

BRITESORB®

FOOD & BEVERAGE ADSORBENTS

Procedure for Using BRITESORB® A100 Beer Stabilizer

When beer is chillproofed with Britesorb®A100 silica hydrogel, the following procedures should be followed to achieve maximum performance:

- ◆ Beers up to a 65% malt ratio are typically treated with 400 - 500 ppm of A100. Beers higher than a 65% malt ratio typically require 500 - 700 ppm of A100.
- * NOTE: Each 100 ppm= 0.025 pounds of Britesorb®A100 per U.S.Barrel of Beer
= 10 grams Britesorb®A100 per Hectoliter of Beer
- ◆ Prepare a 10% slurry with Britesorb®A100 and water (100 grams per liter). A simple way to mix a slurry that is approximately 10% by weight is to use 1 pound of Britesorb per gallon of slurry water.
- * It is highly recommended the slurry be made up with deoxygenated water since any oxygen present would oxidize the beer. A sub-surface “bubbler” or sparger addition of CO₂ will help to deoxygenate the slurry and maintain low dissolved oxygen levels during agitation. Over-agitation can cause vortexing and oxygen pickup and should be avoided.
- * Agitate the slurry until the silica gel is well dispersed. Dispersion is complete when a 100 ml sample of the slurry reveals no large clumps when gently washed through a 100 mesh screen.
- * The slurry should be continually agitated to keep the dispersed particles in suspension. A low level of agitation is sufficient since the terminal velocity (the rate at which the particles will settle out of water suspension) is only 40 cm per minute.
- ◆ For best results, the slurry should be **proportioned** by metering into the beer over at least 90% of the volume. This insures proper dispersion throughout the beer and allows thorough and adequate contact between the beer and the adsorbent.
- ◆ Following injection of adsorbent, the beer flow should be turbulent to ensure complete dispersion of the slurry in the beer. In-line static mixers are ideal for this application; however, intentional angles and bends in the pipeline or hoseline layout usually offer sufficient turbulence.
- ◆ Contact time should be a **minimum of 20 minutes**. Longer contact times can allow for the lowest dose rate where short contact times can only be offset through higher silica dosing. The adsorption process is time and contact dependent.
- * Longer contact times of Britesorb® with the beer (up to several days in a batch treatment) will not adversely affect the beer characteristics or flavor. Britesorb® is a food-grade product.
- ◆ Following sufficient contact time, treated beer is typically filtered using a diatomaceous earth or sheet-style beer filter. Britesorb® A100 exhibits a similar particle size and filterability profile to most standard beer filtering grades of Celite, Dicalite and Perlite. Britesorb® is removed as the beer is clarified.

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