STAR-XENE

5% Aqueous Stabilized Chlorine Dioxide

❖ *BENEFITS*

- ❖ Economical
- ❖ Broad Spectrum Killer
- ❖ Convenient
- ❖ Excellent in C.I.P. Applications

❖ *DESCRIPTION*

STAR-XENE is a 5% solution of stabilized chlorine dioxide. It is 2½ times stronger than the normal stabilized chlorine dioxide available on the market today. The higher concentration allows for economical shipping costs, as well as requiring the customer to purchase less material. This double benefit makes this product one of the most economical sanitizers on the market. STAR-XENE is a mild bactericide at its normal pH of 8.5-9.5. When it is acidified to a pH between 3.5-6 it becomes a very active sanitizer. Requiring concentrations as low as 20 ppms available ClO_2 to kill most bacteria with a two-minute contact time. Most molds and yeast will require a concentration of 100 to 200 ppms with a two-minute contact time, the concentration and time will depend on the actual species of organism. STAR-XENE does not have foam and makes an excellent C.I.P. final rinse sanitizer. It can be injected directly into lines with the use of an injection pump or can be dosed in a batch method. When activating STAR-XENE always add STAR-XENE to water followed by the activating acid. Adding acid directly to STAR-XENE could evolve chlorine dioxide gas that is an irritant to the eyes and lungs. STAR-XENE can either be pre-activated or activated in the use solution. The pre-activated product will remain active over a wide pH range of 3.5 to 10. The use solution activation will require a pH range of 3.5 to 6. Normally adding 1 ml of phosphoric acid per gallon of use solution will lower the pH into an acceptable range.

❖ *PROPERTIES*

APPEARANCE AND ODOR . . . . . Clear to light yellow with a faint chlorine odor

pH of CONCENTRATE. . . . . 8.5 to 9.5

SOLUBILITY. . . . . .Completely soluble in water

COMPATABILITY. . . . . .Do not lower the pH of this product below 3 or volatile chlorine dioxide gas will evolve causing corrosion and respiratory problems.

❖ *GENERAL USE DIRECTIONS*

This solution is intended for use as a food-contact surface sanitizer for dairies, ice cream factories, breweries and food processing plants. This solution may be used on hard, non-porous surfaces such as tables, trays, bins, etc. and the interior or exterior of food processing equipment. All equipment should be thoroughly cleaned to remove gross food particles and soil by pre-flush or pre-scrape and where necessary, a pre-soak treatment. The surfaces or objects should then be treated should then be cleaned with a detergent or cleaner followed by a potable water rinse before application of the sanitizing solution.

IMPORTANT

Star-Xene requires a pH of between 6.0 and 3.0 to maximize its killing power. If your sanitizing water is below a pH of 6.0 you DO NOT need to activate Star-Xene. If the pH of your water is above 6.0, follow one of the following recommended methods for activating Star-Xene:

1. Preparation of Pre-Activated Use-Solution: This is where citric acid is added directly to the Star-Xene container to gently reduce the pH to 6.0 - 5.5. Add 7 to 8 grams (1/2 tablespoon) per gallon of Star-Xene. Mix well and store out of direct sunlight. This pre-activated solution will be stable for 3 months. This procedure does not require any additional acidifying of the CIP sanitizing water. In other words, once Star-Xene is pre-activated it will effectively sanitize at any pH between 3.0 and 10.0. If you are unable to use 1 gallon of Star-Xene within this 3 month period this procedure is not recommended.

2. Activation of CIP Solutions: In this method, it is required to lower the entire solution's pH below 6.0 *after* adding the Star-Xene. This will require a volume of citric acid sufficient enough to lower the make-up water below a pH 6.0. Since water will vary in pH from 5.0 to 9.5, it is very important to know what the pH of your water is before you start. In general, 8 ounces of citric acid per 31 gallons of water is sufficient to produce the correct pH. Please refer to the chart below:

Dilution chart for un-activated Star-Xene:

ppm of Star-Xene	Ounces of Star Xene	Ounces of Citric Acid	Gallons of Water
20 ppm	1.5 ounces	8 oz. Of Citric Acid	31 gallons
40 ppm	3 ounces	8 oz. Of Citric Acid	31 gallons
60 ppm	4.75 ounces	8 oz. Of Citric Acid	31 gallons
100 ppm	8 ounces	8 oz. Of Citric Acid	31 gallons
200 ppm	16 ounces	8 oz. Of Citric Acid	31 gallons
NOTE: The 8oz. of Citric Acid should be enough to lower the pH of any water into the correct activation range. However, it is recommended to check the final pH for accuracy.			

For Kegs (at 100 ppm) Injector type: In a clean 1 gallon jug add 7 pints of water, 1 oz. of Citric Acid and 1 pint of STAR-XENE. This will provide a stock solution of 6,250 ppms. Set injector to 100 ppm final sanitizing rinse.

For Bottle Line: In a 5 gallon pail add 4 1/2 gallons of water, 4 oz. of Citric Acid and 2 quarts of STAR-XENE. This mixture will provide a 5,000 ppm stock solution. Inject into twist rinser at a rate of 5 ppm STAR-XENE.

Yeast Washing: For every 7 pounds of yeast slurry add 2 mils of Star-Xene (20 ppm). Mix in and allow to stand for 30 minutes. The natural pH of yeast (4.5 to 5) will activate the Star-Xene. Pitch yeast in normal manner. When having wild yeast problems use 4 mils of Star-Xene (40 ppm)

See product side panel for additional cleaning instructions.

❖ *SAFETY*

DANGER: STAR-XENE is an oxidizer it must be stored away from acids, other chlorine compounds, sulfite compounds, organic solvents, and combustible/flammable materials, exposure to these concentrates can evolve poisonous chlorine dioxide gas. Do not allow this product to evaporate into a crystalline salt, the salt is an explosive. When handling any chemical always wear protective clothing. Wash after use with soap and water. If material gets on clothing, rinse thoroughly with water.

FIRST AID: For Eyes: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes. Then continue rinsing. Call Poison Control Center or doctor for treatment advice.
If Swallowed: Call Poison Control Center or doctor immediately for treatment advice. Have person sip on a glass of water if able to swallow. Do not induce vomiting unless told to do so by the Poison Control doctor. Do not give anything to an unconscious person.
If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Poison Control Center for treatment advice.

If Inhaled: Move person to fresh air. If person is not breathing call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a Poison Control Center or doctor for treatment.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measure against circulatory shock, respiratory depression and convulsion may be needed. Rev. 09/05