

# Industrial Wastewater

Multi-tech solutions for treating challenging water sources



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# DuPont Water Solutions Portfolio

## The broadest in the industry

Wastewater

Ultrapure Water

**MemPulse™**  
MBR

**DuPont™  
IntegraTec™**  
Ultrafiltration

**FilmTec™**  
Reverse Osmosis  
Nanofiltration

**DuPont™  
Electro-  
deionization**

**OxyMem™**  
MABR

**DesaliTec™**  
SOAR CCRO

**DuPont™  
Amber Series**  
Ion Exchange Resins

## Expertise Beyond the Product



### Design Software

- The industry's first fully integrated modeling software program to integrate our leading technologies – UF, RO, CCRO, IX



### Online Normalization Tool

- FT-Norm PRO – makes the normalization process simple to accomplish but robust enough to allow for effective monitoring of UF and RO systems



### Webinars

- Water Education Resource
- Provides insight on Application, Technology and Design Best Practices
- 30+ Webinars Available Online



### Value Calculators

- Cost Savings Calculator
- Resin Replacement Calculator
- Sustainability Navigator



### R&D Capabilities

- 4 world-class R&D centers
- Real world testing conditions
- Industrial scale assets
- Best-in-class analytical lab
- Cooperation with key institutions
- Product and application experts
- Customer collaboration projects



### System Optimization Services

- Testing, evaluation, and troubleshooting of IX, RO, NF and UF systems, water analysis
- Suggest corrective actions to enhance system performance
- DuPont™ FilmTec™ Fortilife™ DIRECTOR™, the biofilm quantification method

# Introduction

There is growing necessity for sustainable industrial wastewater treatment solutions. Currently, eighty percent of global wastewater, including industrial wastewater, is released to the environment without adequate treatment, according to UN World Water Development Report. There is considerable societal and environmental pressure on industrial water users to reduce the volume of wastewater they generate and ensure proper treatment of wastewater before discharge by adopting solutions that allow for the reuse of wastewater and recovery of valuable resources.

DuPont Water Solutions has a longstanding record of developing best-in-class industrial wastewater treatment technologies, offering customers an advanced portfolio of solutions, to tackle complex wastewater challenges and realize a circular water economy by:

- **Reducing effluent discharge:** DuPont multi-tech solutions help reduce the level of pollutants and overall volume of discharge, which can help to easily surpass the minimum standards of environmental regulations and can help organizations achieve their sustainability goals.
- **Reusing wastewater:** DuPont multi-tech solutions can support the reuse of wastewater, helping to reduce the cost of sourcing water and wastewater surcharges, while improving water availability in regions facing water scarcity.
- **Recycling by-products:** DuPont multi-tech solutions can help recover salts and other valuable materials from wastewater streams to compensate for wastewater treatment operational costs by offering additional revenue streams.

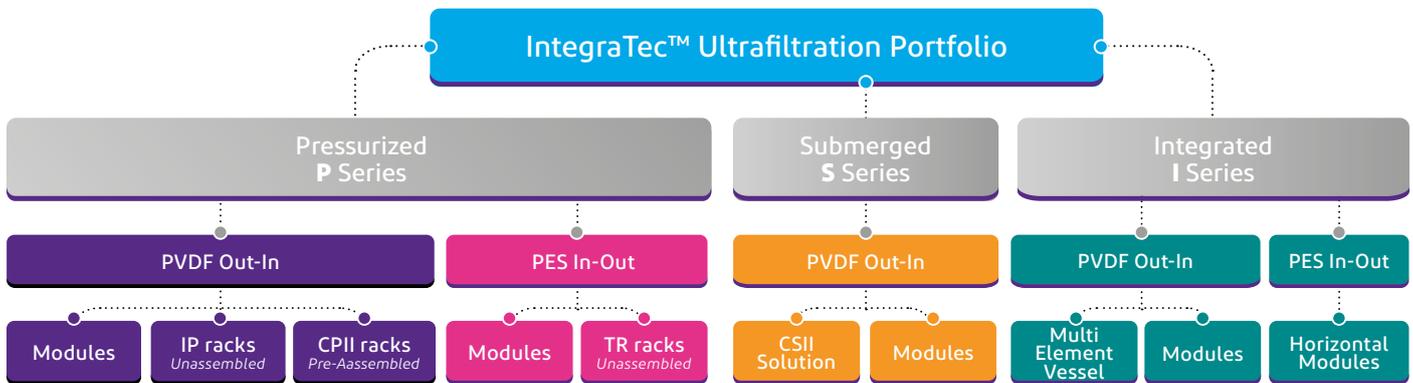
DuPont Water Solutions is working to create a water optimized world, helping organizations to demonstrate corporate social responsibility through responsible wastewater stewardship with energy efficient and circular economy approaches.

# Removal of Suspended Solids & Colloids in Wastewater

As part of the pretreatment steps, the adequate removal of suspended solids & colloids in wastewater could create a good feed water quality for in-depth treatment & reuse process and ensure the efficient and stable operation of facilities like reverse osmosis systems.

**DuPont™ IntegraTec™ Ultrafiltration (UF)** is an excellent technology that separates particulate matter from soluble compounds using ultrafine membrane media.

DuPont offers a wide selection of UF modules, skids and systems that provide industries with solutions to address their challenges while helping to maintain lowest total cost of ownership and managing reliable and profitable operation.



