

Regenerable Adsorbent Materials



With the production and distribution of regenerable adsorbent materials we remove arsenic, fluorine, boron, iodine, iron, manganese, ammonia, and sodium from the water. As a bulk filter media this is an excellent solution for water utilities and water technology companies and for some industrial water management providers.

Our continuously manufactured products:

- AsMet – Arsenic III and Arsenic V adsorbent
- FluMet – Fluoride adsorbent
- BoMet – Boron binding adsorbent
- IoMet – Iodine De-adsorbent
- ZMet – Iron, Manganese, Ammonia, Sodium binding adsorbent

Fields of application:

- for water utility companies and for water industry companies
- for communal and industrial wastewater treatment companies
- to treat the process water of power plants, mining and other factories
- for water bottling plants
- for vegetables, fruits, food processing industries

Benefits of the product:

- cerium based adsorber resin – flexible use for all user from domestic to waterworks and all water industry players
- can be attached to existing waterworks, or installed newly with suspended solid pre-filter
- lifetime 7-10 years
- regenerable, allowing for smaller filter and lower running cost and leaving smaller environmental footprint
- taste, smell, and mineral content of the water stays the same
- ensure the supply of stable water quality with cost saving long term operation



ASMET for drinking water treatment

- reduces the **arsenic** concentration to less than 1 µg/l (WHO standard 10 µg/l)
- binds the As (III) and As (V) contents of the water
- temperature should not exceed 50°C – some hot springs can be treated

In addition to the traditional and chemical-intensive arsenic mitigation methods **AsMet** is a specially developed filter resin that offers cost-effective, sustainable and low-power solution in the field of water treatment.

FLUMET for wastewater treatment (steel, aluminium, fertilizer, semiconductor and other industries)

- pH and Redox substances need controlling with pre-treatment, pH is optimal between 3 and 3.5
- adsorbs **Fluoride** ions under the level 1 mg/l
- maximum fluoride concentration is 30 mg/l

ZMET for drinking water treatment

- made from ground natural zeolite mined in Hungary
- general cation exchange potential, for the removal of **Ammonia, Phosphates, Iron, Manganese** etc.

BOMET applying where seawater has boron above permissible health levels, so desalination need to remove it

- best results for boron mitigation are between 30–300 mg/l boron
- salt brines can also be mitigated to produce boron free sea salt

IOMET for drinking water treatment, and for radioactive waste removal

- to remove unhealthy levels of iodine in drinking water
- removes I-131 radioactive iodine - nuclear mitigation and reduction of **radioactive waste** trough concentration is possible

		AsMet	FluMet	BoMet
		Arsenic	Fluoride	Boron
Composition characteristic	Composition	Crystalline aqueous cerium oxide powder on a polymeric support		
	Adsorption (g/l-Ad)	1.1–1.5	10–12	6–8
	Specific gravity	1.4	1.4	1.4
	Average particle diameter	0.7 mm	0.7 mm	0.7 mm
Condition of use	Initial setting	Not necessary	Not necessary	Not necessary
	pH	5.8–8.6	3.0–3.5	7.0–9.0
	Operating temp	50°C max.	50°C max.	50°C max.
	Contaminants that affect adsorption efficiency	Oxidizing / reducing agents, PO ₄ ³⁻ , B(OH) ₄ ⁻ , F ⁻ , HCO ₃ ⁻ , SiO ₂	Oxidizing / reducing agents, PO ₄ ³⁻ , Al ³⁺ , Fluorides	Fluorides, PO ₄ ³⁻ , F ⁻ , HCO ₃ ⁻ , SiO ₂
	Regeneration conditions	NaOH, NaOCl, HCl	NaOH, HCl	NaOH, HCl