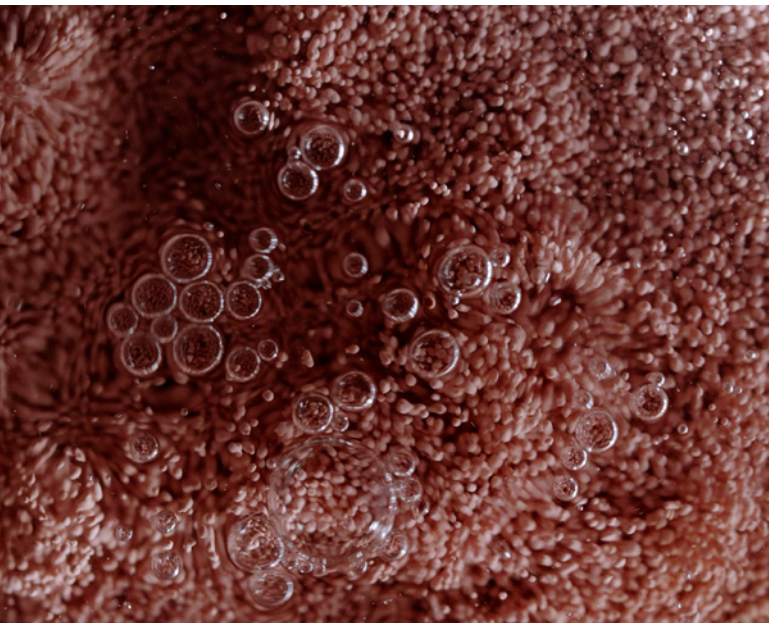


BoMET

The BoMET boron removing adsorbent is a member of the MET product family



We offer a new, cost-effective, sustainable, and economical water treatment technology compared to traditional and chemical-intensive boron reduction methods. This is BoMET, which binds boron with a regenerable, special filter medium. BoMET is a cerium-based regenerable adsorbent that can be used to remove boron contamination in drinking and industrial water. Regenerability means that once the adsorbent reaches its capacity limit, it can be reused after a regeneration process.



PRODUCT BENEFITS

- BoMET water treatment resin binds only the boron content of the water by flowing through the filter media in the tank
- it does not change any other parameter of the water, by removing the boron in the water
- the unit filled with filter material can be fitted to any existing water treatment system, and efficiency can be increased by optimising the size
- regenerable, with a lifetime of 7–10 years

APPLICATIONS

- for waterworks and water companies
- in the desalination process
- in the vegetable, fruit, and food industry
- purification of irrigation and drinking water
- purification of industrial wastewater

MAIN TECHNOLOGICAL REQUIREMENTS

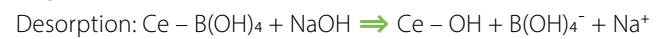
- For drinking water purification demand (between 1–30 mg/l boron concentration, the adsorption capacity of the charge is 0.5 g boron/l).
- The amount of adsorbent must be chosen so that the water flowing through does not exceed 10 m³/hour.
- The adsorbent material must be placed in two containers in series. Ensure that the tank is treated as saturated as possible during regeneration.
- The charge may be stacked up to a maximum height of 1.1 m, considering density and strength.

The filter media removes boron from the water by adsorption. The filter media can be regenerated, as it follows:

Adsorption:



Regeneration



OTHER PROPERTIES OF ADSORBENT

- The cerium-based filter media can be loaded into containers and put into operation.
- After loading, the air bubbles generated must be removed by backwashing to ensure uniform distribution of the filter material particles in the tank.
- The concentration of boron in the water to be treated is between 30 and 300 mg/l, which is optimal for purification
- Suspended solids reduce the adsorption surface of the filter material, so it is worth removing them using pre-filters.
- Boron adsorption of the filter media is most optimal at pH 8.5.
- The maximum temperature at which the filter media can be used is 50 °C degrees.



	Values	
Characteristics	boron adsorption capacity (g/l)	0.5 g/l drinking water, 5–6 g/l industrial water
	specific weight	1.35–1.45
	average size	0.6–0.8 mm
	CeO ₂ content	0.35–0.45 kg/l
Conditions of use	default setting	not necessary
	pH	5.8–8.6
	operating temperature	50°C max.
	materials affecting adsorption capacity	oxidation/reduction materials, PO ₄ ³⁻ , B(OH) ₄ ⁻ , F ⁻ , HCO ₃ ⁻ , SiO ₂
Conditions of regeneration	NaOH, NaOCl, HCl	