

BORON TRAPP

BORON ADSORBENT

Boron Removal with Trappsorb & Crystolite

Boron often detected in natural water streams and have a wide variety of concentration depending on surrounding geology and sewage disposal. The importance of micronutrient of **Boron** can be harmful when exceed permissible concentration. **Boron** is widely distributed in surface water, ground water and can easily contaminate drinking water and consequently has adverse affect to nervous system. The importance of **Boron** removal to meet drinking water standards, is crucial for health stability as well as for plant growth. Removal of **Boron** from water can be achievable through the process precipitation. The precipitation of **Boron** can be removed in the filtration step with Microfiltration Media **Crystolite[®]**.

TRAPPSORB[®] Adsorbent For Water Treatment

Trappsorb[®] is an adsorber filter material, which is purest Magnesium Oxide (MgO) in the form of beads with unique outer surface and structure. **Trappsorb[®]** is porous, amorphous form of Magnesium Oxide (MgO). It is composed of unique manufacturing process giving its uniformity and macroscopic pores. **Trappsorb[®]** have larger pores with wide range of diameters for the various applications.

Trappsorb[®] porous outer surface, when exposed to liquids, exhibit a strong physical affinity for these fluids (Physisorption). The molecules of ionic bonding of liquids, become trapped on the outer surface of **Trappsorb[®]** macrospores and filter out in the filtration step with **Crystolite[®]**.

