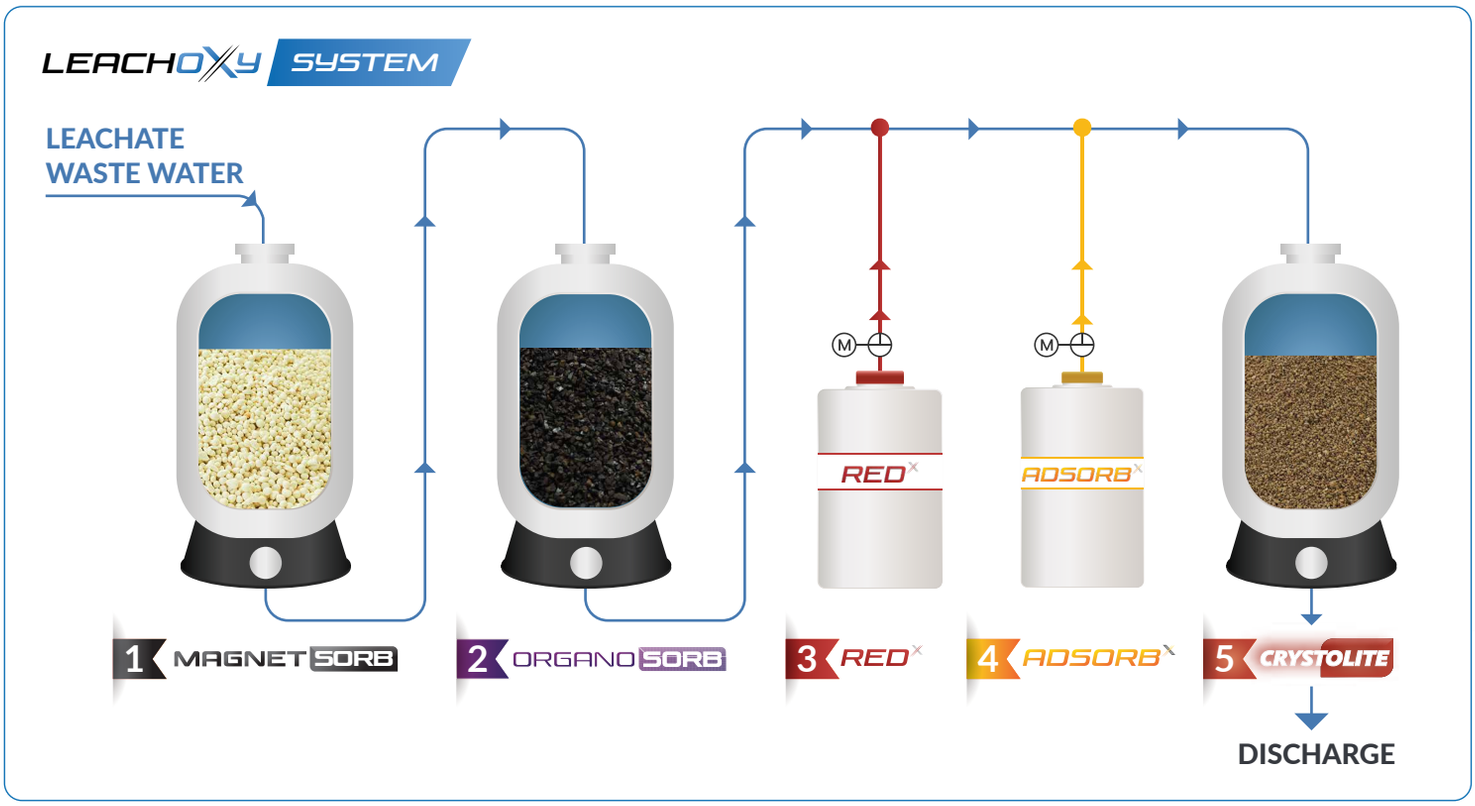
LEACHOXY

ADVANCED LEACHATE WATER TREATMENT

Introduction

LeachOxy Treatment is an innovative approach based on **Advanced Oxidation Process(AOP)**. It targets the removal of both **inorganic** and **organic** compounds from **leachate water**.



Transforming Polluted Waters into Sustainable Solutions.

