



**U.S. STERILES**  
**GRAMICID®**

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## GRAMICID-121

### (CLEANING CHEMICAL FOR REVERSE OSMOSIS SYSTEMS)

#### Alkaline Based Cleaner



**GRAMICID-121** is specially formulated blend of cleaners for the effective removal of carbonate, metal oxide and sulfate scales of Barium, Strontium and Calcium in reverse osmosis systems & slime removes.

#### **SPECIFICATION:**

|                  |                                   |
|------------------|-----------------------------------|
| Appearance       | Colorless to Straw colored Liquid |
| pH (as is)       | 13 pH                             |
| pH (1% solution) | 9-10                              |

#### **BENEFITS:**

- For reverse osmosis system operating on feed water containing barium, strontium apart from commonly encountered hardness salts, there is always potential for scales formation of calcium, barium and strontium. Barium sulfate scales once formed are extremely difficult to remove. Gramicid-121 effectively removes these barium scales and also sulfate scales of Strontium and Calcium. It also removes organic and dead biological matter.
- Liquid cleaner which allows shorter mixing time.
- Low foam formulation.
- Cost effective program for carbonate/sulfate scales removal.
- No adverse effects with repeated use of solution.

#### **CLEANING PROCEDURE:**

- Prepare the stock solution of Gramicid-121 using DM water or permeate water only.
- Use dilution ratio of 0.5% to 3% in proportion of the total volume of cleaning system.
- Flush the membranes using permeate water or DM water.
- Circulate at the flow rate recommended by the membrane manufacture depending upon the membrane size. Pass the prepared cleaning solution through membranes, Circulate the cleaning solution for 1-2 hr. If the solution becomes turbid, prepare fresh solution and re-circulate through membrane.
- Soak the membrane for 30-60 minutes.
- In multi pass systems, best results will be achieved if each pass is cleaned individually.
- Drain out the cleaning solution and flush the system with DM or permeate water.
- Restart the plant.

**There may be some variation in procedure depending on system condition.**

**PACKING:** GRAMICID-121 is available in 30Kg and 50Kg HDPE carboys.