PERVATECH

Datasheet: POMS flat sheet membranes

POMS (Poly Octyl Methyl Siloxane) membranes have hydrophobic/organophilic characteristics, in which the organic constituent of the feed passes preferentially through the membrane.

Membranes

Dimensions:	Flat sheet 297 x 210 mm or 210 x 68 mm
Substrate material:	PET
Intermediate layer:	Type of PI
Top layer:	POMS

Limits of operation

Temperature:	70 °C (short-term 80 °C)
Pressure:	5 bar
pH:	3-10
pre-filtration:	10 µ cartridge filter

Storage and cleaning

Storage before use:	Out of direct sunlight Room temperature < 70% RH
Storage after use (short) :	In a solution of water and 10-15% IPA or water with 2500 ppm Sodium Meta Bisulfite
Storage after use (long):	In a solution of water with 0.7% Benzalkonium
Cleaning:	The element can be cleaned by flushing with water to which a non-ionic detergent (0.1% KOH) is added. Also enzymatic solutions dependent on the feed composition may be used. In case of food & additives processing contact us for alternatives.

Sterilization options

Steam:	106-108°C
Flushing:	With ethylene oxide or 100% ethanol

Possible applications with hydrophobic/organophilic membranes

- Recovery or extraction of organics from natural feed like fruit juices, wine, beer, coco-nut oil, essential oils (carvon, limonene) and in combination with fermentation.
- recovery of organics in biotech or biotech related food applications such as in natural feed like fruit juices, wine, beer, coco-nut oil, essential oils (carvon, limonene) and in combination with fermentation.
- Removal of ethyl alcohol (and other alcohols) from wine and beer
- Upgrading reverse osmosis permeate in juice production.
- Combination with bioreactors in production of alcohols (ethanol, IPA, butanol), ABE (acetone, butanol, ethanol), aldehydes, flavor production as well as acid production.
- Removal of VOC
- In general POMS membranes are more open than PDMS membranes. However, in some solutions, especially >>C2 and low concentrations POMS performs better than PDMS. This especially holds for e.g. phenolic types of molecules.

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