

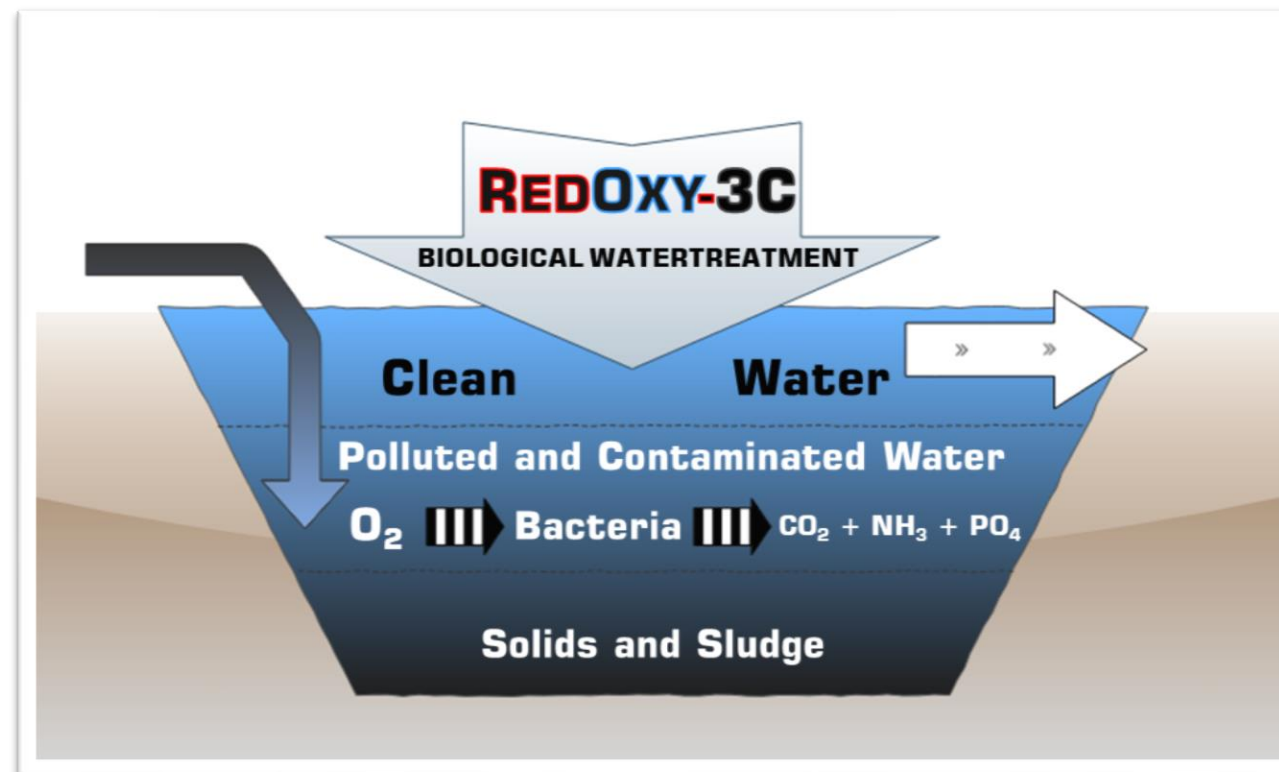
# REDOXY-3C PRESENTATION

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# Watch Water<sup>®</sup> Treatment Division For

- Water recycling and reuse
- Water and wastewater treatment
- Fresh water for drinking, industrialization and agriculture
- **Watch Water<sup>®</sup>** clients are stretched across every sector of industry from
  - ☐ Power Plants
  - ☐ Aquafarms
  - ☐ Oil and Gas
  - ☐ Petrochemicals
  - ☐ Mining and Metals
  - ☐ Chemicals and Pharmaceuticals
  - ☐ Pulp and Paper
  - ☐ Food and Beverage
  - ☐ Municipalities
  - ☐ Waste water services
  - ☐ Landfill Leachate
  - ☐ Rivers, Lakes, Ponds and streams
  - ☐ Surface and Ground water supplies
  - ☐ Recycled water supplies




# Watch Water **REDOXY-3C**

**1**

The **REDOXY-3C** is a process that treats Waste water, Polluted water and Contaminated water by using Red<sup>xxx</sup> Activated beads in sludge.

**2**

RedOxy-3C is used to treat carbon pollution, nitrogen pollution and phosphorus pollution including heavy metals. Therefore, it is the most suitable process for treatment of lakes or any processes before discharge into nature. RedOxy-3C is made of 3 components which together complete a continuous or discontinuous process, where all treatment phases take place in one same tank and treated water is then discharged using an overflow valve.

