Datasheet: PDMS flat sheet membranes

PDMS (Poly Di 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: PDMS

Limits of operation
Temperature: 70 °C (short-term 80 °C)
Pressure: 5 bar
pH: 1-12
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 (10 ppm 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