

Beer Stabilization BECOSORB® 2500

Silica Gel

BECOSORB 2500 silica gel is a saturated non-swelling silicic acid xerogel with a maximum moisture content of 40%. The defined particle size of BECOSORB 2500 silica gel is formulated especially for beer filtration. Uniform surface structure and pore size together with optimum pore volume guarantee that protein compounds of high molecular weight, which might otherwise give rise to colloidal haze, are adsorbed from the beer.

The specific advantages of BECOSORB 2500 silica gel:

- Selective adsorption of protein fractions of high molecular weight
- No influence on components of low molecular weight that are positive for foam formation
- Suitable for all common beer stabilizing methods
- Hydrated silica gel product forming virtually no dust during handling
- Is capable of filtration, supports the filtration process
- Can be combined with PVPP and diatomaceous earth products
- Neutral flavor and aroma, therefore chemically inert
- Free from contaminants which would spoil the beer

Application

BECOSORB 2500 silica gel is suitable for all familiar continuous contact methods used in breweries:

1. It can be added directly into the dosing apparatus together with the diatomaceous earth for the second pre-coat and body feed. BECOSORB 2500 silica gel can be added directly into the dosing apparatus together with the diatomaceous earth for the second pre-coat and the body feed. Part of the fine diatomaceous earth used for the body feed can thus be substituted. This saving corresponds to approx. 50% of the BECOSORB silica gel used.

Example: The addition of 88 lb (40 kg) BECOSORB 2500 silica gel to the body feed saves about 44 lb (20 kg) of fine diatomaceous earth.

2. It can also be added into a stabilizing tank with a separate dosing apparatus prior to diatomaceous earth filtration.

Advantage: Longer contact with the beer to be stabilized and precise control of the quantities used.

Dosage

The required quantities of BECOSORB 2500 silica gel depend on the desired shelf life of the beer and on

- the fermentation process/pH gradient,
- the oxygen content and turbidity values of the beer,
- the temperature during storage and filtration.

The average quantities are between 0.2 – 1 lb/100 gal (25 – 120 g/hl) beer, depending on the protein composition and the desired degree of stability.

The following amounts have proven useful in practice:

0.2 – 0.25 lb/100 gal (25 – 30 g/hl)	for a stability of approx. 3 – 4 months
0.25 – 0.5 lb/100 gal (30 – 60 g/hl)	for a stability of approx. 4 – 6 months
0.5 – 1 lb/100 gal (60 – 120 g/hl)	for a stability of approx. 6 – 12 months

To improve the stability results it is recommended that 1 lb/100 ft² (50 g/m²) BECOSORB 2500 silica gel are given in the 2nd pre-coat filtration stage.

Product Characteristics

With its defined particle size, uniform surface structure, pore size and pore volume BECOSORB 2500 silica gel is formulated for selective adsorption of proteins of medium and high molecular weight in beers. It has no effect on the protein components of low molecular weight that are important for foam stabilization.

Thanks to its favorable Darcy figures* (corresponding to a fine diatomaceous earth quality), BECOSORB 2500 silica gel can also be used for filtration tasks in filtering tanks with high throughput volumes. The absence of swelling properties reduces beer loss. As a hydrated product, it forms extremely little dust during handling and is very convenient to use.

Optimum use of BECOSORB 2500 silica gel guarantees maximum efficiency and economy.

Safety

When used properly no negative effects are known. If dust forms, use an extractor or wear a breathing mask.

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

Storage

BECOSORB 2500 silica gel may adsorb moisture and odors. Therefore, it should always be stored in an intact bag in a dry, well-ventilated place that is free from foreign odors.

The material must be stored and transported in the original packaging and protected from moisture and external odors.

The product should not be subject to extreme fluctuations in temperature. If possible, the product should be stored cool (optimum storage temperature between 44.6 and 68 °F (7 – 20 °C) and protected from direct sunlight. Condensation under the stretch film caused by large temperature changes or by the effect of the sun should be avoided.

Opened bags should be re-sealed to protect them from moisture (e.g. place into PE bags) and stored according to the above instructions.

Delivery Information

BECOSORB 2500 silica gel is sold under article no. 62.525 and is supplied in the following package size:

44.1 lb (20 kg) paper valve bag

Certified Quality

BECOSORB 2500 silica gel is monitored constantly in the laboratory to ensure consistently high quality.

**) Darcy is the standardized unit of measure for the permeability of a porous bed for liquids.*