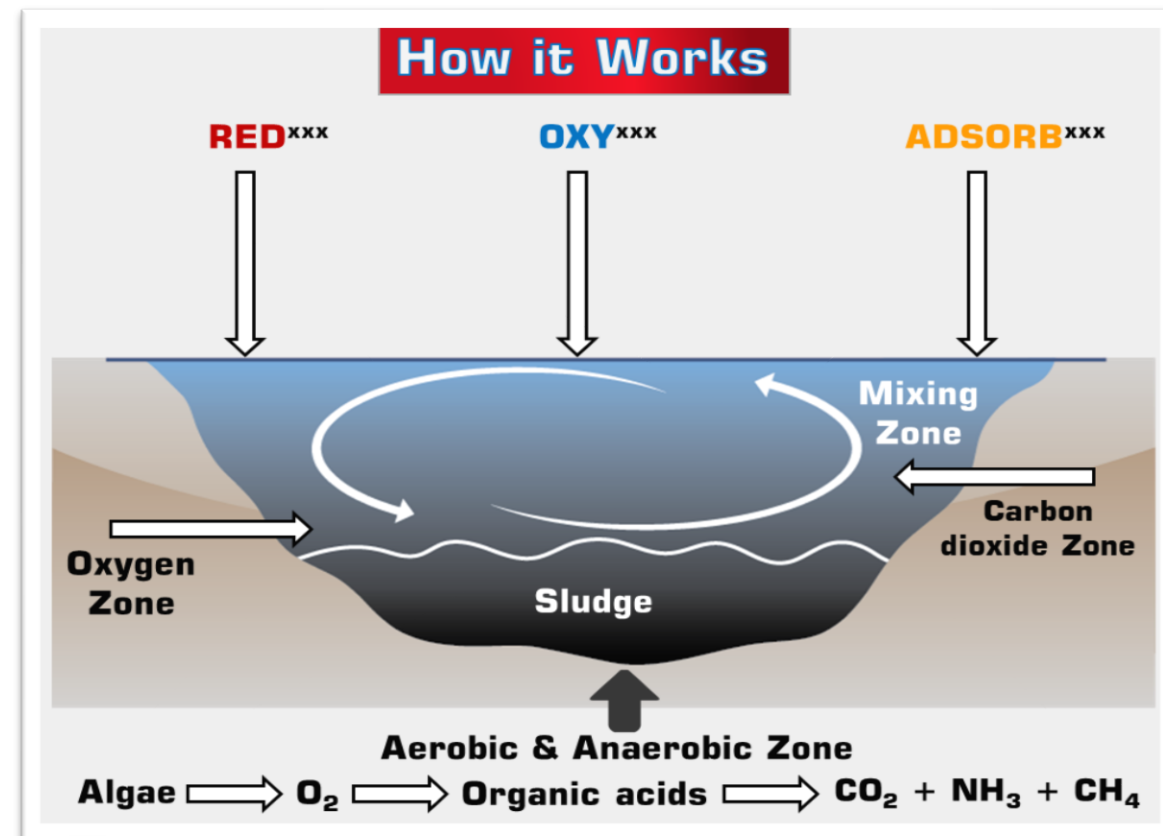


# Water Treatment Division

Advanced water treatment technologies, such as

- Zeosorb Filtration
- Cristolite Filtration
- Katalox Light
- Katalox Light Plus
- Catalytic Carbon
- Oxidation and Disinfection

will contribute to reduce BOD and COD and **producing high quality** water which is then used to recharge the aquifers that provide about half of the world drinking water supplies.



# Watch Water **REDOXY-3C**

The aim is to treat all effluents using **REDOXY-3C** technologies such as biological process which will remove inorganics, organics, emulsified oil, chemicals and solids for discharge into the nature, lakes or ocean's.

**Watch Water®** also launched various new technologies, one of them is **Ferric SG** beads for water and waste water treatment. This is designed to produce **high capacity adsorber**(Ferric Hydroxide) to treat municipal and industrial effluents by **adsorbing** a wide variety of pollutants. Therefore, improving the treatment plants performance without the use of **chemicals**. **Ferric SG** helps to reduce coagulation costs, flocculants costs, energy costs and boost the biological cycle by allowing the bacteria to colonize on the **Ferric SG** beads.