## Key Products

Sub technology	Type	Brand name	Fiber	Best Used For
Pressurized P Series	Rack solutions	IntegraTec™ XP 51 IP / XP 51 IP IG	PVDF Out-In	<ul style="list-style-type: none"> <li>Containerized or small size plant</li> <li>High recovery filtration with high chlorine resistance</li> </ul>
		IntegraTec™ XP 77 IP / XP 77 IP IG	PVDF Out-In	<ul style="list-style-type: none"> <li>Large size plant</li> <li>High recovery filtration with high chlorine resistance</li> </ul>
		IntegraTec™ MB PRO 95 TR / MB 80 TR	PES In-Out	<ul style="list-style-type: none"> <li>Large size plant</li> <li>Low energy filtration with high TOC &amp; Virus log removal</li> </ul>
		IntegraTec™ MB PRO 82 / MB 60 / MB 40 TR S	PES In-Out	<ul style="list-style-type: none"> <li>Containerized or small size plant</li> <li>Low energy filtration with high TOC &amp; Virus log removal</li> </ul>
		IntegraTec™ MB 50 TR	PES In-Out	<ul style="list-style-type: none"> <li>Large size plant</li> <li>High TSS water, Low energy filtration with high TOC &amp; Virus log removal</li> </ul>
	Open platform modules	IntegraTec™ XP 51 / XP 51 IG	PVDF Out-In	<ul style="list-style-type: none"> <li>Containerized or small size plant</li> <li>High recovery filtration with high chlorine resistance</li> </ul>
		IntegraTec™ XP 77 / XP 77 IG	PVDF Out-In	<ul style="list-style-type: none"> <li>Large size plant</li> <li>High recovery filtration with high chlorine resistance</li> </ul>
		IntegraTec™ MB PRO 95 / MB PRO 82 / MB 80	PES In-Out	<ul style="list-style-type: none"> <li>Large size plant</li> <li>Low energy filtration with high TOC &amp; Virus log removal</li> </ul>
		IntegraTec™ MB 60 / MB 40	PES In-Out	<ul style="list-style-type: none"> <li>Containerized or small size plant</li> <li>Low energy filtration with high TOC &amp; Virus log removal</li> </ul>
	Small Modules	IntegraTec™ MB 38	PES In-Out	<ul style="list-style-type: none"> <li>Small size plant</li> <li>High TSS water, Low energy filtration with high TOC &amp; Virus log removal</li> </ul>
		IntegraTec™ SFP-2660	PVDF Out-In	<ul style="list-style-type: none"> <li>Small scale plants and pilot units</li> <li>High recovery filtration with high chlorine resistance</li> </ul>
	Retrofit and Upgrade	IntegraTec™ MB 25	PES In-Out	<ul style="list-style-type: none"> <li>Small scale plants and pilot units</li> <li>Low energy filtration with high TOC &amp; Virus log removal</li> </ul>
		IntegraTec™ XP 55 UXA	PVDF Out-In	<ul style="list-style-type: none"> <li>Replace Pall &amp; Asahi Modules</li> </ul>
		IntegraTec™ N 68 AMU	PVDF Out-In	<ul style="list-style-type: none"> <li>Retrofit and Upgrade Pall &amp; Asahi systems</li> </ul>
		IntegraTec™ N 68 AMZ	PVDF Out-In	<ul style="list-style-type: none"> <li>Retrofit and Upgrade Veolia (Suez) systems</li> </ul>
Integrated I Series	Horizontal Modules	IntegraTec™ N 68 AMK	PVDF Out-In	<ul style="list-style-type: none"> <li>Retrofit and Upgrade Side Fed PVDF out-In systems</li> </ul>
		IntegraTec™ MB 55	PES In-Out	<ul style="list-style-type: none"> <li>Replace Pentair vertical Modules</li> </ul>
	Multi-Element-vessel MEV	IntegraTec™ MB 55	PES In-Out	<ul style="list-style-type: none"> <li>Replace Pentair vertical Modules</li> </ul>
		IntegraTec™ MB 40 HB	PES In-Out	<ul style="list-style-type: none"> <li>Replace Pentair horizontal Modules</li> </ul>
		IntegraTec™ MB PRO 64 H / MB 55 H	PES In-Out	<ul style="list-style-type: none"> <li>Replace Pentair horizontal Modules</li> </ul>
IntegraTec™ XP 52 IC	PVDF Out-In	<ul style="list-style-type: none"> <li>Large size outdoor or mobile plants requiring high pressure and low footprint</li> <li>High recovery filtration with high chlorine resistance</li> </ul>		

## Wastewater Reuse



### Treating Challenging Waters with FilmTec™ Fortilife™ CR-series

Clean less, recover more, and waste less

There is increased awareness of the consumption of water for industrial purposes and the large unnecessary burden this can place on local municipalities and other industries. Government regulations and corporate sustainability goals mean that action is necessary to reduce the impact of industrial water. Simply reducing freshwater consumption may not be sufficient to achieve these goals, and industrial users are increasingly turning to an alternative and immediately accessible source of water – wastewater. While readily available, industrial wastewater tends to be the most challenging water to treat due to high chemical oxygen demand (COD), total organic carbon (TOC), total suspended solids (TSS), and total dissolved solids (TDS).

The DuPont Water Solutions technology portfolio is specifically designed to address this challenge, offering reliable and

effective wastewater treatment solutions to clean-less, recover-more, and waste-less. The FilmTec™ Fortilife™ CR-series reverse osmosis (RO) portfolio offers RO modules expertly designed to produce high quality permeate water suitable for reuse while reducing the required frequency of cleanings in biological and organic fouling prone systems – simultaneously increasing uptime and water productivity while decreasing chemical usage. The complementary DuPont™ IntegraTec™ ultrafiltration (UF) portfolio offers a variety of modules that can be used for pre-treatment, removing particulates and reducing TSS levels. Meanwhile, DuPont™ AmberLite™ ion exchange softening resins can be integrated into the system to efficiently reduce water hardness and alkalinity, avoiding scale formation of sparingly soluble salts, such as calcium carbonate.

FilmTec™ Element	% Salt Rejection		Flow GPD (m <sup>3</sup> /day)	Benefit
	Stabilized	Minimum		
FilmTec™ Fortilife™ CR200	99.7%	99.4%	12,500 (47.3)	Expertly designed membrane and ultra-low pressure drop module design to reduce energy consumption while providing superior biological and organic fouling resistance.
FilmTec™ Fortilife™ CR100(i)	99.8%	99.6%	11,500 (43.5)	Advanced membrane and ultra-low pressure drop module design providing superior biological fouling resistance.
FilmTec™ Fortilife™ CR50(i)	99.6%	99.4%	11,500 (41.6)	Robust membrane and low pressure drop module design providing biological fouling resistance.