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LEACHOXY

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FILTERSORB
FILTRATION
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INSTANT PRODUCTS
OXY TREATMENT
SYSTEMS

MAGNETSORB

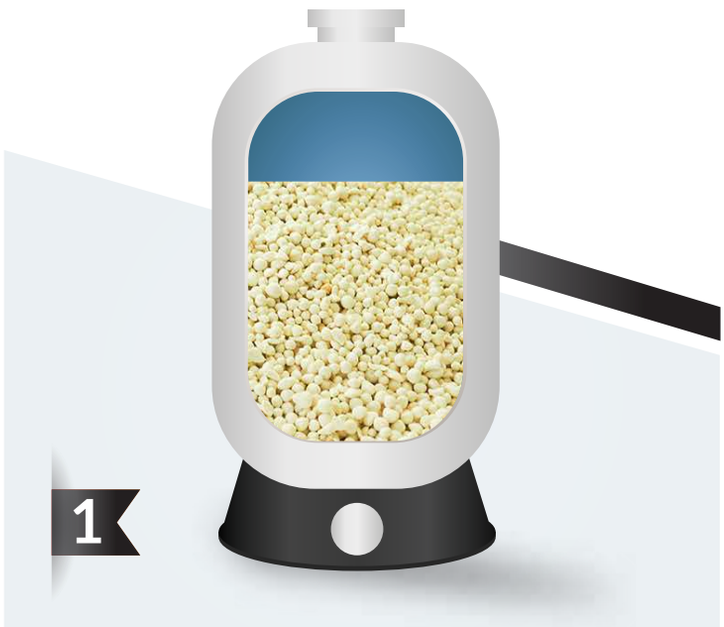
Catalyst for Leachate Treatment

MagnetSorb, also known as Magnetic Media, is specially made for the treatment of **Leachate** in landfill sites. **Leachate** is a worse liquid that is formed when water passes through waste materials in a landfill, picking up **Inorganics & Organic** contaminants along the way to **Leachate** storage.

MagnetSorb media filtration is developed to treat the acidic components to raise the pH level, First making the **Leachate** less harmful to the environment. Second, **MagnetSorb** precipitate heavy metals, reducing their concentration in the **Leachate**. Using **MagnetSorb** for **Leachate** treatment can help to improve the quality of the **Leachate** before it is forwarded to **Organosorb** for further treatment.

MagnetSorb is used as a Catalyst for the treatment of **Leachate** at landfill sites. As a catalyst **MagnetSorb** can help facilitate chemical reactions that breakdown organic contaminants in the **Leachate** make it easier to treat for **Organosorb**.

When used as a Catalyst, **MagnetSorb** can enhance the Oxidation of all Organic components in the **Leachate**, converting them to **Carbon Dioxide** (CO_2) and water. This process can help to destroy all the organics in the **Leachate** and improve the quality of water.



Thirdly, **MagnetSorb** accelerate the precipitation of **Heavy Metals** in the **Leachate** water, aiding in their removal from the liquid.

MagnetSorb as a Catalyst for **Leachate** treatment is the best-known treatment process after the membrane process. **MagnetSorb** as a Catalyst for **Leachate** treatment is an important area of research that holds promise for improving the treatment of **Leachate** in all landfill sites around the world.

Benefits of Magnetsorb

The biggest benefit of **Catalytic MagnetSorb** is that this **catalyst** can be used as a filter Media and Adsorber for water treatment applications. When **MagnetSorb** used as a filter Media it can effectively remove turbidity, Odors many **Organic & Inorganic** impurities including bad contaminants from water & **Leachate** water. Here are some key points on using **MagnetSorb**.

Adsorption

MagnetSorb has a very high surface area and can adsorb impurities and dangerous contaminants from **Leachate** water. It can effectively remove **Heavy metals, Organic** compounds and other dangerous pollutants that may present in water.

pH adjustment

MagnetSorb can be used to adjust the pH of **Leachate** including water Alkalinity, which can improve the efficiency of **Leachate** treatment process that rely on specific pH conditions

Regeneration & Reusability

MagnetSorb can be regenerated and reused for up to **5-7 years**, making it cost effective option for **Leachate** Wastewater & Water Treatment. Regeneration can be done by washing the media with a dilute **OXYDES-P** solution to remove the accumulated impurities.

Reduction

MagnetSorb is the best filter media to eliminate odors in **Leachate** by neutralizing sulfur compounds and other Oduors compounds.

Consideration

When using **MagnetSorb**, it is important to consider the flow rate, contact time, its is very important to run 10 BV to ensure optimal performance. Regular monitoring and maintenance of the **MagnetSorb** are also need to be considered as an essential step to ensure consistent water quality.

