Nothing is forever... ECOTHOR®-EOx Onsite PFAS Destruction

ECOTHOR-EOX

NOTHING IS FOREVER $^{\text{TM}}$ is our mantra. E2metrix strives to show the world that nothing needs to last forever, including chemicals such as PFAS, in our waterways.

Our waters are loaded with complex, toxic contaminants, from persistent organic pollutants to pharmaceuticals, hormones and the dreaded PFAS, known as forever chemicals. Through our patented, cost-effective ECOTHOR®-EOx electro-oxidation process, these lingering, dangerous chemicals can be a thing of the past in our waters.

Society should accept nothing more than CLEAN WATER FOR ALL, free from PFAS and other emerging contaminants.



What are PFAS?

Per- and polyfluoroalkyl substances, or PFAS, are chemicals used in consumer and industrial goods (ex. fire fighting foams, non-stick cookware, packaging, stain or water- resistant fabrics).







Why are they harmful?

There is overwhelming evidence that persistent exposure to PFAS at the parts-per-trillion (ppt) levels or below in water, is toxic to human health, leading to cancers and many other sicknesses. More importantly, PFAS are not biodegradable, the reason why some refer to them as "forever chemicals". At least 98% of all Americans have detectable levels of PFAS in their blood.

What is ECOTHOR®-EOx?

ECOTHOR®-EOx for Onsite PFAS Destruction leverages over a decade of experience in developing, designing, fabricating and delivering commercial ECOTHOR® electrotechnology solutions for a wide range of applications and contaminants.

All the features from ECOTHOR® - industrial, robust design, optimal hydraulics from CFD modeling, ease of maintainability, automation, remote operation on multiple platforms - have been incorporating into ECOTHOR®-EOx for Onsite PFAS Destruction.

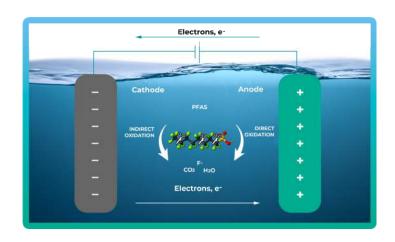
High Destruction efficiencies are achievable using ECOTHOR®-E0x on a wide variety of water and effluents:

- Drinking Water
- Municipal wastewater
- Landfill Leachate
- Contaminated groundwater
- Industrial wastewater
- Foamate from foam fractionation
- Concentrate from IX resin regeneration



ECOTHOR® EOX

ECOTHOR®-EOx, is a patented electro-oxidation (E0) process from E2metrix. An electrical current is passed through water being treated continuously by the ECOTHOR®-EOx reactors. Oxidants are created which lead to breaking these C-F bonds into carbon dioxide (CO2) and fluoride (F-), both which are harmless at these low levels.



		% MASS REDUCTION	
WATER	MARKET	TOTAL PFAS	PF0A-PF0S
RO Concentrate	Drinking Water, Municipal	87%	92%
Foamate	Drinking Water, Municipal	80%	85%
IX Resin Regeneration Solution	Drinking Water, Municipal	82%	>99.9%
Contaminated groundwater	Site Remediation (AFFF)	76%	98%
Contaminated groundwater	Site Remediation (AFFF)	96%	99%
Raw Leachate	MSW Landfill	62%	99%
Raw Leachate	MSW Landfill	64%	92%
	INTEGRATED SOLUTIONS	>99.9%	>99.9%

When ECOTHOR®-EOx is integrated with concentrating and polishing steps, this process can reduce the treatment costs by over 80% vs current approaches. Moreover, ECOTHOR®-EOx can be easily operated at the site of capture, avoiding transportation and long-term liability concerns.





