Heavy Metal Removal Media

Effective, Low Cost Adsorbent for Removal of Heavy Metals

The Thirsty Nomad's heavy metal removal media is an adsorbent that utilizes a patented material to adsorb both forms of arsenic as well as a wide range of contaminants in water. Empty bed contact times as low as 10 seconds achieve high removal efficiencies. The material affords a higher capacity and a lower level of ion interference than competitive iron and alumina based products.

The Thirsty Nomad media's adsorptive capacity is 7-12 grams of arsenic per kilogram of adsorbent in drinking water applications with a pH range of 6.5-8.5. Much higher adsorptive capacities have been measured, up to 400 g/kg, in industrial treatment applications.

The Thirsty Nomad's heavy metal removal media is manufactured in the USA meeting the most rigorous global standards, including:
ASME Section VIII, Division I
PED 97/23/EC
10CFR50 App.B– Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants
ISO 9001:2015
EU 1935/2004
NSF61

Adsorbent Product Features/Benefits

- Removal of heavy metals to meet drinking water standards
- High adsorbent capacity requiring less frequent replacement
- Fast kinetics to work effectively at high flow rates
- Nonhazardous disposal as solid waste

Contaminants

- Arsenic III
- Arsenic V
- Cadmium
- Copper
- Antimony
- Lead
- Mercury
- Uranium
- Zinc
- Selenium

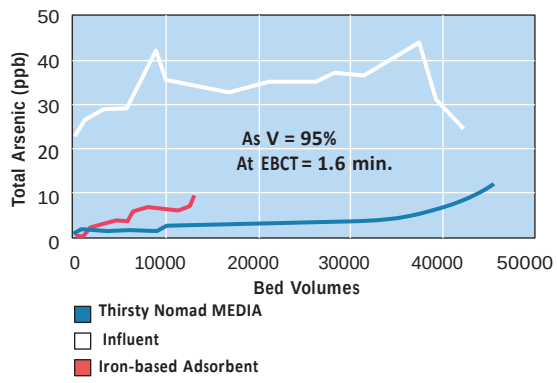
Applications

- Commercial and industrial treatment units for drinking water or contaminated water
- Municipal water treatment
- Carbon blocks
- Cartridges for pitchers
- Faucet mounted and countertop devices
- Household point of entry treatment units

Thirsty Nomad Heavy Metal Adsorbent Specifications

Appearance	White granules
Moisture Content	<10%
Bulk Density	0.65 grams per cc (40 lb/ft^3) milliliter
Other	Free Flowing
Particle Size	-16/+60 U.S mesh

SMALL COLUMN TEST RESULTS

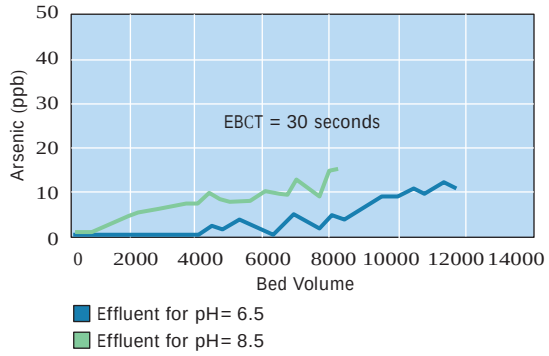


Comparison of HMRG adsorbent with iron-based adsorbent.

BATCH TEST DATA-ADSORPTIVE CAPACITY

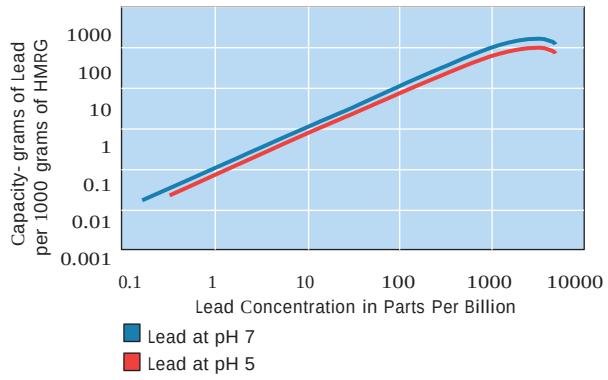
Metal	Initial Concentration	Final Concentration
Arsenic V	50 ppb	<2 ppb
Arsenic III	50 ppb	5 ppb
Cadmium	1,000 ppb	24 ppb
Copper	500 ppb	5 ppb
Lead	1,000 ppb	18 ppb
Mercury	500 ppb	26 ppb
Zinc	500 ppb	12 ppb

