

OF1050X

Technical Data Sheet

OF1050X— Organic Flocculent

OF1050X is an environmentally friendly treatment system that can effectively deal with the severe problems that are being encountered during the treatment of recycled frac water, produced water, impounded waterways and wastewater systems. Heartland's OF1050X is based on a unique technology that binds heavy metals, reduces TSS levels and lowers the overall BOD/ COD of the fluid being treated. Finally, companies can treat their water economically without incurring massive transportation expenses. After treatment, the water can be recycled and may be easily and quickly transported to the next location. OF1050X is a non-hazardous, non-toxic, non-regulated, and environmentally safe alternative to other common chemistries used today. It is highly reactive and is extremely friendly to use on site.

FEATURES AND BENEFITS:

- Effective method for the reduction and removal of heavy metals
- An excellent treatment for the reduction of Total Suspended Solids
- Simple, safe and inexpensive treatment method
- Comprised of long chain and volumetric molecules
- Highly active material both geologically and chemically
- Highly purified and reactive material
- Geologically interacts to form mineral complexes
- Chemically interacts with elements for strong metal binding
- Efficient cation/anion exchange properties
- Qualifies for OMRI certification (Organic Certification Standard)
- Can be easily combined with pHix I®, pHix XIV®, or Activate to achieve additional treatment benefits

Typical Results After One Application:

| Analytical Method: EPA 200.7 | | | | |
|------------------------------|---------|------------|-------|-----------|
| PRE-TREAT | | POST-TREAT | | |
| 200.7 Metals, Total | Results | Results | Units | Reduction |
| Arsenic | 23.8 | 13.3 | ug/L | 44.12% |
| Barium | 329 | 179 | ug/L | 45.59% |
| Cadmium | ND | ND | ug/L | ND |
| Chromium | 39.7 | ND | ug/L | 100.00% |
| Lead | 19.2 | ND | ug/L | 100.00% |
| Selenium | ND | ND | ug/L | ND |
| Silver | ND | ND | ug/L | ND |
| Analytical Method: SM 2540D | | | | |
| PRE-TREAT | | POST-TREAT | | |
| Total Suspended Solids | 1518 | 86 | mg/L | 94.33% |

TYPICAL PHYSICAL PROPERTIES:

| | |
|----------------------|-------------------|
| Appearance and Color | Dark Brown Liquid |
| Initial Freeze Point | No Data Available |
| Odor | Earthy Odor |
| Solubility in Water | 99% |
| Melting Point | No Data Available |
| Flashpoint | N/A |
| Specific Gravity | 1.02 ± .04 |

APPLICATIONS:

Jar testing is always suggested prior to use.

For impounded bodies of water; mix the appropriate ratio of OF1050X thus yielding a RTU spray material. Use a centrifugal style high volume pump and spray the material evenly across the top of the impounded body of water completely saturating the surface of the impoundment. OF1050X along with gravity will settle the impurities to the bottom of the impounded waterway or tank. In most cases, the treated water will be ready to reuse in less than 12-24 hours!

For frac tanks or tanks with closed tops; the appropriate ratio of OF1050X should be added to the vessel. After the product addition, a centrifugal pump should be allowed to circulate and evenly mix the fluid into the impacted water. As soon as the product is adequately dispersed and mixed, the pump should be shut off and the tank should be allowed to settle for a period of at least 12 hours. At this point, the treated water can be easily transferred for re-use.

Note: In cases of severely impacted water, multiple applications may be required to achieve desired results.

PACKAGING:

OF1050X is packaged in 5 gallon to 275 gallon containers. Bulk quantities are available upon request.

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