# Sustainable solutions for industrial wastewater treatment.



# Minimum Liquid Discharge

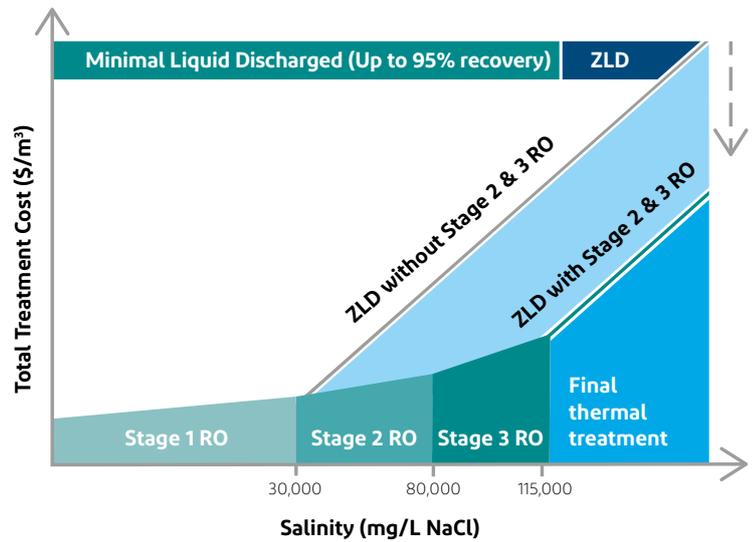
A water management approach aimed to increase water recovery and reduce costs

The reduced access to freshwater sources along with more stringent discharge restrictions, has prompted the search for economical and environmentally friendly methods to extract value from wastewater, recognizing it as a precious resource rather than a waste stream. Zero liquid discharge (ZLD) using thermal treatment to recover and reuse wastewater has proved to be energy intensive and results in waste salts that are directed to landfill – an alternative, long term sustainable solution is needed.

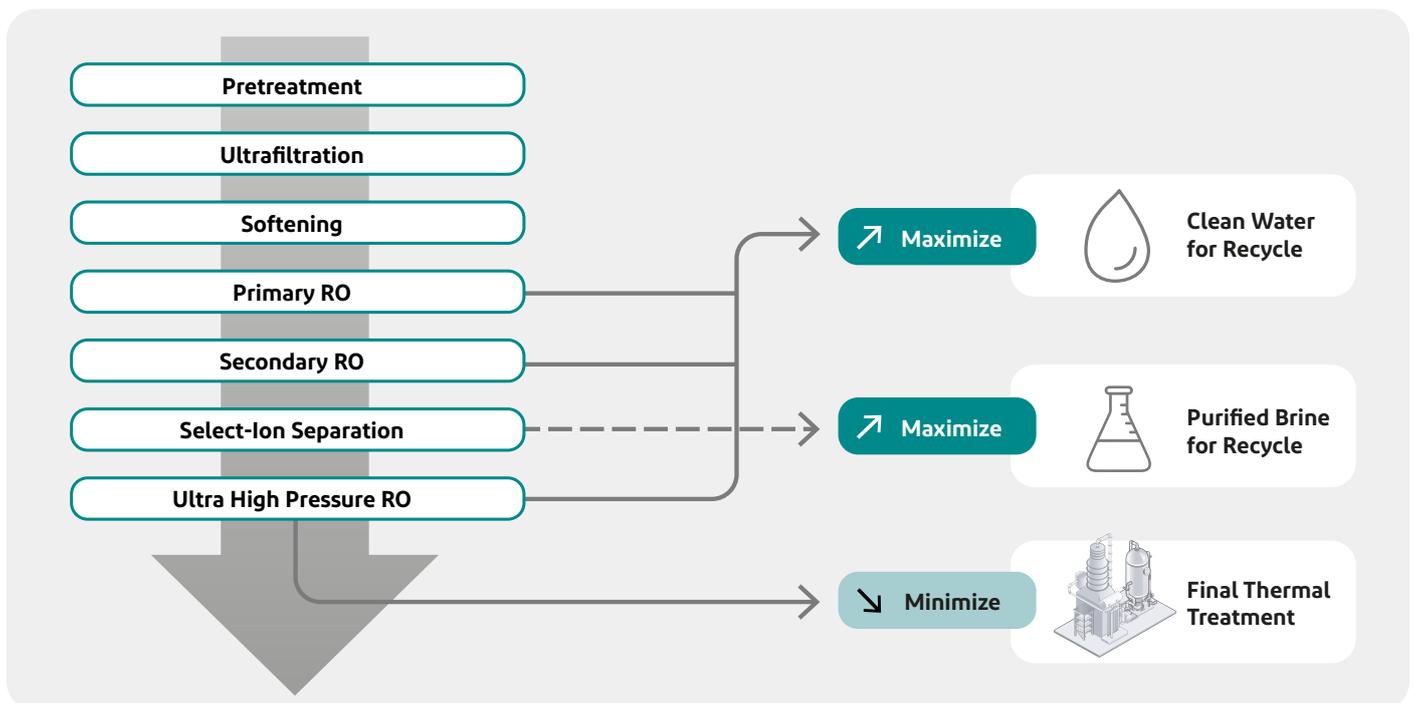
DuPont’s minimum liquid discharge (MLD) solution harnesses a collection of proven technologies – FilmTec™ Fortilife™ reverse osmosis & nanofiltration, IntegraTec™ ultrafiltration, and DuPont™ AmberLite™ ion exchange technologies and processes that help enable users to achieve up to 95% liquid discharge recovery at a fraction of ZLD’s costs. Coupling DuPont’s MLD solution with traditional thermal treatment can help to greatly reduce the energy requirement to recover water and achieve ZLD while also providing options to recycle and reuse salts, reducing landfilled waste.

