

BRITESORB®

FOOD & BEVERAGE ADSORBENTS

Procedure for Using BRITESORB®D300 Beer Stabilizer

When beer is chillproofed with Britesorb® D300 silica xerogel, the following procedures should be followed to achieve maximum performance:

- ◆ Beers up to a 70% malt ratio are typically treated with 250 - 400 ppm of D300 gel. Beers higher than a 70% malt ratio typically require 400 - 600 ppm of D300 gel.
- * NOTE: Each 100 ppm= 0.025 lb. Britesorb® D300 per U.S. Barrel of Beer
= 10 grams Britesorb® D300 per Hectoliter of Beer
- ◆ Prepare a 10% slurry with Britesorb®D300 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 should be avoided.
- * Agitate the slurry until the silica gel is well dispersed. Continue agitating for at least 20 minutes before use to allow the dry gel to hydrate and entrapped oxygen to be swept out of the gel particles.
- * 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. Adsorption efficiency depends on intimate contact of silica gel with all of the beer.
- ◆ 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 3 to 5 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.
- * Extra long contact 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®D300 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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