

PCI - WFS0325 Classic Ultrafiltration Tubular Membrane

Basic Characteristics

- Polysulfone tubular membrane cast on a composite polyester non-woven carrier
- Developed for use in a variety of ultrafiltration processes in industrial food and non-food applications
- Membrane material composed of polysulfone
- Structure asymmetric
- Membrane carrier is a polyester non-woven
- Tubular geometry

Applications

- Concentration of modified starch waste water
- Manufacture of starch derivates
- Economical direct conversion of sour skimmed milk into quark
- Concentration of whole milk for cheese production
- Cost effective water removal from whole egg, egg white, fermented egg white and rinsing water

Performance Data

Parameter	Unit	S0325	Remarks
Initial flux	l/m ² .h.100 kPa	40 ± 10	RO-water at 25 °C
Transmembrane pressure	kPa	-20 .. + 1000	
Molecular weight cutoff	Dalton	100000	90% rej. on dextrans
		20000	90% rej. on peg
pH		2 - 10	at 25 °C
Chlorine exposure	ppm.h	200000	at 25 °C
Temperature	°C	1 - 70	
Hydrolic diameter	mm	14.5	
Length	m	1 - 6	

Operation of membranes at any combination of maximum limits of pH, concentration, pressure or temperature, during cleaning or production, will severely influence the membrane lifetime.

Solvent Resistance

Since the resistance of the membrane to solvents strongly depends on the actual process conditions, the indications given below should only be considered as guidelines.

- Organic acids ++
- Organic esters, ketones, ethers +
- Aliphatic alcohols ++
- Non polar aliphatic compounds ++
- Aromatic compounds +
- Formaldehyde ++

Cleaning

Depending on the nature of the feed solution the following cleaning agents can be chosen:

Chlorine	Hydrogen peroxide	Sodium hydroxide	Nitric acid	Phosphoric acid	EDTA	Sodium tri-phosphate	Citric acid	Enzymatic compounds
500 ppm max.	1000 ppm max.	pH11.5 max	pH 1 min.	pH 1 min	pH 11.5 max.			

It is recommended to keep the pH between 2 and 8 and not to exceed a temperature of 35 °C during cleaning and/or disinfection. If those standard cleaning techniques fail to remove the foulants, more concentrated cleaning solutions can be tried. Please contact PCI Membranes for recommendations. It has to be stressed, however, that no warranty can be given on the efficiency of any cleaning nor on the membrane performance after such cleaning attempts.

Storage

New membrane modules can be stored as supplied. After being used, storage is required in humid environment or in a solution of 250 ppm SPECTRUS NX1164 (BetzDearborn) in water at a temperature of 1 – 35 °C.