre-coat filters are thus substantially extended.

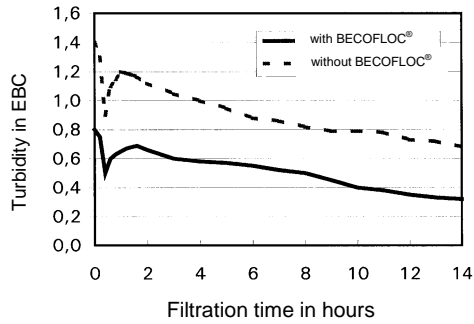


- A: Filter cake made exclusively of granular filter aids, few cavities, premature hardening
- B: Filter cake made of granular filter aids combined with BECOFLOC filter flakes
- C: Flaws in filter cakes made of granular filter aids caused by the formation of cracks, cavities, or cones and suspended matter slip through

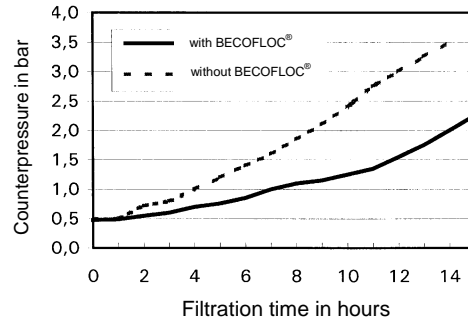
Application

1. The application of BECOFLOC filter flakes is easy. Add BECOFLOC filter flakes into the mixing tank of the dosing unit which is half-filled with water or unfiltered product. A homogeneous distribution is guaranteed when adding while the agitator is running.
2. Then add the required amount of diatomaceous earth or perlites into the mixing tank of the dosing unit and mix thoroughly with BECOFLOC filter flakes. Do not use readily-premixed diatomaceous earth or cellulose mixtures.
3. Pre-coat the suspension of BECOFLOC filter flakes and diatomaceous earth/perlites and carry out filtration as usual.

Better results in reducing turbidity when using BECOFLOC



Lower increase of counterpressure when using BECOFLOC



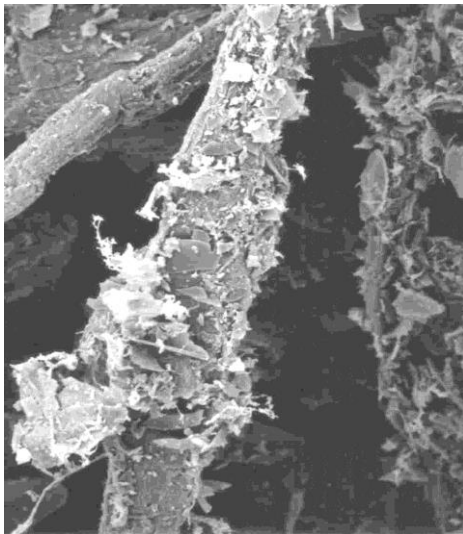
Available Products

BECOFLOC 7 filter flakes

For high retention rates in the beverage industry (fine filtration). Increases clarification and reduces filter aid consumption. Equally suitable for basic pre-coating and for body-feed.

BECOFLOC 10 filter flakes

For ultra-fine and polishing filtration at high retention rates and excellent filtration volumes. Always improves the clarification efficiency at equal or even reduced diatomaceous earth consumption. Improves clarity of the filtrate when used in body-feed.



BECOFLOC 10 filter flake fibres (magnified 1,000 times)

Dosage

The quantities of BECOFLOC filter flakes in lb/ft² (g/m²) or gal (hl) given in the table below may serve as guideline for various applications. In practice they have to be varied according to the specific operations.

| Application | BECOFLOC for initial coating | BECOFLOC for pre-coating | BECOFLOC for body-feed |
|---------------------------------|--|--|--|
| | lb/100 ft ² (g/m ²) | lb/100 ft ² (g/m ²) | lb/100 gal (g/hl) |
| Bottom fermented beers | BECOFLOC 10 0.4 – 0.6 (20 – 30) | BECOFLOC 10 0.4 – 1 (20 – 50) | BECOFLOC 10 0.01 – 0.03 (1 – 3) |
| Top fermented beers | BECOFLOC 7 0.4 – 0.6 (20 – 30) | BECOFLOC 7 0.4 – 1 (20 – 50) | BECOFLOC 7 0.031 – 0.05 (3 – 5) |
| Easy to filter wines | BECOFLOC 10 0.4 – 0.6 (20 – 30) | BECOFLOC 10 0.4 – 0.6 (20 – 30) | BECOFLOC 10 0.01 – 0.03 (1 – 3) |
| Difficult to filter young wines | BECOFLOC 7 0.6 – 1 (30 – 50) | BECOFLOC 7 0.6 – 1 (30 – 50) | BECOFLOC 7 0.031 – 0.05 (3 – 5) |
| Juices | BECOFLOC 7 0.6 – 1 (30 – 50) | BECOFLOC 7 0.6 – 1.6 (30 – 80) | BECOFLOC 7 0.005 – 0.02 (0.5 – 2.0) |
| Sparkling wines | BECOFLOC 10 0.4 – 1 (20 – 50) | BECOFLOC 10 0.4 – 1 (20 – 50) | BECOFLOC 10 0.005 – 0.02 (0.5 – 2.0) |

Chemical, pharmaceutical products; gelatin, etc.

The quantities and type of BECOFLOC filter flakes to be applied must, in each case, be determined by preliminary tests.

Safety

No negative effects are known to have arisen upon proper professional use.

BECOFLOC filter flakes are not subject to hazardous waste disposal regulations. Possible reservations regarding disposal may arise from the substances contained in the filtered liquids.

Further safety information can be found in the relevant Material Safety Data Sheet, which can be downloaded from our website.

Storage

BECOFLOC filter flakes are to be stored in a dry, odourless place, under no circumstances together with or near evaporating chemicals, oils, fuels, etc.

Delivery Information

BECOFLOC filter flakes are supplied in convenient 2.2 lb (1 kg) bricks under in the following article numbers:

BECOFLOC 7 Art. no.: 33.070.001
BECOFLOC 10 Art.no.: 33.100.001

Packing/shipping units:

20 x 2.2 lb (1 kg) packs per carton
10 cartons (441 lb (200 kg)) per Euro-pallet

Certified Quality

BECOFLOC filter flakes are regularly tested in the laboratory to ensure high product quality.

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12-2016

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