



PRODUCT DATA SHEET

APTsorb

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.

PROPERTIES¹

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

¹ Test methods available upon request

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

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

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