



CYANIDE REMOVAL SOLUTION

FROM CYANIDE POLLUTION TO SAFE WATER

Got cyanide in your water or wastewater? Thankfully, municipalities, public utilities and industrial companies can now easily remove cyanide, and the once-toxic water becomes safe and clean for drinking or industrial purposes.

CHEMICAL-FREE TECHNOLOGY

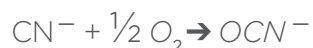
TOXSORB's propriety Modified Activated Carbon (MAC) NP2 technology continuously absorbs and destructs cyanide from water and wastewater up to non-detect level – using nothing but air.

ROBUST CAPABILITIES

- Very high media affinity to the cyanide ion for extremely strong adsorption.
- Complete detoxification and chemical elimination. The media catalyzes the cyanide oxidation by atmospheric oxygen.

HOW IT WORKS

- ➔ The oxidation is catalyzed by the media and utilizes atmospheric oxygen with cyanate (OCN^-) as an intermediate product:



- ➔ The MAC NP2 enables generation of safe, clean drinking and industrial water.

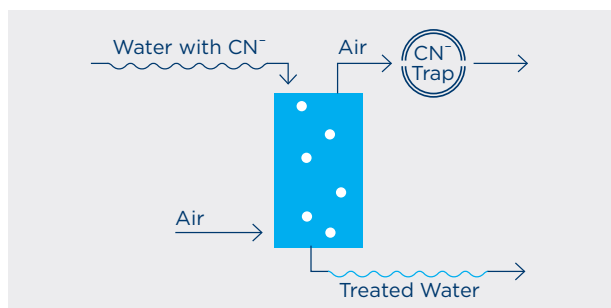
COST AND ECO SAVINGS

- Eliminate chemical handling – saving time, hassle and cost
- No chemical addition necessary, so you can destruct cyanide without salinity elevation.
- One solution for both free and complex cyanide.
- Gain peace of mind. MAC NP2 is NSF61 approved and recognized by the American and Israeli health authorities.

AN AIRY PROCESS – LESS HASSLE, LESS OPEX

No more applying oxidizing chemicals to remove cyanide, as traditionally done. The system can continuously remove cyanide with air only when designed as a trickling filter.

The polluted water is introduced to a non-saturated media-bed, and air is counter flowed, supplying oxygen for the process. Retention times are typically 3-5 minutes per 90% decrease in CN concentrations.



ENHANCE PERFORMANCE WITH NEAR ZERO BRINE

- Target the cyanide by automatically filtering water through the MAC NP2 technology.
- Utilize modified carbon as a selective ion exchange, with a **strong affinity** to the cyanide, to **capture it within the filter**.
- Break strong cyanide complexes and **adsorb them to non-detect levels**.
- Catalyze cyanide oxidation by atmospheric oxygen, **achieving complete detoxification, resulting in zero brine**.
- Enjoy clean, safe drinking and industrial water.

PERFORMANCE DATA

Table 1 presents estimated removal rates in different retention times and influent concentrations.

Influent CN Concentration	pH	Retention Time	Removal	Air Flow (SATP)
mg/l		min	%	m ³ air per m ³ of water
5000	8-9	120	90	75
100	8-9	5	95	2
10	8-9	3	99	0.15
10	8-9	5	100	0.15

DRIVING GLOBAL PUBLIC HEALTH AND SUSTAINABILITY

For over a decade now, TOXSORB, a business unit of WFI Group, has been providing end to end, modular and turnkey contaminant removal solutions to water and regulatory authorities, as well as industrial companies worldwide, who are committed to driving enhanced public health and sustainability. Our expert scientific team is extremely devoted to going beyond profitability, helping clients generate new revenue streams based on a circular economy, taking better care of the people and planet we're privileged to call home.

LET'S CREATE MORE VALUE FROM WATER – TOGETHER

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TOXSORB
by WFI Group