

Stabilized Liquid Yeast is a new form of fresh yeast for use in fuel ethanol and beverage alcohol fermentations. It contains a distillers' strain selected for high temperatures and alcohol concentrations that has been grown for high activity and stabilized to extend its shelf life. Higher activity provides shorter lag times than conventional fresh or dry yeast and allows direct pitching without a propagation step. Stabilized Liquid Yeast has twice the shelf life of conventional fresh yeast and remains uniformly suspended without agitation. It can be dosed by weight or volume and delivered through automated handling systems.

## INGREDIENTS

Water, yeast (*Saccharomyces cerevisiae*), food-grade stabilizers.

## SPECIFICATIONS

Stabilized Liquid Yeast contains 19 to 26% yeast solids and has a specific gravity of about 1.06. One U.S. gallon weighs about 8.85 pounds. One pound is equal to about 0.11 U.S. gallons, or 14 fluid ounces.

## APPLICATIONS

Stabilized Liquid Yeast is intended for use in fuel ethanol and beverage alcohol fermentations. It ferments well at temperatures up to 98°F (38°C) and in a pH range of 3.5 to 6.0. Stabilized Liquid Yeast tolerates high levels of backset and organic acids. It produces low levels of fermentation by-products and is suitable for many types of beverage alcohol.

## DIRECTIONS FOR USE

Stabilized Liquid Yeast can be added directly to the fermenter at a rate of 1 to 4 pounds per 1,000 U.S. gallons final volume (10 to 50 grams per hectoliter). When dosing by volume, use 0.01 to 0.04% (15 to 60 fluid ounces per 1,000 U.S. gallons, 10 to 40 ml per hectoliter). Lower levels can be used if there is a propagation or conditioning stage before the production fermenter.

## DOSING SYSTEMS

Stabilized Liquid Yeast can be dosed manually by weight or volume by dispensing into a pail. Elevate the tote in the cooler and attach a suitable spring-loaded "deadman" type valve. Ethanol Technology can also supply engineering details for a freestanding dosing system, or engineering support to integrate automated dosing into a plant's existing process control system.

## STORAGE AND HANDLING

Store and ship refrigerated at 34° to 40°F (1° to 4°C). Check temperature on receipt and routinely during storage. When stored under these conditions, the product is stable for 3 months from the date of manufacture.

## PACKAGING

1,050-liter gross volume/1,000-liter net volume plastic totes containing approximately 2,335 pounds (1,060 kilograms) at the time of filling.

The production or use of Stabilized Liquid Yeast may be covered by U.S. Patent 5,427,943. Other patents pending.

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