

### Supratec Flat Sheet (SFS) Membrane For MBR Applications

Based in Simmern/Hunsrück (Germany), Supratec Membrane GmbH is the membrane division of the Supratec Group, who has more than 40 years of experience in the water and wastewater treatment field. Supratec Group is well-known all over the world for its high efficiency fine bubble diffusers, but now Supratec is well respected as the highest German quality membrane supplier with more than 30 years membrane team experience. Supratec top quality hollow fiber and flat sheet membranes are manufactured with a fully automatic production lines based on Germany Industry 4.0 standard.



Combined with our OEM customers, Supractec Group has more than 5,000 installations in water and wastewater field globally.



This is one of the most modern membrane-manufacturing plants in the world with an annual membrane capacity larger than 7M m<sup>2</sup>, while Supratec UF cassettes are assembled in EU and Shanghai, China.

Supratec





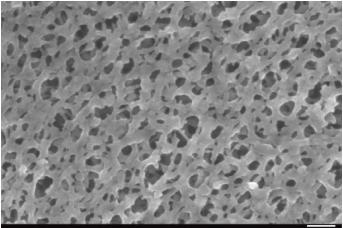
Supratec Membrane offers highest-quality ultrafiltration membranes based on PVDF at very competitive prices. Our membranes are characterized by an extremely porous and homogeneous pore structure. These excellent features lead to significant advantages in the operation of MBR applications:

- Significantly higher clean water permeability for UF membrane (> 2000 LMH/bar)
- Consistently higher flux rates for MBR applications compared to other membranes available in the market.
- Reduced energy costs due to higher porosity and lower membrane resistance (MBR air scour rate as low as 0.08 Nm<sup>3</sup>/h/m<sup>2</sup>)
- Lower investment costs due to a reduction of the required membrane area
- Strongly reduced membrane fouling due to smaller pore sizes and reduced pore blockage as well as associated longer service life of the membrane (up to 10 years)
- Enhanced cleaning efficiency and excellent cut off due to very narrow and even pore size distribution





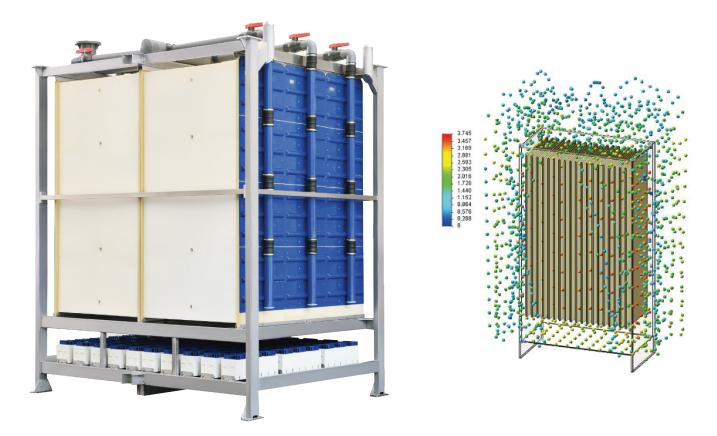




FDU-MS 2 SEM SEI 3.0kV X100,000 WD 2.0mm 100nn

## **SUPRATEC Flat Sheet MBR**

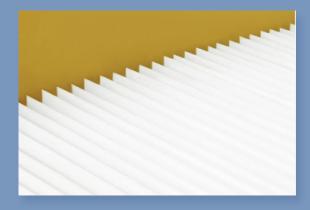
Plateless FS combining advantages of plate FS & HF



# Advantages of Supratec Flat Sheet MBR:

- True PVDF UF membranes with a nominal pore size of 0.03 μm, with an expected 6-log bacteria removal of 99.9999% and expected 4-log virus removal of 99.99 %.
- Proprietary siphon aerator scouring providing efficient air souring. Specific aeration demand, ranging from 0.08 to 0.12 Nm<sup>3</sup>/m<sup>2</sup>.h, is lower than other flat sheet competitors.
- 3. Backflushable, up to +1.5 m water head.
- 4. Outstanding chlorine total lifetime exposure (1,000,000 ppm.h).
- 5. Modular and flexible design with easily expandable and scalable configuration.





## **Global MBR References**

(Partial list shown)



Philippines, Industrial Wastewater (F&B) Capacity, 750 m<sup>3</sup>/d (2 systems)



China, Municipal MBR Capacity. 80,000 m<sup>3</sup>/d



China, Upgrading of a Municipal MBR Capacity, 75,000 m<sup>3</sup>/d



Malaysia,Domestic MBR Capacity, 1,500 m<sup>3</sup>/d



Philippines, Municipal MBR Capacity, 6,500 m<sup>3</sup>/d



Thailand, Industrial Wastewater, Salad Dressing Capacity, 360  $\mbox{m}^3\mbox{/d}$ 

## Supratec

### Germany

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