

# E-COAT PLANT HOLIDAY SHUTDOWN: PLAN FOR SUCCESS

As we approach the end of the year, preparing for the holiday shutdown is important to ensure everyone's return in the New Year is hassle-free and productive. Solecta Inc. optimizes quality, recovery and reliability in E-Coat processes. Our solutions maintain best-in-class quality standards while optimizing the recovery of valuable paint solids critical to your electro-coating process.

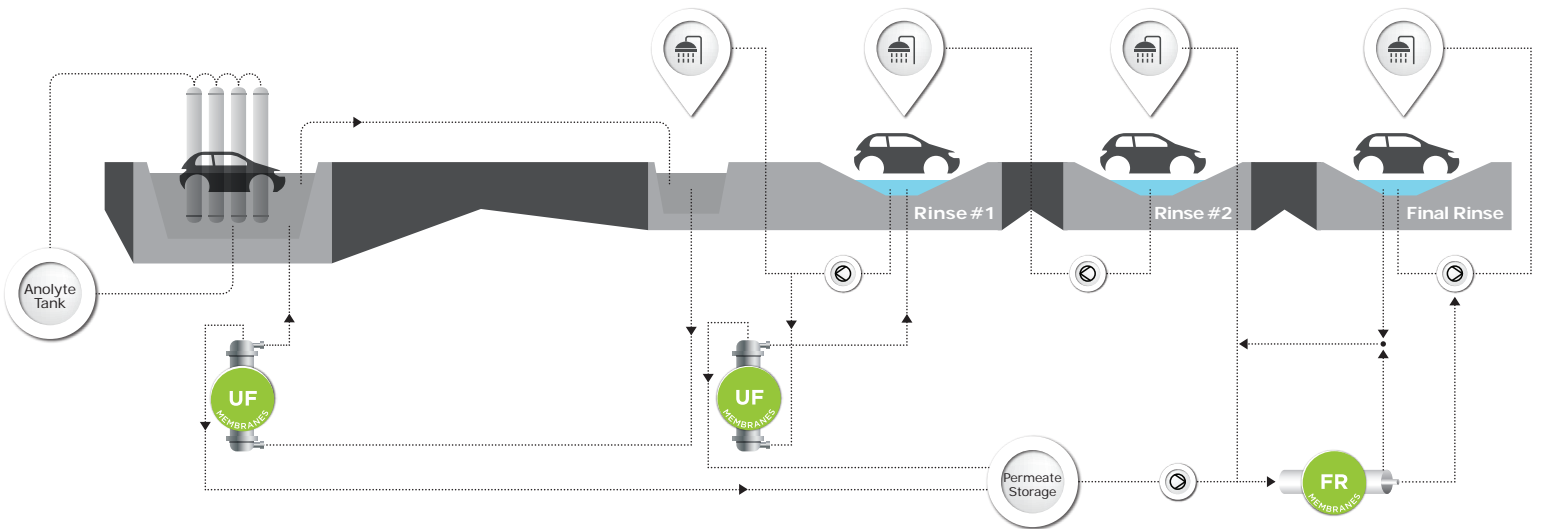
Proper shutdown and maintenance are critical to the successful start-up of the ultrafiltration (UF) system used in plants after the holidays. Paint standing idle in the elements can cause irreversible fouling and lead to unanticipated system downtime. Planned maintenance periods provide a great opportunity to check the valves, pumps, and seals and clean the UF system. This is also the optimal time to change the elements if needed. Solecta's team of experts can provide guidance on cleaning formulations and protocols to ensure a successful shutdown and productivity in the New Year. Due to supply chain challenges, it is important to have all materials and backups on-site for critical components.



## Ultrafiltration Modules Treatment

Improper treatment or handling of the UF modules may cause early element breakdown. When handling the modules, take the below instructions into serious consideration:

- Never use tap water for flushing or cleaning. Always use demineralized water (DI-water), pH-adjusted DI-water or RO water
- Keep modules wet for storage. Solecta can advise on short and long-term storage protocols
- Immediately flood newly installed modules with RO water or pH-adjusted DI-water
- Do start-up and shutdown procedures with care
- Avoid pressure and feed flow peaks
- Avoid sediments downstream of the filter bags, starting with clean filter bag cages



# Properly Shutdown an Ultrafiltration System

If a shutdown occurs, immediately drain and flush the system with fresh DI or RO water and institute a chemical cleaning procedure before leaving the system shutdown. If the system will be idle for longer than one week, it is recommended to use the following storage procedure:

<b>Step 1</b> Flush Cycle	Flush the system with clean water* sending permeate and concentrate to the drain. Ensure that at least 2X the system hold-up volume has been flushed through the system.
<b>Step 2</b> Storage Solution	Circulate clean water*. Slowly add a recommended storage solution. After 20 minutes, shutdown the system and leave the solution in the system. Ensure the storage solution does not drain from the system.
<b>Step 3</b> Weekly Circulation	Once per week, circulate the storage solution through the system for 20 minutes. While circulating the solution, check the pH. Add additional storage solution if the pH needs to be adjusted and circulate for an additional 20 minutes.
<b>Step 4</b> Pre-Restart-Up	Before running product, perform a full CIP on the system. Check the membrane water flux and microlevels. If either is unacceptable, contact your chemical supplier for additional cleaning recommendations.

\*Clean water is defined as water at or below concentrations listed on the CIP Water Quality Guidelines.



Contact **Solecta** to learn how our team of experts and innovative solutions can assist with cleaning protocols and reduce unplanned downtime in the New Year.

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