Other Benefits

As the media is coated extensively with **Glass Coated Media**, MagnetSorb has a very high surface area and can adsorb Cations including Heavy Metals in Leachate through various Magnestic reactions. This process can help to remove harmful toxic substances from the leachate/polluted liquids.

Applications

MagnetSorb can be used in various water treatment systems.

- Point Of Use (POU)
- Point Of Entry (POE)
- Commercial Water Treatment
- Industrial Water Treatment
- Wastewater Treatment Plants
- Leachate Treatment

Steps to use

Coating **MagnetSorb** involves applying a layer of glass material on to the surface of **MagnetSorb** granules. This coating is so unique and can provide hundreds of **Extra benefits**, including improved **Filtration & Adsorption** properties, enhanced durability and increase resistance to environmental factors. This glass material forms a protective layer on the surface of the Magnet particles, creating a barrier that helps to prevent degradation and enhance the overall performance of the **MagnetSorb**.

Coating **MagnetSorb** with glass is so useful in applications like **waste water** and **Leachate** and all harsh conditions. The Glass coating can help to protect the **MagnetSorb** from moisture, chemicals and abrasion extending the lifespan of the Magnet and improving it adsorption capacity.

Coating **MagnetSorb** with glasses so innovative technique allows for endless design possibilities. The glass coating adds huge surface and durability. It ensures that the **MagnetSorb** will remain intact and effective for a longer period of time, reducing the need for frequent maintenance and replacement. This top quality product has wide range of applications and funtionality.

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ORGANOSORB

Metalic Organic Frameworks

Leachate treatment is a critical process in waste management, as leachate is a highly toxic liquid that can contaminate water sources, if not properly handle & treated. The use of **Metalic-Organic-Frameworks** with **Acid-based MOF** can significantly improve the removal of contaminants from **Leachate**, making it absolutely unique and effective treatment method *(Best available method)*.

PMOF for water treatment, Waste Water treatment and **Leachate** treatment is the most promising technology for improving the effectiveness of water treatment processes.

The **PMOF** coating on ActiveSorb-CX can triple its adsorption capacity for a wide range of contaminants, Including **heavy metals, organic components, PFOA, PFOS** and Microplastics including other pollutants found in **Leachate**. The **MOF** coating provides additional binding sites for these contaminauts, Increasing the massive removal efficiency of the ActiveSorb-CX

Applications

1. Water Treatment Adsorber
2. Food & Beverage industry
3. Chemical and Pharmaceutical industry
4. Environmental Remediation
5. Leachate Treatment System
6. Advanced Oxidation Processes
7. Membrane Treatment (Pretreatment)
8. Degrading & Destroying 6PPD
9. Eliminating 6PPD
10. Very High & Macroporus Adsorption
11. Removal of Microplastics from Water
12. PMOF as Advanced Filteration Process
13. PMOF as Perfluorooctanesulfonic Acid Adsorber Removal)
14. PMOF as Polyfluoroalkyl Removal (PFAS Adsorber)

Huge Energy Storage

"P" - Based Catalyst can be used as an electrode material in supercapacitors and batteries for energy storage applications. Its enormous high surface area and porosity make it an ideal material for storing and releasing energy efferently. This energy in water is in the form of Kinetic energy which is energy associated with the movement of water molecules. **Oxidation** transformation is associated with this reaction and the amount of "P" - involved.

Catalysis

“P” - Based Activated Carbon (MOF) can be used as a unique catalyst to support Leachate water, such as

- Breakdown of Toxic Contaminants
- It form complexes with Heavy metals such as Lead, Cadmium and Mercury and facilitate their precipitation or adsorption on to solid particles. This is the **most sustainable and effective technology available** for removing heavy metals from leachate, thereby reducing the risk of groundwater contamination and environmental pollution.

In addition to heavy Metal removal and toxic metal removal, it plays a crucial role in Neutralizing acidic Leachate by acting as a buffer or pH stabilizer.

Purification of Pharmaceutical compounds

“P” - Based Activated Carbon (MOF) can be used in the purification of pharmaceutical compounds through the process due to its **Unique** properties and catalytic capabilities. This is the most effective tool for purification or treating of pharmaceutical waste in **Leachate**.

For detailed information on the purification of pharmaceutical compounds, explore more about **ActiveSorb – Pharma**.