DuPont Water Solutions can help you overcome wastewater regulatory challenges with technology that has the potential to minimize your operating costs and maximize water recovery while reducing energy consumption.

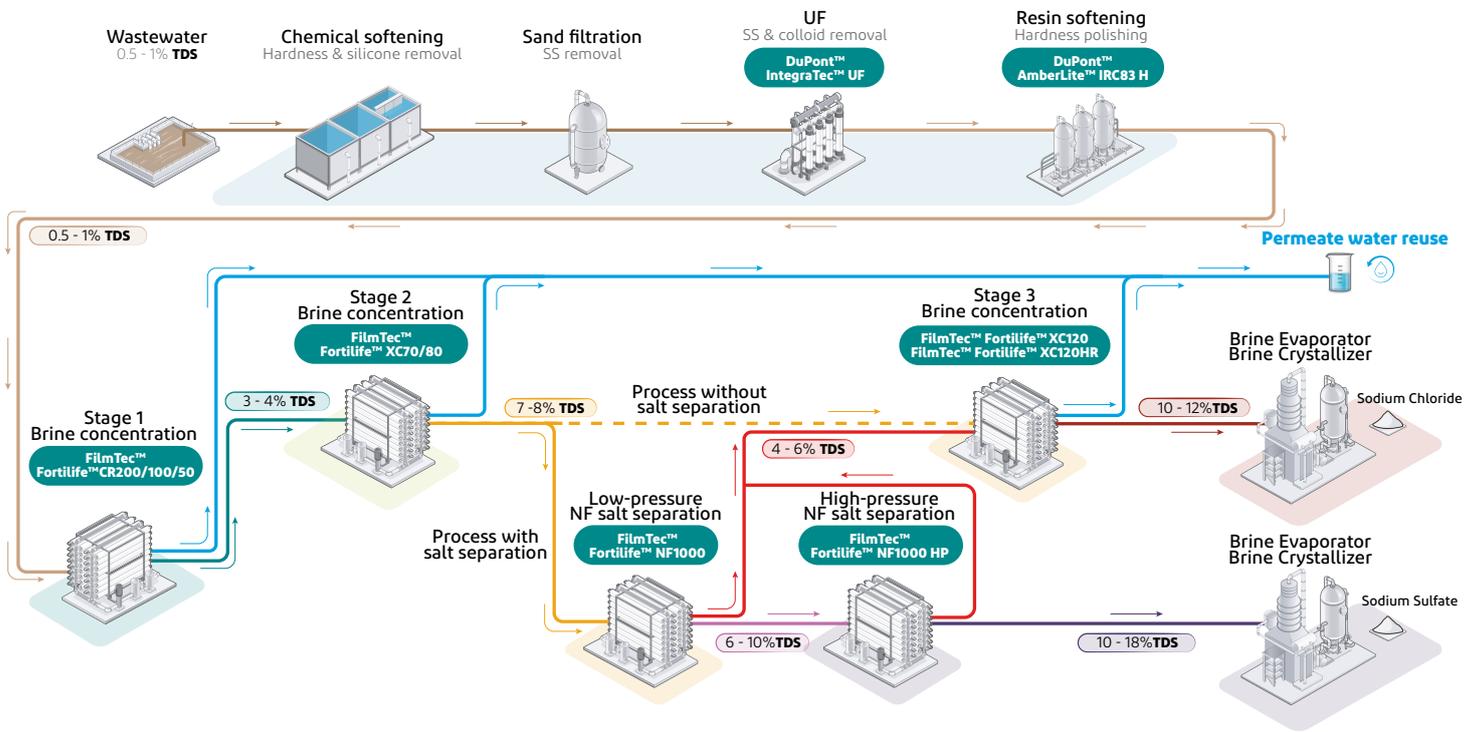
**Cost Benefit of Minimal Liquid Discharged (MLD) Coupled with Zero-Liquid Discharge (ZLD)**



With the industry’s broadest portfolio of sustainable purification and separation technologies, DuPont can help you achieve your MLD goals and get you on a path toward cost savings and higher recovery today.



# Minimum Liquid Discharge (MLD) Total Solution



## The FilmTec™ Fortilife™ XC Element Family

The FilmTec™ Fortilife™ XC family is comprised of four products, each offering unique features and benefits, enabling a tailored solution to meet your MLD goals.

FilmTec™ Element	Approximate TDS Treatment Range (ppm)*	Benefits
FilmTec™ Fortilife™ XC70	15,000 – 70,000+	<ul style="list-style-type: none"> <li>Concentrate TDS to reach &gt; 70,000 ppm* while operating ≤ 83 bar</li> <li>High productivity and high quality permeate water for reuse</li> <li>Fouling resistant membrane and module design</li> <li>Less frequent cleaning, allowing for greater up-time and extended element life</li> </ul>
FilmTec™ Fortilife™ XC80	15,000 – 80,000+	<ul style="list-style-type: none"> <li>Concentrate TDS to reach &gt; 80,000 ppm* while operating ≤ 83 bar</li> <li>Lower brine volume and maximize water recovery with standard RO system design</li> <li>Fouling resistant membrane and module design</li> <li>Less frequent cleaning, allowing for greater up-time and extended element life</li> </ul>
FilmTec™ Fortilife™ XC120	60,000 – 120,000+	<ul style="list-style-type: none"> <li>Concentrate TDS to reach &gt; 120,000 ppm* while operating ≤ 83 bar</li> <li>Robust membrane designed for an extended element life</li> <li>Durable and capable of withstanding cleaning over a broad pH range (1-13) for effective membrane/system maintenance</li> </ul>
FilmTec™ Fortilife™ XC120HR	60,000 – 120,000+	<ul style="list-style-type: none"> <li>Concentrate TDS to reach &gt; 120,000 ppm* while operating ≤ 120 bar</li> <li>Produces high quality permeate ready for reuse</li> <li>Robust membrane designed for an extended element life</li> <li>Durable and capable of withstanding cleaning over a broad pH range (1-13) for effective system maintenance</li> </ul>

\* Values are representative of a feedwater containing sodium chloride

# Resource Recovery

Industrial wastewater has incredible potential as a source of valuable resources. By recovering salts and other chemical compounds, resource recovery can help enable a circular economy while increasing the sustainability and affordability of water recycle systems.

