



## ***MBR KLEAN 212***

### ***MBR MEMBRANE CLEANER***

- **Designed specifically for cleaning membranes in Membrane Bio-Reactor systems.**
- **Effectively releases sludge from membrane surface.**
- **Superior cleaning results with high flux recovery.**
- **Enhanced performance at elevated temperatures**
- **No adverse effects with repeated use.**

### **Description and Use**

MBR KLEAN 212 is a moderate pH powder cleaner designed to remove fouling and sludge from MBR membrane surfaces. MBR KLEAN 212 provides very effective cleaning resulting in improved sludging control, reduced energy consumption and longer system running time.

### **Typical Applications**

Membrane Bio-Reactor systems will during operation accumulate sludge and suspended solids from the biological tank on the membrane surface. This accumulation leads to fouling of the membranes restricting the water flow through the membranes.

If left untreated the result can be a system that operates with unacceptably low production, high operating pressure, or an excessive pressure drop in the system. Results can be irreversible membrane damage.

Regular clean-in-place (CIP) cleaning of the membranes prevents these scenarios and keeps the system operating within the design specifications and prolongs membrane lifetime.

Indications of the need for cleaning include a significant decrease in normalized permeate flow, a significant increase in pressure drop across the system (or individual module), or a decrease in the normalized permeate quality such that product quality is unacceptable.

Your Copenhagen Chemicals partner can assist you with monitoring your system and determining when cleaning is advised.

MBR KLEAN 212 contains a blend of solubilizing and active cleaning ingredients designed to specifically remove organic sludge and particulate foulants from the surfaces of the membrane.

### **Feed Requirements**

**Feed System** - This product should be used in conjunction with the membrane cleaning equipment supplied by the manufacturer of the MBR system.



**Dilution** – The product must be dissolved in water prior to introduction into the membrane system. The recommended dilution is a 0,5-2% strength solution. Typical dilution for normal cleaning will be 0,5-1%. If severe fouling is observed, up to 2% may be necessary.

**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.

### **Packaging Information**

MBR KLEAN 212 is a powder material and is available in 5 kg pails as standard. MBR KLEAN 212 can be supplied in other quantities on request. Please contact your Copenhagen Chemicals partner for further details.

### **Safety Precautions**

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

### **Example**



MBR KLEAN 212 used for cleaning a fouled plate membrane prior to a tear-down of the membrane module for manual cleaning of membranes.

MBR KLEAN 212 had released the sludge cake from the membrane surface making it very easy to remove with no tools required as was normal procedure before using MBR KLEAN 212.

MBR KLEAN 212 had coated the sludge making it slippery, effectively keeping it from sticking to the membrane surface.

Cleaning time was reduced 50%.