

**Beverage Stabilization**  
**Na-Ca Bentonite P/G**



**Na-Ca Bentonite P/G (P = powder/G = granules) fining agent from Eaton's Begerow Product Line is a special product for beverage fining and for removing positively charged albuminous substances from musts, wines, fruit juices and vinegar.**

The specific advantages of Na-Ca Bentonite P/G fining agent:

- Specially formulated for albumin adsorption in beverages
- Na-Ca Bentonite P/G fining agent has very high adsorptive properties in respect of proteins because of its Na content
- Despite the higher swelling volume a compact lees depot is formed
- Besides protein adsorption, tannins are also removed to a certain extent

**Application**

In order to obtain optimum stabilizing efficiency without using excessive bentonite quantities, Eaton recommends that the bentonite requirements be determined individually by means of a preliminary test with the beverage to be treated.

**Approximate quantities for various applications**

If bentonite is used without carrying out preliminary tests the following figures may serve as a guide. However, always check stability achieved in the finished product.

**Fining process**

Na-Ca Bentonite P/G fining agent is easy to suspend and can be added directly to the beverage. It is, however, more efficient if suspended prior to addition. The bentonite quantity required is interspersed into 10 – 15 times the liquid quantity under vigorous stirring, preferably by an agitator. The agitator may only be stopped when a uniform, smooth suspension has been obtained. However, the stabilization will be even more efficient if allowed to swell for some hours, stirring occasionally.

For cost-saving application we recommend that water be used instead of beverage as the swelling liquid cannot be recovered afterwards. Excessive water can be decanted.

| Beverage to be fined                     | Na-Ca Bentonite P/G lb/1,000 gal (g/hl) |
|--|---|
| Wines with low protein content           | 2.5 – 8.35 (30 – 100)                   |
| Wines with moderate protein content      | 6.68 – 15.02 (80 – 180)                 |
| Wines with high protein content          | 12.52 – 20.86 (150 – 250)               |
| Types/vintages extremely rich in protein | up to 29.21 (350)                       |
| Heavily oxidized wines                   | 1.67 – 12.52 (20 – 150)                 |
| Lees-recovery and yeast wine             | 8.35 – 29.21 (100 – 350)                |
| Unfermented grape juices                 | 12.52 – 25.04 (150 – 300)               |
| Fruit juices                             | 2.5 – 8.35 (30 – 100)                   |
| Aroma improvement                        | 0.42 – 1.25 (5 – 15)                    |
| Fining of vinegar                        | 4.17 – 10.01 (50 – 120)                 |

The success of bentonite fining depends to a large extent on a thorough mixing of the beverage and fining agent. The beverage to be treated must first be vigorously agitated, preferably by means of an efficient agitator. The freshly prepared bentonite suspension is then slowly added, after which stirring must be continued for another 15 to 30 minutes. Even better protein stabilization is achieved by stirring the mixture again after several hours.

**Clarification after fining**

Na-Ca Bentonite P/G fining agent acts very fast and intensely. Separation can therefore be carried out shortly after fining. However, the most economic clarification is possible if you take advantage of the good sedimentation properties of bentonite and filter only after self-clarification has been completed. Lees quantities are relatively small and can be handled by rotary drum or frame-type lees filters.

The performance of your lees filter will be considerably improved by the addition of 0.5 – 2% BECOCEL™ 2000 filter cellulose and/or BECOLITE™ 5000 perlits.

## Product Characteristics

The active constituent of Na-Ca Bentonite P/G fining agent is montmorillonite, a mineral with a special crystal structure and high swelling capacity. Montmorillonite is an aluminum silicate with a laminar structure in which crystal water and exchangeable positive ions in varying quantities are deposited between the silicate layers. Due to this special structure, the mineral has excessive negative charges which will adsorb any positively charged substances, e.g. proteins.

The silicate lamination of the bentonite possesses different swelling properties which depend on the surrounding media, in particular the swelling liquid.

The mineral also contains a low quantity of positively charged carriers and is therefore able to adsorb tannins or other negatively charged colloidal matters. The surface energy of bentonite is another factor for its efficiency.

## Safety

When used and handled correctly, there are no known unfavorable effects associated with Na-Ca Bentonite P/G fining agent.

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

## Storage

Na-Ca Bentonite P/G fining agent is produced and packed with special care. As it is a highly efficient adsorptive agent it will adsorb off-flavors when stored inadequately. It should therefore be stored in carefully sealed packages in a dry and well-aerated area, free of off-odors.

## Delivery Information

Na-Ca Bentonite P/G fining agent is sold under article no. 61.306/61.307 and is available in the following package sizes:

55.12 lb (25 kg) bag

HS Customs Tariff: 3802 90 00

## Certified Quality

Na-Ca Bentonite P/G fining agent is monitored regularly during the production process to ensure consistently high quality. Strict controls are also carried out immediately before and during final packing.

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Not all products in Eaton's Begerow Product Line are available in all regions. Please contact your local Eaton Filtration office to determine availability.

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