DuPont’s resource recovery approach uses FilmTec™ Fortilife™ NF1000 and NF1000 HP nanofiltration (NF) elements to reduce the volume of costly waste disposal by converting a large proportion of the RO concentrate into purer, easier to crystallize salt solutions. Enabled by DuPont technologies, China’s Coal to Chemical industry recovers high quality sodium chloride and sodium sulfate from its wastewater MLD process, allowing for the reuse of those salts within other industries, including chlor-alkali, soda, dyeing, leather processing, and construction. Salt recovery has helped these facilities reduce operational costs, shrink their carbon footprint, and open additional revenue streams through carbon credits and carbon trading programs.

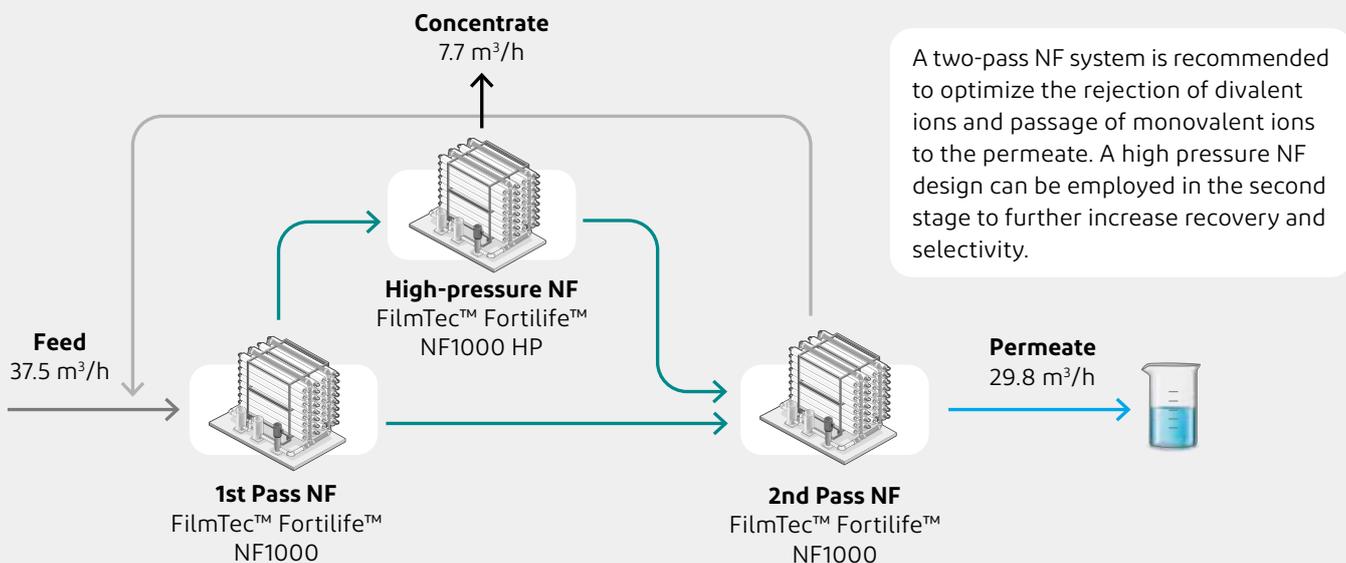
**Recycled Salt options**

Use NF membrane process to separate NaCl and Na<sub>2</sub>SO<sub>4</sub>

FilmTec™ Element	Approximate TDS Treatment Range (ppm)*	Benefits
FilmTec™ Fortilife™ NF1000/NF1000 HP	0 – 160,000+	<ul style="list-style-type: none"> <li>• Selective membrane with high monovalent ion passage</li> <li>• High permeability enabling low energy operation</li> <li>• Less dissolved solid waste</li> </ul>

\* Values are representative of a feedwater containing sodium chloride

## Recommended salt separation system design with FilmTec™ Fortilife™ NF1000 HP



# Ferric Phosphate (FePO<sub>4</sub>) Wastewater Treatment

As part of the evolving new energy landscape, there is increasing demand for Lithium Ferric Phosphate (LFP) batteries. As the important precursor of LFP cathode material, the production of ferric phosphate (FePO<sub>4</sub>) is also booming. However, treating the manufacturing wastewater can be extremely costly and cumbersome, and can hinder efforts to expand the capacity of FePO<sub>4</sub> plants. The traditional wastewater treatment process requires a vast amount of chemicals and generates solid waste almost equal to the weight of the FePO<sub>4</sub> product – creating a significant barrier to the growth of the industry.

or sodium sulfate, can be re-purposed as chemical fertilizer. Ultimately, DuPont’s FePO<sub>4</sub> wastewater treatment solution can significantly reduce the discharge of wastewater and production of solid waste by maximizing the recovery of water and valuable solid resources. This approach is helping FePO<sub>4</sub> plants to significantly reduce their operational costs while demonstrating a sustainable method of LFP material manufacturing.

