

# CS-1

## Active Dry Yeast

CS-1 is an active dry yeast for use in fuel and beverage alcohol fermentations. It is a strain of *Saccharomyces cerevisiae* that has been specially selected for good productivity in continuous operations or continuous or batch operations where yeast is recycled.

### CHARACTERISTICS

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- Rapid fermentation start and strong stress tolerance
- Short lag phase which is an advantage against competing bacteria
- Killer activity present which helps reducing the risk of contamination from other yeasts
- Tolerance to temperature, pH, and osmotic stress also improves alcohol yields by maintaining higher yeast counts and lower glycerol concentrations
- Long-lived and resilient in continuous fermentation conditions
- Robust, stable yeast that dominates the fermentation, thus giving it a long cycle life.

### DESCRIPTION

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CS-1 is an active dry yeast strain of *Saccharomyces cerevisiae*.

### APPLICATIONS

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- CS-1 is intended for use in continuous fuel and beverage alcohol fermentations.
- The optimal temperature is between 77 - 90° F (25 - 32° C), but ferments well at temperatures up to 93° F (34° C).
- pH range of 3.5 - 6.0.

### PACKAGING

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- 10 kg (22.04 lb) vacuum-sealed foil bag.

### DIRECTIONS FOR USE

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CS-1 can be added directly to the fermentor at a rate of 10 - 25 g per hectoliter (1 - 2 lbs per 1,000 US gal). Lower levels can be used if there is a propagation or conditioning stage before the fermentor. Upon start up of continuous system, 20 - 62.5 g per hectoliter (2 - 5 lbs per 1,000 US gal) is suggested. For optimum maintenance of strain genetic integrity, a regular addition to the pre-fermentor is recommended to rehydrate the yeast before utilization. For rehydration, use fresh water at 100 - 104° F (38° - 40° C), stir, and allow to stand for 15 minutes.

### STORAGE & HANDLING

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CS-1 should be stored in a cool, dry area away from heat for maximum stability. When stored under these conditions, the product is stable for 36 months from the date of manufacture.

Kosher approved.