

Durafil®

Application and Cleaning Instructions

The Durafil® Membrane has some restrictions regarding application and cleaning:

Restrictions:

Due to the geometry of the slits, the Durafil® membrane cannot be Back-flushed.

Due to the size and geometry of the slits, the first pre-coat layer should be laid down with D.E.

Perlite or soft material as PVPP, or any soft or flexible material should not be used for first pre-coat.

Any of the materials listed above can be used as a second pre-coat or body-feed.

We normally recommend that the first filtrations be performed with the same media and the same procedures that have been in use with previous screen filter septum.

Due to the size and configurations of the slits in the Durafil® we would under normal conditions recommend a first pre-coat with Standard Super Cell or equivalent. A coarser pre-coat only seem to duplicate the Durafil® membrane itself and does not seem to bring any advantages under normal conditions.

In all other regards the Durafil® membrane can be handled like any other filter septum;

There might be a small change in delta P over the membrane compared to normal screens in the same filter under comparable conditions.

All flows, both for pre-coating and filtration can be held to normal flows for the filter. (Under normal conditions we consider pre-coat flow to be 1.5 to 2 times normal filtration flow).

The potential for reduction in pre-coat amount must be explored in each type filter as this is dependent on the flow distribution of the filter design under low delta P.

It is recommended to start with a normal pre-coat amount and then reduce the amount as one gains experience. (On our ZHF Primus filter we have been able to reduce the pre-coat amount up to 50 %, this amount can then be used as body-feed).

Filter run length:

This is completely dependent on the total cake capacity (pre-coat + body-feed) of the filter design, there will be no change with Durafil®, the only improvement possible is a change in the ratio between pre-coat and body feed amounts.

Cake discharge:

The cake discharge is dependent on filter type, not filter septum, no change from normal.

Filter leaf cleaning:

Normally all filters will have a procedure to clean the filter screens between filtrations and they can be followed.

We normally recommend a filter leaf/filter cleaning with water after each cake discharge. The Durafil® membrane does not have any particular requirements.

It is a preference that a spray bar (or water spray from a hose) is applied to rinse off the spent filter cake between filtrations.

(Due to the Durafil® slit configuration one should normally see less filter aid inside the filter leaves, but it is still important for the following pre-coat to assure that the surface is clean).

We also recommend a CIP with hot caustic (3 % and 85° C for 30 minutes in circulation at pre-coat speed) at the end of every week that the filter has been in operation.

In addition we recommend an acid rinse at room temperature (1 % Phosphoric or Nitric acid for 30 minutes in circulation at pre-coat speed) once every month following the normal weekly CIP.