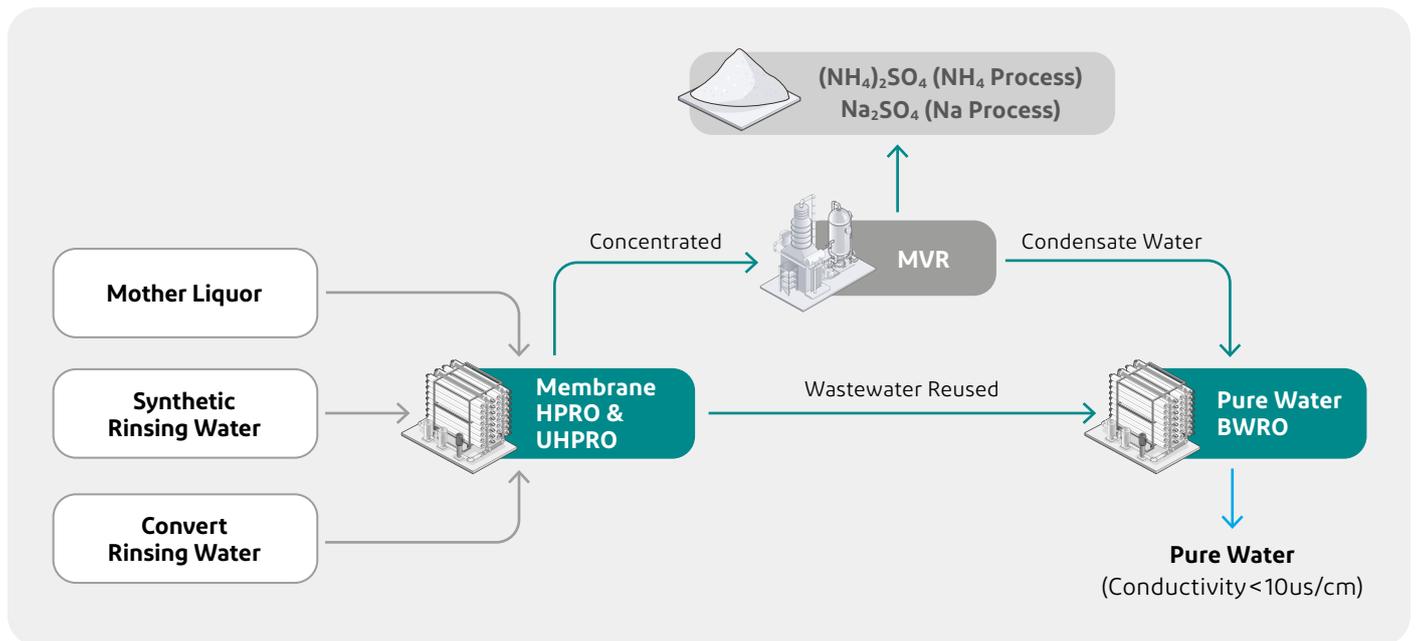
DuPont’s resource recovery approach provides a total solution combining proven membrane technologies to allow for the high recovery of water and valuable resources from FePO<sub>4</sub> wastewater. By using a combination of state of the art membrane products such as FilmTec™ Fortilife™ XC120HR, FilmTec™ Fortilife™ XC70, FilmTec™ Fortilife™ XC120, FilmTec™ Fortilife™ CR200, FilmTec™ Fortilife™ CR100 as well as FilmTec™ BW30XHR PRO and FilmTec™ ECO PRO-440, high quality RO permeate water can be reused in the manufacturing process and valuable salt by-products, such as ammonia sulfate



## Product Recommendation

FilmTec™ Element	Process step	Benefits
FilmTec™ Fortilife™ XC70	High pressure (<83bar)	<ul style="list-style-type: none"> <li>Concentrate TDS to reach &gt; 70,000 ppm* while operating ≤ 83 bar</li> <li>High productivity and high quality permeate water for reuse</li> <li>Fouling resistant membrane and module design</li> <li>Less frequent cleaning, allowing for greater up-time and extended element life</li> </ul>
FilmTec™ Fortilife™ XC80	High pressure (<83bar)	<ul style="list-style-type: none"> <li>Concentrate TDS to reach &gt; 80,000 ppm* while operating ≤ 83 bar</li> <li>Lower brine volume and maximize water recovery with standard RO system design</li> <li>Fouling resistant membrane and module design</li> <li>Less frequent cleaning, allowing for greater up-time and extended element life</li> </ul>
FilmTec™ Fortilife™ XC120	High pressure (<83bar)	<ul style="list-style-type: none"> <li>Concentrate TDS to reach &gt; 120,000 ppm* while operating ≤ 83 bar</li> <li>Robust membrane designed for an extended element life</li> <li>Durable and capable of withstanding cleaning over a broad pH range (1-13) for effective membrane/system maintenance</li> </ul>
FilmTec™ Fortilife™ XC120HR	Ultra-high pressure (<120bar)	<ul style="list-style-type: none"> <li>Concentrate TDS to reach &gt; 120,000 ppm* while operating ≤ 120 bar</li> <li>Produces high quality permeate ready for reuse</li> <li>Robust membrane designed for an extended element life</li> <li>Durable and capable of withstanding cleaning over a broad pH range (1-13) for effective system maintenance</li> </ul>
FilmTec™ ECO-PRO 440	2nd-pass BWRO	<ul style="list-style-type: none"> <li>Low energy BWRO membrane element</li> <li>High TDS rejection</li> </ul>
FilmTec™ BW30XHR PRO-440	2nd-pass BWRO	<ul style="list-style-type: none"> <li>Extra high rejection BWRO membrane element</li> <li>Exceptional permeate quality including excellent silica, boron, nitrate, TOC and ammonium rejection</li> </ul>

\* Values are representative of a feedwater containing sodium chloride



## Treatment of Landfill Leachate

Globally, leachate from landfill or municipal solid waste incineration power plants contain high concentrations of COD, BOD, dissolved salts, ammonia, nitrogen, and heavy metals, making it one of the most challenging wastewater sources to treat.

A RO/NF membrane is a barrier to soluble salts, inorganic molecules, and organic molecules, making it highly effective at removing contaminants in the leachate treatment process. However, leachate is prone to causing fouling of membranes, requiring frequent CIP, shortening the lifespan of membranes and leading to instability in the quality of permeate water. DuPont™ FilmTec™ NF products benefit from robust, expertly designed and optimized membrane chemistry to help enable

reliable performance over an extended element lifetime. They can help overcome challenges in the leachate treatment process, achieving consistent permeate water quality through excellent COD and color removal, in addition to partially removing hardness.

