

## CC KLEAN 065E

### ENZYMATIC MEMBRANE CLEANER

- **CC KLEAN 065E is used to clean membranes in combination with f.ex. CC KLEAN 105 or CC KLEAN 115**
- **The special combination of active tensides and protein splitting enzymes makes CC KLEAN 065E very efficient towards milk, whey, blood and similar substances.**
- **Enhanced performance at elevated temperatures of 45-55 °C.**
- **No adverse effect with repeated use.**

#### DESCRIPTION AND USE

CC KLEAN 065E is a neutral pH, fluid based enzymatic cleaner designed to be used in combination with moderate alkaline pH cleaners like CC KLEAN 105 and CC KLEAN 115. The special formula combining cleaning active tensides and protein splitting enzymes gives unparalleled performance when used to clean membranes treating milk, whey, blood or similar substances.

Regular use of CC KLEAN 065E in these types of applications results in longer interval between cleanings, reduced energy consumption and longer system running time.

#### TYPICAL APPLICATIONS

CC KLEAN 065E is suitable for use in applications like dairy, pharma and other where the enzymatic effect will be desirable for optimal cleaning.

Consult your Norlex Chemicals partner for details about your application, to determine if CC KLEAN 065E will improve your cleaning performance.

For optimum results, CC KLEAN 065E should be used in combination with moderate alkaline pH

cleaners such as CC KLEAN 105 or CC KLEAN 115 to buffer pH at desired level of 9,5 – 10,5.

#### FEED REQUIREMENTS

**Feed System** - This product can be used in conjunction with CIP cleaning equipment supplied by the manufacturer of the system or be dosed as a solution or neat directly into the system to be cleaned.

**Dilution** – The product must be diluted prior to introduction into the membrane system. The recommended dilution is a 0,1-0,2% strength solution.

**Temperature** – As increased temperature improves the cleaning result; it is recommended that the cleaning solution be heated to at temperature of 45 – 55 °C.

**Materials Compatibility** – Corrosion resistant equipment, such as PVC, should be used for the storage and preparation of this product. Pumping materials coming in contact with the diluted products should also be corrosion resistant.

**pH** – pH of the concentrated product is approx. 6,5. In dilution, pH should be buffered to 9,5 – 10,5.

#### PACKAGING INFORMATION

CC KLEAN 065E is a liquid material and is available in 20 kg pails or 200 kg drums

## GENERAL INSTRUCTIONS

The following general cleaning procedure can be followed.

1. Inspect cleaning tank, hoses, and cartridge filters. Clean tank and flush hoses if necessary. Install new cartridge filters.
2. Fill cleaning tank with RO permeate or DI water. Turn on agitator or tank recirculation pump.
3. Slowly add CC KLEAN 065E to cleaning tank (0,05-0,1 kg of product for every 50 L water) and allow to mix thoroughly.
4. Add CC KLEAN 105 or CC KLEAN 115 to buffer pH of the cleaning solution at 9,5 – 10,5. Usually this requires addition of one of these cleaners to 0,6 – 0,8% w/w concentration.
5. Heat solution to a temperature of 45-55 °C, or the maximum allowable temperature for the membrane if this is lower than recommended interval. If membrane manufacturer's recommendation is not available, contact your Norlex Chemicals partner.
6. Check solution pH. The solution pH should be between 9,5 – 10,5. If pH is too low, adjust pH upward with CC KLEAN 105 or CC KLEAN 115.
7. Circulate solution through one stage at a time in the direction of feed flow for 15-60 minutes. Circulate at the flow rate recommended by the membrane or system manufacturer. If the manufacturer's recommendation is not available, contact your Norlex Chemicals partner. Pressure should be low enough so that no permeate is produced during cleaning, but always less than 4 bar.

In cases of heavy fouling, the first return flow (up to 20% of the cleaning tank volume) should

be diverted to drain to prevent redeposition of removed solids.

For optimum results, each stage must be cleaned separately in a multistage system.

8. If the first stage cleaning solution becomes turbid or discolored, dump the tank and prepare a fresh cleaning solution before proceeding. If solution pH or temperature moves out of the recommended range, a new solution should be prepared. In any event, a new cleaning solution should be prepared for each stage.
9. Rinse with permeate before returning system to service.
10. When returning unit to service, divert product water to drain until any residual cleaning solution has been rinsed from system.
11. After cleaning with CC KLEAN 065E, all surfaces that will come in to contact with food and beverage products must be cleaned thoroughly with water (drinking water quality). To achieve complete inactivation of any residual enzymes, a cleaning with CC KLEAN 015 or CC KLEAN 018 is recommended.

## SAFETY PRECAUTIONS

A Safety Data Sheet containing detailed information about this product is available upon request.