

Tubular Microfiltration Membrane Incompatible Substances



The tubular microfiltration membranes used in Evoqua's Memtek® microfiltration systems are resistant to wide variety of chemicals and suspended solids. However, certain chemical species and substances are classified as difficult to filter or incompatible with filtration operation. These substances reduce filtration performance or even attack membrane integrity.

SUBSTANCES INCOMPATIBLE WITH MICROFILTRATION MEMBRANES

Following is a list of chemicals and substances causing limitation of membrane filtration functionality. Limitation of membrane filtration performance depends on overall water matrix and concentration of substances.

- Oil and grease
- Waxes
- High molecular weight polymers
- Concentrated organic material
- Latex, paint
- Lacquer
- Silicates
- High solid concentration (TSS > 5%)
- High concentration of organics (citric acid, succinic acid, humic acid, etc.)
- Majority of dyes
- Pigments
- Tannins
- Soaps and detergents at elevated concentrations
- Septic waste

SUBSTANCES DETRIORATING & ATTACKING MEMBRANE STRUCTURE

- Caustic (>5%) (NaOH)
- Certain organic solvents at high concentration (Acetones, ketones, aldehydes, methyl acetone, isopropyl ether, chloroform, etc.)
- Abrasive material (sand, rocks, granular activated carbon, glass, plastic, shells)
- High temperature liquids (>130 °F)