DuPont™ FilmTec™ Fortilife™ RO products feature robust, fouling-resistant membranes to help achieve reliable long-term performance.

They are capable of withstanding cleanings over a broad pH range (pH 1–13) allowing for effective cleaning in cases of severe fouling without impacting on membrane integrity or lifespan.

### Objective 1

High recovery for reuse



### Challenge 1

high recovery expectation with increasingly challenging feed water

- Membrane fouling
- Membrane scaling

### Objective 2

Qualified permeate water quality for reuse/discharge



### Challenge 2

more stringent discharge & reuse requirements

- Color issue
- Specific ions requirements (like TN, Cl- or TDS)

### Objective 3

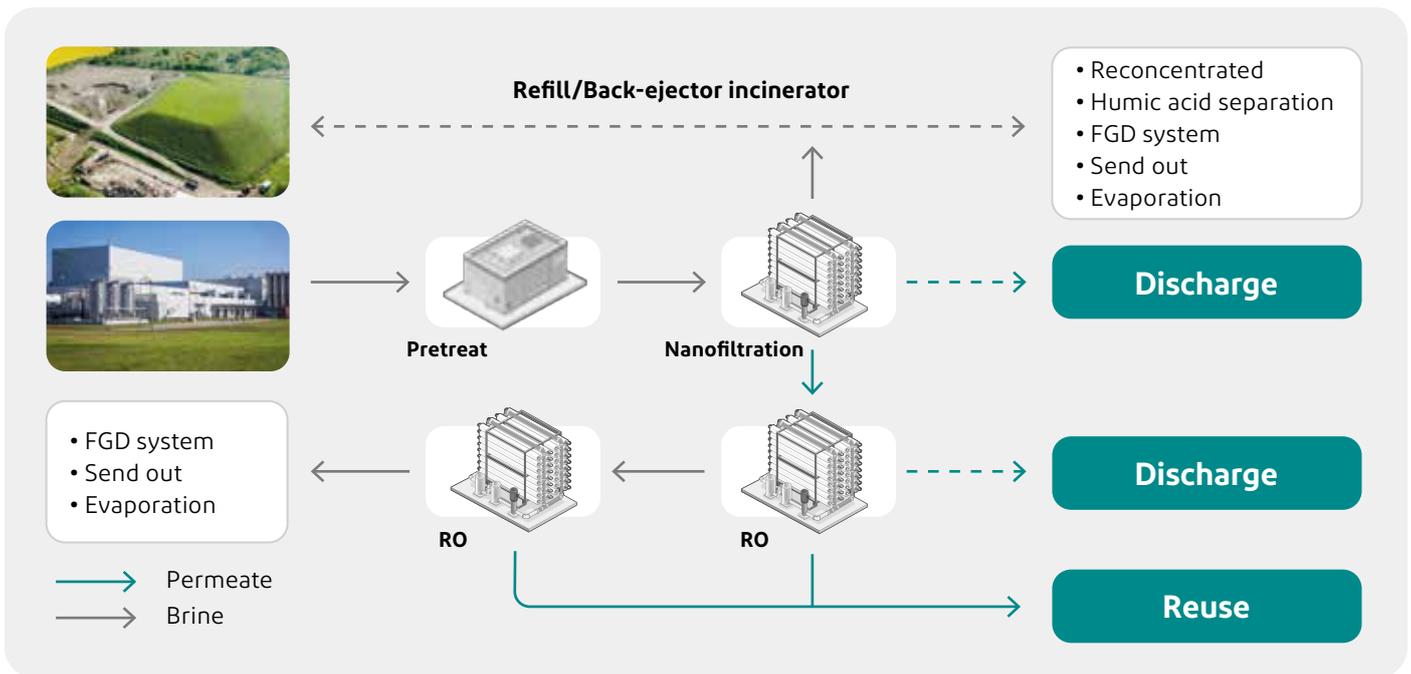
MLD/ZLD



### Challenge 3

excessive amount of brine water leads to MLD process

- Lower the cost of ZLD
- Provide alternatives to ZLD



FilmTec™ Element	Benefits
FilmTec™ Fortilife™ NF1000	<ul style="list-style-type: none"> <li>• High monovalent-divalent ion selectivity allows for the production of high purity salt solutions while reducing the volume of liquid directed to downstream thermal treatment</li> <li>• Expertly designed and optimized membrane chemistry to enable robust and reliable performance throughout element lifetime</li> <li>• High productivity membrane allows for increased water and resource recovery and/or reduced energy consumption</li> </ul>
FilmTec™ Fortilife™ XC70	<ul style="list-style-type: none"> <li>• Allows system reject total dissolved solids (TDS) levels &gt; 70,000 mg/L and reduced concentrate stream volume within standard RO system operation.</li> <li>• Robust, fouling-resistant membrane for reliable long-term performance.</li> <li>• Durable and capable of withstanding cleaning over a broad pH range (pH 1-13) allowing for effective cleaning in cases of severe fouling.</li> </ul>

## FilmTec™ Fortilife™ Service

### FilmTec™ Fortilife™ MATRIX Design (beyond iSD)

FilmTec™ Fortilife™ Matrix is an innovative DuPont RO/NF system design concept. By combinedly using RO/NF membrane elements with different permeability in series in the same system, FilmTec™ Fortilife™ Matrix can help optimize the balance of water distribution among elements at different positions and enhance systems' resistance to fouling with better hydraulic conditions, which could lead to lower frequency of required cleaning, lower system energy consumption and longer time of stable operation. Additionally, FilmTec™ Fortilife™ Matrix also has potential to avoid the usage of inter-stage boost pumps in system design to reduce the required capital investment.