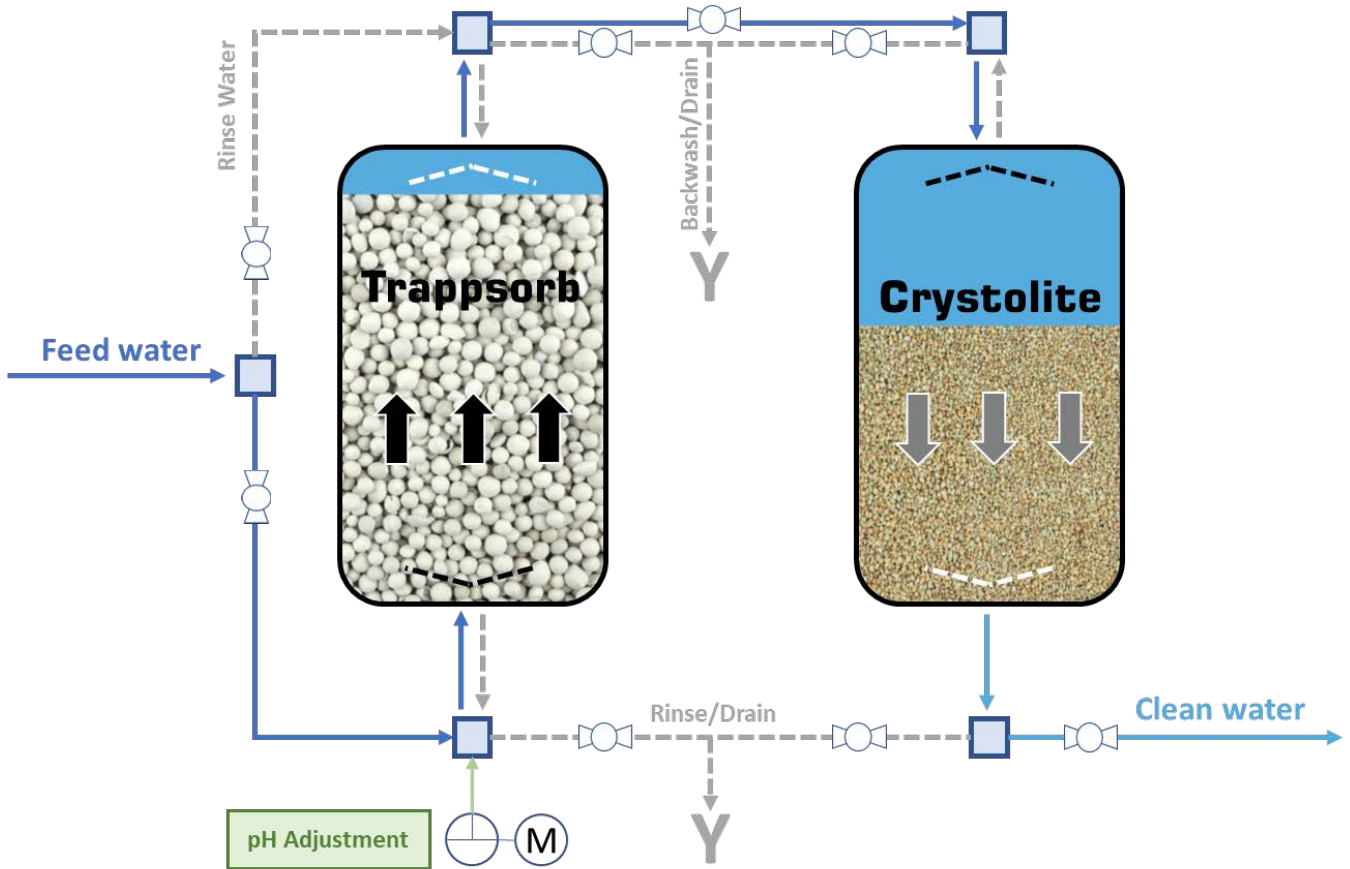


Crystolite[®] Microfiltration Media

Crystolite[®] Filtration Media (CFM) is very robust, long life span, back washable filter media. **Crystolite[®]** filtration media meets the needs of all industrial, municipal, residential and water reuse for any application. The unique, high capacity media is designed to reduce waste of expensive cartridges and plastic filter housing.

Crystolite[®] high surfaces allow the filtration down to **0.5 microns** without clogging. Additionally, all suspended solids accumulate on the surface of the **Crystolite[®]** media can be easily backwashed to drain. Therefore, producing high efficiency filtration with low cost.

BORON REMOVAL WITH TRAPPSORB & CRYSTOLITE



Backwash/Rinse

Trappsorb

Weekly or when there is a pressure differential of the filter exceed 0.5 bar

Crystolite

Every 24 to 72 hours or if the differential pressure of the filter exceeds 0.5 bar

Periodic Refill

Trappsorb

Trappsorb material is consumed slowly, and a refill of the filter is recommended after 30 to 40% of the initial volume have been consumed.

*Adsorbent consumption: 1 mg : 1.5 mg (contaminant: product)

PH Adjustment

In order to maximize the performance of Trappsorb, a pH adjustment is required prior to Trappsorb of a recommended pH between 6.5 – 6.9.

*Adsorption consumption is an average capacity by considering different capacity for different contaminants in water

Flow Direction

Trappsorb

Down-flow or Up-flow

Crystolite

Down-flow

Distributors

Trappsorb

Top & Bottom: 0.5 mm

Crystolite

Top & Bottom: 0.5 mm

BORON REMOVAL WITH TRAPPSORB & CRYSTOLITE

BORONTRAPP process consists of 2 steps



1

First Step

TRAPPSORB

TRAPPSORB is an adsorber filter material based on Magnesium Oxide beads with highest purity of 99.9%. Due to our unique manufacturing process, **TRAPPSORB** has a higher porosity and unique surface which allows a quick and efficient reaction with **Boron** in water.



2

Second Step

CRYSTOLITE[®]

Crystolite is a high capacity filter material with one of the highest filtration efficiencies in the market. Allowing to retain particles down to **0.5 microns**, it delivers exceptionally clear water and is used whenever a combination of a superior filtration performance and lower operating costs. **Crystolite** can deliver an excellent alternative to microfiltration.

Appearance:	Off-white
Bulk density:	1.300 kg/m ³
Mesh size:	2 – 5 mm
Service velocity:	10 m/h
Backwash velocity:	28-30 m/h
Certification:	NSF/ANSI 60

Appearance:	Light red granules
Bulk density:	1.050 kg/m ³
Mesh size:	0.5 – 1.2 mm
Service velocity:	15 - 30 m/h
Backwash velocity:	20-30 m/h
Certification:	NSF/ANSI 61

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