ARSENIC REMOVAL DATA - NSF 53



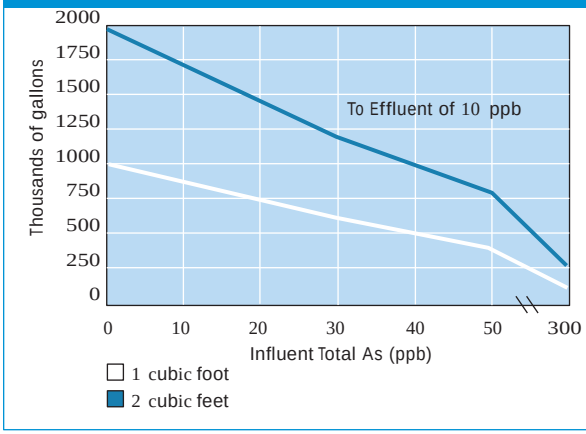
Testing was done under the conditions specified by the NSF Standard 53 for Arsenic. Results at a pH of 6.5 and a pH of 8.5 are shown in the graph above.

LEAD ADSORPTION ISOTHERM



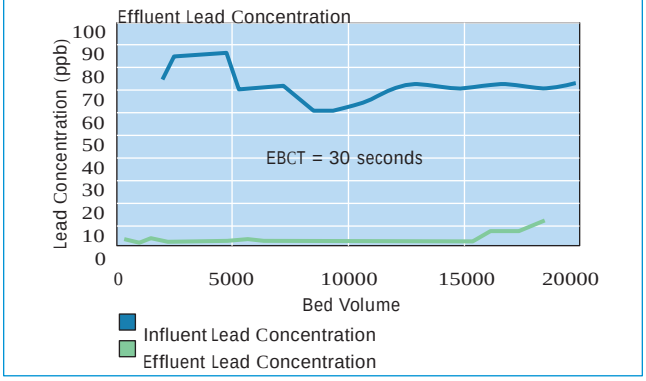
Adsorption isotherms for lead between pH 5 and 7 are nearly identical.

ARSENIC TREATMENT CAPACITY VS . ARSENIC INLET LEVELS



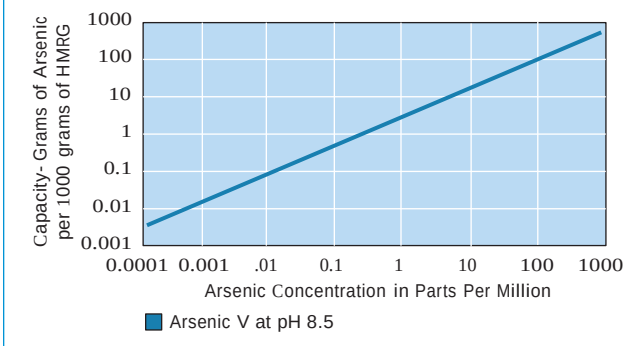
Treatment capacity as a function of tank size.

LEAD REMOVAL COLUMN DATA



Lead removal by Thirsty Nomad media adsorbent in column test; 30 seconds EBCT.

ARSENIC ADSORPTION ISOTHERM



The above graph shows the adsorption isotherm for Arsenic V at pH 8.5.

For more information

The Thirsty Nomad Pty Ltd 1800 979 752

Water Quality Association

American Water Works Association
The Authoritative Resource on Safe Water℠

Rural Water Association