There are two methods to apply FilmTec™ Fortilife™ Matrix in RO/NF system design:

1. Use different membrane elements at different stages in multi-stage systems;
2. Use different membrane elements in series in the same pressure vessel, which could also be called as internally-staged Design (iSD).



## FilmTec™ Fortilife™ DIRECTOR™ Biofilm Visualization Tool

FilmTec™ Fortilife™ DIRECTOR™ Biofilm Visualization Tool helps RO users to understand the fouling characteristics of compromised RO systems. With this knowledge, appropriate system maintenance protocols can be established to mitigate the impact of biofouling and improve system up time and reliability. By optimizing the maintenance processes of systems prone to biofouling, operators can achieve energy savings while reducing loss of productivity due to down time and low recovery operation.



Increased reliability



Reduced energy consumption



Reduced chemical usage

### Industry-leading Biofouling Visualization Tool

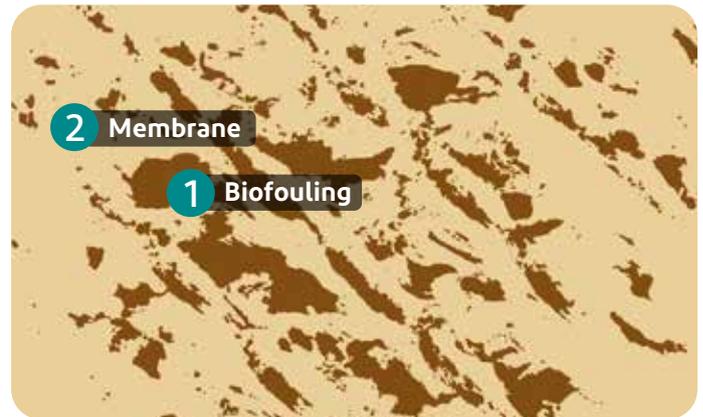
FilmTec™ Fortilife™ DIRECTOR™ does not alter the biofilm structure nor interact with the membrane. It provides a sharp image that enables the visualization and quantification of the membrane surface covered by biofilm.

### Helps enable customers to

- Accurately determine the extent of membrane biofouling
- Optimize the efficiency of cleaning processes
- Define an optimal membrane replacement strategy



Autopsied biofouled RO



After FilmTec™ Fortilife™ DIRECTOR™

### Benefits



Fast



Economic



Safe to Handle



Sharp Definition

### The tool allows users to:

- Differentiate the membrane area from the biofilm surface
- Study the distribution and morphology of biofilm
- Detect problems in membrane surface (imprint or defects)
- Obtain a detailed image of the membrane surface
- Calculate the biofilm surface area

# Powering Performance Worldwide

Location	Industry	Process	Application	Feed capacity m <sup>3</sup> /h
Australia	Municipal	sUF - RO	WWR	540
Brazil	Food & Beverage	RO	WTP	450
Brazil	Chemical & Petrochemical	RO	WTP	300
Brazil	Food & Beverage	UF + RO	WWR	134
China	Textile	UF+RO+WAC+UF+NF1+RO2+UF+RO3+RO4+MVR	MLD	6,600
China	Municipal	UF+RO	IWT	3,300
China	Coal Chemicals	UF+BWRO+IER+UF+NF+BWRO+SWRO+UHPRO	MLD	3,000
China	Coal Chemicals	UF+SAC+WAC+BWRO+SWRO	MLD	2,800
China	P&P	UF+RO	WWR	2,500
China	Coal chemicals	UF+RO	WWR	2,500
China	Metal	UF+RO	WWR	2,500
China	Coal Chemicals	UF+WAC+BWRO+SWRO(HERO)	MLD	2,300
China	Steel	UF+RO	WWR	2,000
China	Coal Chemicals	UF+IER+ROSWRO	MLD	2,000
China	Chemicals	UF+RO	WWR	2,000
China	Coal chemicals	UF+RO	WWR	2,000
China	Chemicals	UF+RO	WWR	1,600
China	Coal Chemicals	UF+RO	MLD	1,500
China	Steel	UF+ 2 pass RO+NF+SWRO	MLD	1,300
China	Coal Chemicals	UF+IER+RO+NF+SWRO	MLD	1,300
China	P&P	UF+SWRO+UHPRO	MLD	1,250
China	P&P	UF+RO	WWR	1,200
China	P&P	UF+RO	WWR	1,200
China	Coal chemicals	UF+MLD	MLD	1,000
China	Coal chemicals	UF+MLD	MLD	1,000
India	Textile	PT+QF+WAC+RO+NF+RO+MEE+ATFD	ZLD	333
India	Textile	PT+QF+WAC+RO+MEE+ATFD	ZLD	250
India	Textile	PT+QF+WAC+RO+UF+NF+RO+MEE+ATFD	ZLD	230
India	Textile	PT+MGF+UF+RO+MEE+ATFD	ZLD	175
India	Textile	PT+UF+NF+RO+MEE+ATFD	ZLD	110
India	Textile	PT+MBR+RO+MEE+ATFD	ZLD	75
India	Textile	PT+MGF+RO+MEE+ATFD	ZLD	50
Indonesia	Palm Oil	UF RO	IWW	120
Indonesia	Nutrition - Sugar	RO	IWT	80
Malaysia	Power	MMF+2-pass RO	IUW	90
Mexico	Chemical & Petrochemical	UF + RO	WWR	910
Mexico	Metal & Mining	MBR + RO	WWR	55
Singapore	Microelectronics	h-DWS UF+RO	IWW	260
Thailand	Industrial	RO	IWW	225
Thailand	Starch	RO	IWW	100
Thailand	Latex	RO	IWW	100
Thailand	Starch	RO	IWW	100

# You can learn more about our solutions here

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## Applications for Industrial Wastewater



## FilmTec™ Fortilife™ RO Portfolio



## DuPont™ IntegraTec™ Ultrafiltration Capabilities



## Customer Success Stories



## Water Solutions

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