



CelluX™ 2 is a GMO strain of *Saccharomyces cerevisiae* that has been developed for the second generation ethanol industry. With a high ethanol tolerance, this yeast strain demonstrates the ability to resist stresses and maintains higher cell viability especially during fermentations of hydrolyzed cellulosic material.

**Ingredients :** Yeast (*Saccharomyces cerevisiae*), Emulsifier (E491)

**Dosage:** **Direct pitching (no propagation):**  
A minimum of 4-8 lbs per 1000 gallons of wort (0.5-1.0 kg per m<sup>3</sup>) to achieve an initial viable cell concentration approximately 36 -72 billion viable cells per gallon (10-20 million per milliliter) in the fermentation vessel.

**Indirect pitching (short propagation):**  
In state-of-art facilities, exerting strict control over contamination issues, dry yeast can be propagated during a short period. The required quantity of yeast will be dependent on fermentation capacity of desired objectives at the ethanol plant.

**Pitching instructions:** Prior to using in fermentation, the yeast should be rehydrated in 5 times its weight of sterile water. This is done at 89°F ± 6°F (32°C ± 3°C) for 15-30 minutes to ensure "conditioning" and a perfect homogenization.

**Fermentation temperature** 30-35°C (86 -95°F)

**Packaging:** 1 x 10 kg vacuum-packed sachets in cardboard box.

**Shelf life and storage:** Shelf Life (< 70°F) = 24 months. Activity loss can be expected to be 1% per month. Higher storage temperatures will result in increased loss of activity. Product should never be stored above 80°F (27°C). Partially used packages should be tightly sealed, removing as much air as possible, stored at refrigerated temperatures 40°F (4°C) and used within one (1) week of opening.

Refer to best before end date on sachets.

Typical analysis	Chemical	Method
	Dry Matter	94.0-96.5% Internal (16 Hr @ 105C)
	Microbiological	
	Salmonella	Negative /60g ISO 6579
	Viable Yeast Cells	> 20 Billion/g ISO 7654:1987
	TPC	< 10000 CFU/g ISO 4833
	Acetic Acid Bacteria	< 1000 CFU/g EBC* 4.2.4.3
	Lactobacillus	< 1000 CFU/g ISO 14214

\*European Brewing Convention

Please note that any change to a fermentation process may alter the final product quality. We therefore advise that fermentation trials are carried out prior to using our yeast commercially.