**Datasheet: PEBA Membranes**

PEBA (polyether block amide) membranes have hydrophobic/organophilic characteristics, in which the organic constituent of the feed passes preferentially through the membrane.

**Membrane elements:**
Dimensions: 1-channel tube 250 x 10 x 7 mm, effective area 0.005 m²  
1-channel tube 500 x 10 x 7 mm, effective area 0.01 m²  
4-tube assembly 1200 x 25 mm, effective area 0.1 m²  
4-tube assembly 600 x 25 mm, effective area 0.05 m²  
Substrate material: α-Al₂O₃  
Top layer: PEBA  
Coating position: Inside of the tube

**Limits of operation**
Temperature: 70 °C (short-term 80 °C)  
Pressure: max. 10 bar  
pH: 3-8  
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**
Flushing: With 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
Typical example of PV process in combination with bioreactors:

![Diagram of PV process with bioreactors](image)

- Principle of membrane reactor for continuous recovery of product (alcohols, aromas)
- The system with PV continues to produce alcohol while other systems stop when inhibiting amounts of alcohol (or other inhibitor) have been reached.

In some cases a pretreatment is necessary - PDMS membranes are stable and insensitive to fouling.