

Beverage Stabilization

SIHA® Activated Carbon GE



SIHA Activated Carbon GE fining agent from Eaton's Begerow Product Line is a specially formulated activated carbon with vegetable origin for the use in the beverage industry with mainly deodorizing properties. This highly pure carbon of vegetable origin is used to correct aroma and flavor defects in beverages.

Through a special, very gentle activation process the pore structure of the activated carbon is made especially capable of binding undesired aroma and flavor substances in beverages.

SIHA Activated Carbon GE fining agent can be used for mashes, musts, wines, sweet must, juices, and spirits.

The specific advantages of SIHA Activated Carbon GE fining agent:

- Adsorbs undesired aroma and flavor substances in beverages
- Has a large inner surface and therefore results a high adsorptive capacity
- Builds a compact turbidity depot thanks to good sedimentation

Application Wine, Fruit Juice, Spirits

In order to use the full adsorptive power of SIHA Activated Carbon GE fining agent Eaton recommends that carbon fining will be carried out in the clarified and filtered beverage to prevent displacement of the active surface through turbidities.

If used in combination with another fining agent, always add SIHA Activated Carbon GE fining agent first in order not to reduce the high adsorptive capacity of the carbon.

We recommend that the quantity of SIHA Activated Carbon GE fining agent determined by a preliminary test be mixed to a paste with a small amount of the beverage in order to completely moisten the powder. Then add more beverage to the paste to allow a quantitative rinsing of the entire batch. Afterwards, it is necessary to stir vigorously to guarantee an even distribution of the product in the beverage. Depending on the action of the agitator, the stirring time should be 10 to 20 minutes.

After approx. 1 hour, stir the beverage thoroughly once again to utilize the full adsorptive capacity of SIHA Activated Carbon GE fining agent. As the carbon develops its adsorptive power as soon as it is added, fining takes just a few hours.

Racking by filtration should follow after two days at the latest.

Quantities required

- To correct undesired flavors in wines due to the vintage or rot, a quantity of 2.5 – 4.17 lb/1,000 gal (30 – 50 g/hl) SIHA Activated Carbon GE fining agent is required. For best results correction should be done in the mash or in the must; a quantity of 2.5 – 6.68 lb/1,000 gal (30 – 80 g/hl) can be used, depending on the strength of the foreign taste. The rule of thumb is: for each % of rotten harvest use 0.08 lb/1,000 gal (1 g/hl) SIHA Activated Carbon GE fining agent.
- To treat the desliming or separator turbidity, a quantity of 6.68 – 8.35 lb/1,000 gal (80 – 100 g/hl) SIHA Activated Carbon GE fining agent is required.
- To remove rot, barrel, mold and other foreign aromas or flavors in wines and juices, 0.83 – 3.34 lb/1,000 gal (10 – 40 g/hl) SIHA Activated Carbon GE should be used.
- To treat fresh yeast sediment, up to 8.35 lb/1,000 gal (100 g/hl) SIHA Activated Carbon GE fining agent is required.
- The taste of beverages can be harmonized and rounded off with just 0.25 – 0.42 lb/1,000 gal (3 – 5 g/hl) SIHA Activated Carbon GE fining agent.
- Wines with a bitter or rape taste can also be improved with 0.83 – 4.17 lb/1,000 gal (10 – 50 g/hl) SIHA Activated Carbon GE fining agent.
- To improve the flavor of spirits, a quantity of at least 8.35 lb/1,000 gal (100 g/hl) SIHA Activated Carbon GE fining agent is required - in some cases 16.69 – 41.73 lb/1,000 gal (200 – 500 g/hl) to prevent a moldy-musty aroma or flavor.
- The activated carbon dosage for wine treatment is limited to a maximum of 8.35 lb/1,000 gal (100 g/hl).

Application Beer

For application in beer, pre-application tests Eaton also recommends in order to determine the quantity required.

If the last wort is reused, color intensification and a broad, hard beer taste may be expected. This can be counteracted by adding activated carbon to the last wort with a dosage of approx. 8.35 lb/1,000 gal (100 g/hl).

Slight imperfections in the beer, such as yeast bitterness or a broad or slightly oxidized taste, can be corrected by using only about 0.42 – 0.83 lb/1,000 gal (5 – 10 g/hl, even in returned beer). However, in most cases, it is recommended to re-krausen beer that has been treated with activated carbon (approx. 20%) and to blend it with faultless beer depending on requirements. Add the carbon 5 – 7 days prior to filtration, preferably by turning over the tanks. This procedure can remove even more severe imperfections, such as smoky taste or similar faults. Diacetylic taste or similar imperfections are not influenced by activated carbon.

Pre-Application Test

The exact quantity of SIHA Activated Carbon GE fining agent is best determined by performing initial tests with 0.34 fl oz (100 ml) of the beverage. For this, a 5% suspension of SIHA Activated Carbon GE fining agent is prepared. The suspension is then pipetted to 0.34 fl oz (100 ml) of the beverage in increasing quantities.

0.007 fl oz (0.2 ml) of the 5% suspension per 0.34 fl oz (100 ml) beverage corresponds to a quantity of 8.35 lb/1,000 gal (10 g/hl) of SIHA Activated Carbon GE fining agent.

The initial tests should be carried out according to the following table.

SIHA Activated Carbon GE suspension fl oz/gal (ml in 100 ml)	Corresponding quantity to be added to the beverage lb/1,000 gal (g/hl)
0.51 (0.4)	1.67 (20)
1.02 (0.8)	3.34 (40)
1.54 (1.2)	5.01 (60)
2.05 (1.6)	6.68 (80)
2.56 (2.0)	8.35 (100)

Intermediate values can be chosen accordingly.

Stir the fining preparations vigorously and then filter off through a pleated filter that has been sufficiently wetted beforehand. The first 0.34 fl oz (100 ml) of the filtrate is discarded. The filtrate is then tasted and compared with the initial sample. The exact quantity of SIHA Activated Carbon GE fining agent is determined by tasting the samples.

Safety

If used properly and correctly no detrimental effects of SIHA Activated Carbon GE fining agent are known.

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

Storage

SIHA Activated Carbon GE fining agent stores well. Due to high adsorptive capacity of the carbon, it has to be stored in a dry, cool, well ventilated and odorless room. Opened packages should be sealed tight and used up quickly.

Delivery Information

SIHA Activated Carbon GE fining agent is sold under article no. 63.101 and is available in the following package size:

44.09 lb (20 kg) paper bag

HS Customs Tariff: 3802 10 00

Certified Quality

SIHA Activated Carbon GE fining agent complies with all pertinent legal requirements. It is monitored constantly during the production process to ensure consistently high quality.

These inspections cover technical function criteria as well as approval in accordance with the law governing the production and sale of foodstuffs. Strict controls are carried out immediately before and during final packing.

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For more information, please e-mail us at filtration@eaton.com or visit us online at eaton.com/filtration for a complete list of Eaton's filtration products.

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

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