ACHIEVING A NEW LEVEL OF PERFORMANCE IN MEMBRANE TECHNOLOGY

Highest Flux
Withstands the Harshest Environments
Quick & Easy Cleaning for Full Recovery
Longest Life of Any Membrane

SILICON CARBIDE FLAT PLATE MEMBRANES

Ideally suited for Sludge Thickening, High Rate MBR, Tertiary Treatment and Wet Weather Overflow Applications
**KEY HIGHLIGHTS**

- 0.1 µm pore size
- Completely hydrophilic
- High chemical and temperature tolerance
- Submerged design
- Resistant to damage from debris, grit, and coarse material
- Easily re-wetted after drying

**WHAT'S SO SPECIAL ABOUT SILICON CARBIDE?**

Silicon Carbide's natural properties effortlessly attracts water while repelling foulants. This results in extremely high sustainable fluxes and the ability to operate reliably in high solids and oils, as well as under other difficult conditions that polymeric membranes have shied away from. Silicon carbide is also one of the hardest materials in the world and forms membrane plates that are solid as a brick and able to withstand the broadest range of temperature, pH, chemicals, and pressures. SiC membranes have achieved a new level of performance in some of the most demanding applications.

**HOW IT'S MADE**

**SiC POWDER**
Silicon Carbide mixed into paste and extruded

**SUBSTRATE**
Extrusion fired at 2,000 °C to bind SiC grains

**MEMBRANE LAYER**
Membrane layer applied to substrate

**SiC PLATE**
0.1 micron SiC flat plate membrane
POTENTIAL APPLICATIONS

**HIGH RATE MBR**
SiC allows for operation at high MLSS, increasing MBR capacity within the same footprint

**SLUDGE THICKENING**
SiC expands the operating window for MBT, easier to recover from dewatering

**TERTIARY TREATMENT**
High flux, low footprint design with lower energy consumption than hollow fibers

**WET WEATHER OVERFLOWS**
CSO, SSO MBR peak flow, CAS peak flow. SiC can be completely dried, allowing for intermittent storm use

WITHSTANDS THE HARSHEST ENVIRONMENTS
THE OVIVO DIFFERENCE
200+ YEARS OF HERITAGE • 100% FOCUSED ON WATER

OPERATING LIMITS/CAPABILITIES

<table>
<thead>
<tr>
<th>Operating Parameter</th>
<th>Units</th>
<th>Silicon Carbide</th>
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</thead>
<tbody>
<tr>
<td>TSS</td>
<td>mg/l</td>
<td>&lt; 45,000</td>
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<tr>
<td>Oil &amp; Grease</td>
<td>mg/l</td>
<td>&lt; 500</td>
</tr>
<tr>
<td>Free Oil</td>
<td>mg/l</td>
<td>&lt; 500</td>
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<tr>
<td>pH</td>
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<td>1 - 14</td>
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<tr>
<td>Temperature</td>
<td>°C</td>
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<tr>
<td>Backwash Pressure</td>
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<tr>
<td>Chlorine Tolerance</td>
<td>wt%</td>
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</tr>
</tbody>
</table>

CSO Results
(Raw Sewage)

ALL OF YOUR MANUALS, ALL OF YOUR KNOWLEDGE, ALL IN ONE PLACE.

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