



ClearSol CIP ETOH-G PreBatch 20+

Technical Data Sheet

GRAS SURFACTANT & HARD WATER CONTROL ADDITIVE FOR CONCENTRATED CAUSTIC SOLUTIONS FOR ETHANOL

DESCRIPTION

ClearSol CIP ETOH-G PreBatch 20+ is a formulated, GRAS surfactant & hard water control additive designed specifically for ethanol plant CIP systems and is readily soluble in up to 50% Caustic Soda for preparing caustic-based concentrates. When diluted typically to 5% NaOH solutions for ethanol plant CIP cleaning applications, these solutions provide very low surface tensions of 30 dynes/cm and can tolerate up to 25 grains (or 430 ppm) water hardness preventing scale build-up. These features greatly improve ethanol plant CIP systems by improving yield, lowering maintenance costs, reducing cleaning cycle times, and production stops. Also **requires** the injection of ClearSol ETOH DEFOAMER (also GRAS) into the solution blend tank to control foam.

This brand new, innovative technology exhibits the following attributes when formulated into a caustic-based cleaner:

- All components are GRAS (Generally Recognized as Safe).
- Significantly improves ethanol plant CIP systems by improving yield, lowering maintenance costs, reducing cycle times, and production stops.
- Lowers surface tensions of 5% NaOH cleaning solutions to 30 dynes/cm compared to 75+ dynes/cm of NaOH-only cleaning solutions.
- Controls hard water up to 25 grains (430 ppm) hardness, even in high

CLEAR SOLUTIONS USA
47 North Ski Court, Gilbert, AZ 85233
Phone: 480-539-4276 Fax: 480-539-1893

- temperatures preventing scale build-up, unlike using NaOH alone.
- Can help reduce either the NaOH consumption or cleaning cycle times.
 - **Requires** the use of ClearSol ETOH DEFOAMER (also GRAS) to be injected into the cleaning solution blend tank to control foam.
 - Applications include ethanol plant CIP systems, food, brewery, draft beer lines, dairy poultry, egg, car and truck, strong caustic or acidic cleaners. Also includes paint and coating strippers, oil field, and pulp and paper.

FORMULATION TIPS

For best results ClearSol CIP ETOH-G PreBatch 20+ should be added at **10% by weight** into **90% by weight** caustic soda (sodium hydroxide) to formulate the concentrated caustic cleaner. This cleaner would then be diluted as needed i.e., to 5% active sodium hydroxide, for actual ethanol plant CIP cleaning solutions.

The addition of ClearSol ETOH-G DEFOAMER (also GRAS) to the 5% active sodium hydroxide cleaning solutions is **required** to control foaming. One (1) gallon of ClearSol ETOH DEFOAMER needs to be injected into the blend tank for every 1,000 gallons of concentrated caustic cleaner added to the blend tank to make the 5% NaOH solution. As additional caustic cleaner concentrate is added to replenish the 5% NaOH cleaning solution, additional ClearSol ETOH DEFOAMER needs to be added at the same ratio.

SPECIFICATIONS

| | |
|------------------|---------------------------|
| Appearance | Clear, light amber liquid |
| Odor | Bland odor |
| Specific Gravity | 1.21 |
| pH (as is) | 2.0 – 3.0 |

STANDARD PACKAGING

Available in 55-gallon drums, 275 & 330-gallon totes.

SHELF LIFE

ClearSol CIP ETOH-G PreBatch 20+ has a shelf life of two years.