

# Iron Oxides and Carbonate Scale Cleaner for Membranes

## Description and Use

Hydrex 4503 is an aqueous solution of a specialized surfactants and organic acids specifically designed to remove iron and carbonate scales from membrane surfaces.

Hydrex 4503 complies with membrane manufacturers recommendation for iron oxide and carbonate scale removal. Concentration used depends upon membrane type and degree of fouling.

## Advantages

- Effective at removing iron and carbonate scale from membrane surfaces
- Cost effective liquid product
- Compatible with membrane manufacturer's recommendations.

## Application Information

Hydrex 4503 should be diluted using chlorine free soft water. Hydrex 4503 minimum dosing solution strength of 10% w/w is recommended. The duration of the cleaning process depends upon the amount and nature of the fouling to be removed. Although a cleaning period of one hour may be considered typical, an extended soaking period may be necessary in the case of heavy fouling. Short periods of circulation are considered good practice for cleaning heavily fouled membranes.

It is recommended to rinse the membranes after the cleaning process with good quality water to remove residual cleaning solution. When the plant is returned to service the product water must be discarded for the first 15 minutes to ensure permeate is free of the cleaning agent.

Please contact your VWS Representative for the proper dosage and specific control limits for cleaning with Hydrex 4503 .

## Specifications

Physical Form : Clear colorless liquid  
Specific Gravity (g/cm<sup>3</sup>) @ 25°C : 1.05 - 1.09  
Product pH (as supplied) : 0.0 - 1.5  
Solubility : Complete in water  
Flash point : None

## Materials Compatibility

Hydrex 4503 is an aqueous solution of an organic acid and as such is corrosive in its concentrated form. Corrosion resistant dosing equipment should be therefore be used.

Stainless steel, PVDF, or PVC is the best choice for the pump heads and feed lines. Copper, galvanized, or black iron (mild steel) components should not be used.

## Packaging

Hydrex 4503 is supplied in packaging including bulk and semi-bulk containers. Drums and smaller containers are available upon request. For best results, store product at 0-40°C. Protect from freezing. If product freezes, allow to warm in heated area and thaw thoroughly before using. Also, please adhere to your local and state code requirements.

## Safety Information

Detailed information on the product described in this leaflet can be found in our relevant health and safety information (Safety Data Sheet). Please contact us for further information.