

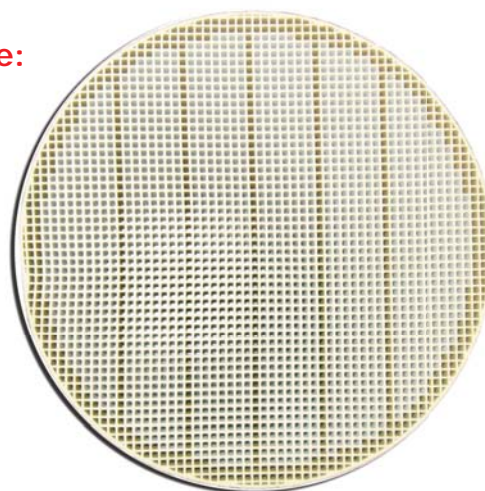
Ceramic Membrane Ultrafiltration for Electrocoat Paint Bath



Ceramic membrane ultrafiltration is a time tested technology that is relatively new to the electrocoat industry. Ceramic membrane filters are an attractive alternative technology for E-coat paint UF systems. It can be also be used to extend the life of the pretreatment stage alkaline cleaner bath.

Product features of the ceramic membrane filter include:

- Excellent chemical resistance
- Broad pH range of 2-13
- Inert to solvents and common chemicals
- Can be aggressively cleaned
- Allows for higher flux recovery
- High temperature operation – to 200° F
- Low thermal coefficient of expansion
- Membrane pore size stability
- Backpulsing capable
- Tolerance to pressure excursions
- Favorable solids loading capability
- High concentrations possible



Ceramic Membrane Filter Cross Section

Advantage Summary - Ceramic Membrane Ultrafilter for Electrocoat Paint Bath

- Sustained permeate flux
- Increased flux recovery after cleaning
- Reduction in labor costs
- Reduction in cleaning chemical usage and costs
- No delamination or telescoping of filter
 - *Structural durability
- Extended filter life
- Elimination of pore plugging due to temperature rise
- Construction alleviates blinding of membrane surface
- Requires fewer filter cleanings per year

Performance Issues with Existing Membrane Ultrafilters Include

- Low permeate flux
- Membrane cleaning
- Membrane replacement frequency
- Susceptibility to pressure surges
- Vulnerability to temperature excursions
- Treatment to remedy biofouling



Ceramic Membrane Filter

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