

**POREFLON™**

PTFE MF/UF Membrane Module

HIGH PERFORMANCE IN EXTREME CONDITIONS



## News & Highlights

### POREFLON™ Tested Best for Large Commercial Kitchen

#### Case Study

**Location:**

Hotel complex in Tokyo, Japan, 2016

**Goal:**

Stable, economic treatment of commercial kitchen/building wastewater treatment

**Capacity:**

200 m<sup>3</sup>/d (52,834 GPD)

#### Situation

A large-scale, commercial kitchen detoxification facility within a central Tokyo hotel complex needed a new wastewater treatment system. The treatment facility was managing wastewater from many restaurants within the hotel plant. The existing sand filtration system was failing to treat the wastewater adequately, due in part to the system's age, but also due to highly fluctuating volumes and oil content within the waste stream. Further, the treated water was needed for reuse in the hotel's sanitation facilities (bathrooms).

#### Testing

Two types of membrane filtration systems were considered. A flat membrane with experience at another facility and **POREFLON™ MBR** were analyzed and put to the test.

The wastewater from the kitchen is subject to sudden volume fluctuations daily, monthly

Choose **POREFLON™ PTFE** membranes for:  
**Chemical resistance.**  
**Tensile strength.**  
**Mechanical strength.**  
**Porosity. Hollow fiber.**  
**Wettability.**

#### Results

In the end, it was the **POREFLON™ MBR** wastewater treatment system that performed to the highest standard and was selected for installation.

**POREFLON's** high strength and chemical resistance led to longer life of the membranes and provided a favorable life cycle cost. The building owner approved use of the **POREFLON** membranes that were designed into the building and are at work today.

#### Treatment Process

**Raw Water → Aerobic → MBR → Activated Carbon → Water Reuse**

#### Water Quality

and seasonally. The oil content in the wastewater proved to be a challenging application for other technologies, but not for **POREFLON™**. Even under extreme conditions, the **POREFLON™ MBR** maintained stable operations.

	mg/L	Raw Water MBR	Treated Water
SS	800		<10
BOD	200		<5
n-Hex	150		<5

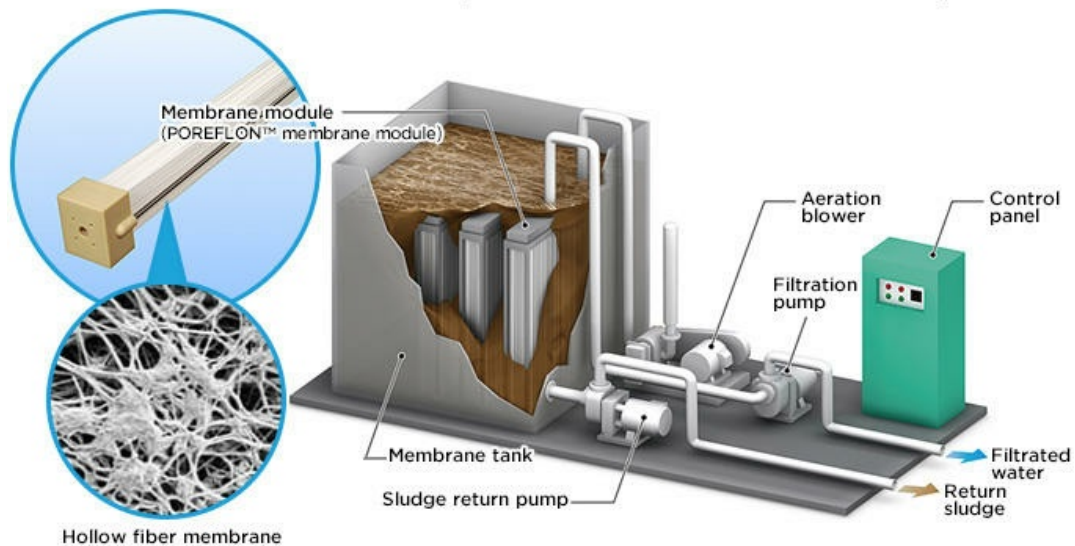
## Features of POREFLON™ Water Treatment Membrane Module

**Due to its high degree of flexibility**, Sumitomo Electric's PTFE hollow fiber membrane sways easily. The flexibility of the membrane and the intrinsic properties of the material give the membrane its fouling resistant property.

**POREFLON™ hollow fiber membranes** are made of a single material (PTFE) which has been proven 8 to 10 times stronger than other hollow fiber membranes made of different materials.

**The POREFLON™ wastewater treatment system** is packaged with a membrane tank, pumps, aeration blower, and a control panel. The membrane module design achieves efficient aeration by its dense array of hollow fiber membranes, while the other necessary equipment and devices are minimized, resulting in overall energy-saving system operations.

### POREFLON™ membrane separation wastewater treatment system



**Do you have challenges in the treatment of manufacturing wastewater?**

[Learn more about PTFE membrane technology today.](#)

Contact the Water Processing Group at Sumitomo Electric USA  
Phone: (408) 881-2011 | [Email](#)

### Video about POREFLON™

The multiple advantages of POREFLON™ PTFE in a Membrane Bio Reactor (MBR) system are highlighted [in this short video.](#)



**For specifications & a demo with Sumitomo's POREFLON™ PTFE**

With our sales and service teams in the U.S., we look forward to working with our customers in the Americas.

Please visit our product website and subscribe to our newsletter for case studies and additional information on our U.S. installations.



Visit our Website

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