

APTSorb in Use: How to Deploy

APTSorb is a versatile media and can be deployed in almost any tank, vessel, tank, vault or sock, but keep the following in mind:

1. APTSorb, because it is an organic media, requires a certain amount of **residence time**; the performance of the media is sensitive to the velocity of the water. If the water is flowing past the media too quickly, the media does not have time to form bonds with the metal ions as they travel past. A general rule of thumb is to keep the velocity less than 2 ft/hr (0.6m/hr).
2. Try to keep the **ratio of bed height to bed diameter** less than one. A shorter, squatter contactor is preferred over a taller, thinner vessel. Given the recommended velocities above, this configuration allows for a favorable volume of water while maintaining the residence time.
3. A **lead/lag system** will extend the life of the media as well as allow for some shortcomings in system design. The different mechanisms at work on the natural peat have different coefficients of performance, which means that the media responds robustly to different system parameters. A lead/lag system can utilize more of the different loading mechanisms than a single-pass treatment system.
4. APTSorb will act concurrently as a **physical filtration** media. The angular, polar surfaces of the media are very effective at sequestering solids within the bed. Removals exceeding conventional sand filters are possible. A vessel that allows for backwashing will extend the life of the media. Backwashing rates can vary depending on the nature of the solids, but 10-15 gpm/ft² is generally sufficient to lift the APTSorb bed.
5. **Regeneration** of the APTSorb media is not recommended. The media forms very stable double bonds with metal ions, and regeneration is usually incomplete and unwieldy. Once the media is exhausted, disposal is recommended. Disposal of spent APTSorb is dependent on local regulations and how the media was loaded. For most metals, with the exception of lead, we anticipate that the media will pass the TCLP test (EPA 1311).

Some examples of contactors:



Vertical pressurized tank



Gravity-feed in-ground vault

Media sock in French drain

