

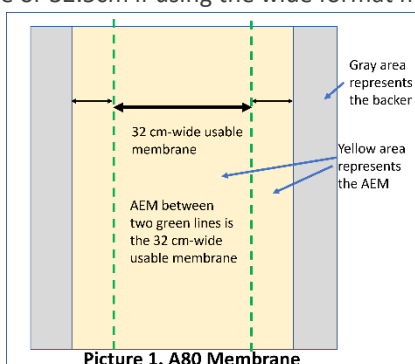
Membrane Characteristics and How to Handle

Versogen's Piperlon® AEM membrane typically has a transparent yellowish color and may have a slight smell of amine which is normal. Changes in this color do not influence final performance and are not considered a defect.

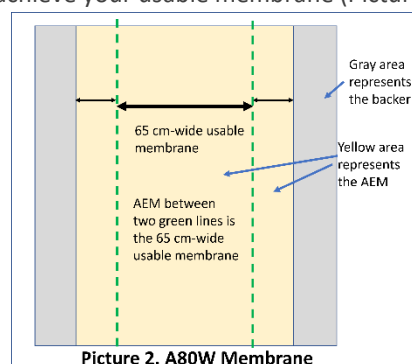
After taking off the AEM from the Backer and refolding the membrane, visual creases may appear, and this will not have any impact on the membrane performance as the crease will disappear after soaking the AEM in water or KOH solution. Some membranes are already off the backer when rolled, so sometimes you have areas of creases from rolling. **This is not a defect.**

The counter-anion of the AEM is bicarbonate/carbonate mixture and conditioning the membrane in 1M KOH at room temperature for 6h to 12h will help enhance the membrane performance.

A80 membranes are shipped with pre slit edges. Measure from the center of the membrane out 16cm on either side or 32.5cm if using the wide format membrane to achieve your usable membrane (Picture 1 and 2).



Picture 1. A80 Membrane



Picture 2. A80W Membrane

To release AEM from the backer, please follow the recommendations below if the membrane is not delaminating on its own.

1. Cut to 120% of the required use size and let the membrane sit out in ambient conditions. The membrane should self-delaminate from the backer within 60 minutes. If you do not wait for the membrane to self-delaminate, some damage may occur to the membrane/backer when peeling it off.
2. If the AEM does not release after 60 minutes, follow the instructions below based on assembly condition.
 - A. If assembling the membrane in dry form, place it in an oven at 50C and wait until the membrane delaminates. The loss of residual solvent in the membrane allows delamination. Allow the membrane to equilibrate to the ambient temperature and humidity conditions before assembling into cell.
 - B. If assembling the membrane in wet condition, soak the membrane in 1M KOH for a few hours. The membrane will delaminate from the backer. Continue the pretreatment until 6-12 hours has been achieved.
3. Once your roll of membrane is cut, please place a piece of PET tape fully across the cut seam of the unused roll. This will keep air out of the roll and help reduce membrane swelling due to air exposure.

To achieve the best performance with the membrane, place the backer-facing side of the membrane towards the anode side of the electrolyzer.