



## PRODUCT DATA SHEET

**APT**sorb

APTsorb is an innovative, environmentally-friendly sorption media for dissolved heavy metals. It is made of physically-, thermally-, and chemically-modified red-sedge peat harvested from the abundant reserves of North America. It capitalizes on the known sorption mechanisms and capacities of natural peat while improving on those qualities that have limited peat's use in wastewater treatment in the past.

APTsorb is a low-cost alternative to traditional resins and excels in applications such as polishing prior to discharge, storm water treatment, and waste water with low pH.

PROPERTIES<sup>1</sup>

Physical form	Granules
Matrix	Reed-sedge peat
Mechanisms of sorption	Chemical: ion-exchange, chemisorption, complexation Physical: surface adsorption Combination: adsorption-complexation
Ionic form	H <sup>+</sup> , Na <sup>+</sup>
Total capacity <sup>2</sup>	44.5 meq/100 g
Capacity at 50 ppb equilibrium <sup>3</sup>	14 meq/100 g
Bulk density	0.7 g/cm <sup>3</sup>
Particle size	12 X 50 mesh (>90 percent of granules)
Particle density	1.55 g/cm <sup>3</sup>
Moisture content as shipped	9-14 percent
Expansion	up to 65 percent
pH of media <sup>1</sup>	4.9-5.2
Ash content	15-17 percent

## SUGGESTED OPERATING CONDITIONS

Maximum operating temperature	77°C (170°F)
pH of water	4 - 7.5
Recommended flow velocity m/h	Up to 1
Column pretreatment	Flush with five bed volumes clean water, discharge to drain
Regeneration	Not recommended
Sparging/fluffing	Water, air, CO <sub>2</sub> or N <sub>2</sub>
Expansion precautions	Pre-wet media or allow for expansion, air sparge if needed

## ELEMENTAL ANALYSIS

Element		Element	(ppm)	Element	(ppm)	Element	(ppm)
C	48 – 52 %	Be	<1	Li	<5	Na	<4800
H	4 – 5 %	B	<20	Mg	<1200	Sr	<18
N	2 – 3 %	Cd	<7	Mn	<31	Tl	<10
O	29 – 35 %	Ca	<5100	Hg	<60 ppb	Sn	<10
	<b>(ppm)</b>	Cr	<7	Mo	<3	Ti	<100
Al	<3500	Co	<2	Ni	<7	V	<6
Sb	<5	Cu	<6	K	<550	Zn	<10
As	<4	Fe	<3900	Se	<2		
Ba	<65	Pb	<7	Ag	<2		

<sup>1</sup> Test methods available upon request

<sup>2</sup> Measured using cadmium ion (22-25 mg of Cd/g)

<sup>3</sup> Measured using cadmium ion (5-8 mg of Cd/g)

### AMERICAN PEAT TECHNOLOGY, LLC

36203 350<sup>TH</sup> AVE • AITKIN, MN, 56431  
 OFFICE - 218.927.7888 • FAX - 218.927.3272  
 WWW.AMERICANPEATTECH.COM

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