

## Hyflux Launches Newest PVDF Member to Kristal® UF Hollow Fibre Family, 2000T

Hyflux announces a third addition to its recently expanded line of Kristal® ultrafiltration membranes, Kristal® 2000T. Fabricated from polyvinylidene fluoride (PVDF), it has characteristics that makes it ideal for wastewater treatment in and under aggressive environments and operating conditions. Coupled with thermal and pH adaptability, Kristal® 2000T has excellent mechanical properties that include high tensile strength, high shock- and UV- tolerance. In addition, its resistance to corrosive chemicals such as sodium hypochlorite and chlorine significantly improves its cleaning efficiency, as well as its overall membrane lifespan.

The Kristal® range never fails to ensure high permeate flux and quality, high throughput, and great system recovery. Kristal® has a proven, award-winning track record of consistently achieving optimal performance when treating industrial/municipal wastewater and seawater in large scale industrial and municipal projects - an important trait for Hyflux to be Highly Commended at the recent GWI Global Water Awards 2010 for "Desalination Deal of the Year" for not one, but two of its major seawater desalination projects. With its certified performance capabilities and internationally recognised brand name, Kristal® continues to set standards in the water industry for years to come.

For more information, please contact us at [sales@hyfluxmembranes.com](mailto:sales@hyfluxmembranes.com)

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## Hyflux Develops Zeolite-Based Ethanol Purification Solution

Hyflux recently saw a breakthrough in its ceramic-based membrane technology with its new ZeoZap® zeolite membrane. Targeted at the process of ethanol removal from ethanol fermentation broths, this membrane shows high ethanol/water selectivities and seeks to provide isomer separation solutions, especially in the removal of xylenes and C4-C8 hydrocarbons. This will prove a key milestone in the global search for energy-efficient ethanol extraction and purification technologies as countries race for alternative sources of energy.

Bioethanol has long established itself as the world's no. 1 biofuel and the bioethanol market has continued to grow rapidly in recent years, at a CAGR of approximately 18%, last year going beyond 81 million m<sup>3</sup>. Of that amount produced, over eighty percent (66 million m<sup>3</sup>) was used in fuel applications. The increasing use of bioethanol as a replacement for fossil fuels has already been pushed for years in the USA and Brazil, with these main markets producing 35 million m<sup>3</sup> and 24.2 million m<sup>3</sup> respectively. There is little doubt that the demand will continue to grow as the threat of energy crises festers and the world's need for energy continues to grow while fossil fuels deplete continually. With ZeoZap®, Hyflux is poised to offer another new solution to our impending environmental needs today.

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## Global Specialty Chemicals Manufacturer Endorses InoCep® in Latex Recovery Process

One of the largest manufacturers of specialty chemicals in Europe has collaborated with Hyflux to improve the efficiency of their latex recovery process in rubber production. With the integration of InoCep®, larger quantities of unrecovered latex from the rubber production stage can now be separated effectively from hot caustic soda used during clean-in-place (CIP) – a method of cleaning the interior surfaces of pipes, vessels, process equipment, without disassembly. By adopting InoCep® in their recovery system, customers can now reduce operating costs by recycling a larger volume of CIP chemicals, while increasing overall latex production levels.

Polymeric membranes are often used as the filtering media in conventional latex recovery systems. However, as high temperatures are required during its cleaning process, this often causes the membrane fibres to degrade at an accelerated pace. To reduce its detrimental impact, after CIP, heat from the hot caustic soda and recovered latex mixture are extracted first before being filtered. The filtered caustic soda is then heated up again before a repeated CIP process. With InoCep®'s superior thermal stability, the heat extraction step is eliminated altogether; reducing a plant's overall energy consumption. With its proven long service life, due to its enhanced ceramic-based mechanical strength, InoCep® ensures durability when operating at such high temperatures.

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