# TRAPPSORB HIGH-CLASSFILTER

Meanwhile, **Ultrafast** is a high-rate down flow gravity or pressure filter using **MGO beads** media that can have a range of **applications** including municipalities, industrial process water and wastewater treatment. A proprietary media with very less backwash sequence enables maximum recovery of water, extends media life and limits energy consumption by reducing costs and maintenance requirement as well as minimizing **footprint**. Ultimately the aim is to increase **REDOXY-3C** capacity by cutting costs and boost phosphorus removal.

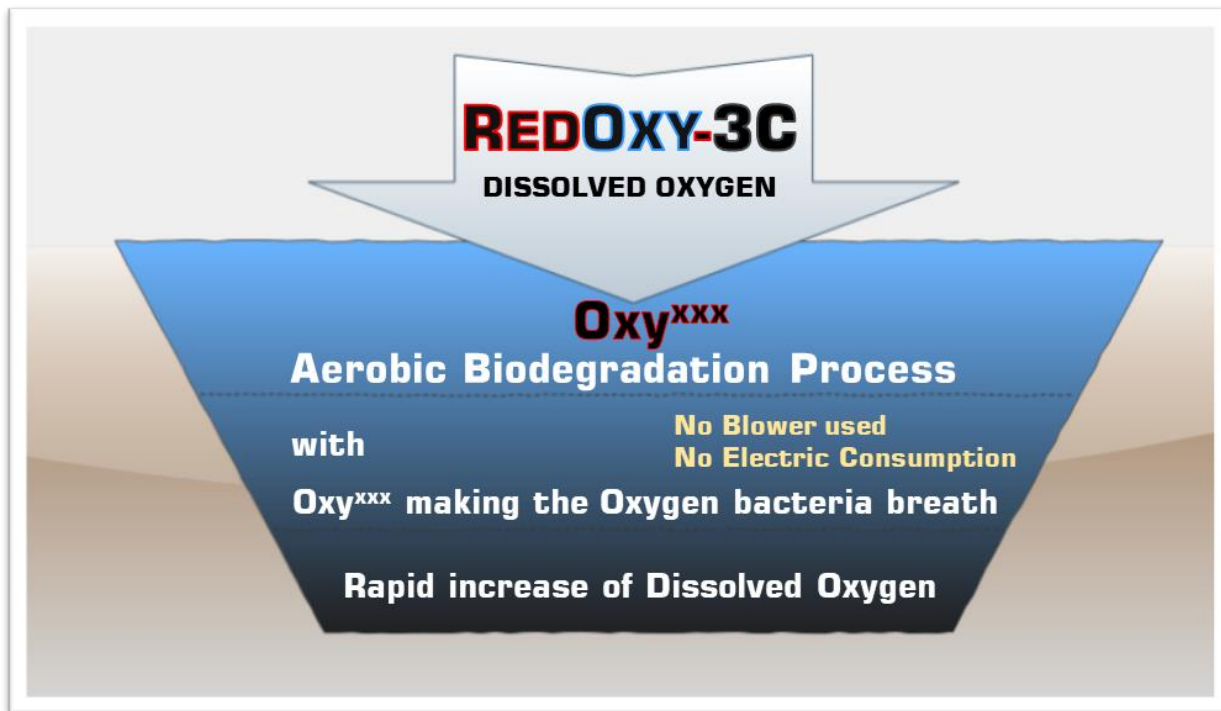
**Watch Water® REDOXY-3C** technology works by using **oxygen** to transfer **biotechnology** to deliver oxygen to a biofilm attached to the **high surface of Red<sup>xxx</sup>Oxy beads**. Immersing **REDOXY** beads on sludge surfaces increases the population of biomass in the water treatment system. This immediately intensify the **biological treatment** process. Oxygen is delivered to the sludge by diffusion through the **REDOXY**, which reduces the energy required for oxygen delivery by up to 100 times compared to all conventional aeration systems.





# REDOXY-3C Dissolved Oxygen

In recent years, the rapid development of world's economy, emissions of surface water, ground water and waste water containing organic is increasing day by day, such as water in lakes, rivers, ponds, surface water, ground water, waste water, pharmaceutical waste water, printing and dyeing waste water has serious harm to industries, agriculture and drinking water.



# REDOXY-3C

Organic pollutants in any kind of water is very essential for degradation by aerobic microorganisms. To increase the dissolved oxygen content in water, use of **blower** is useless according to the **Henry's Law of gases**. No matter what type of areation or apparatus employed are involved. They are faced with low utilization efficiency, high energy consumption and other issues like adding **nitrogen** and **carbon dioxide** into the water.

**Oxy<sup>xxx</sup>** overcomes the deficiencies of all currently available aerobic system's which can be widely used to strengthen all types of **aerobic biological treatment process**.



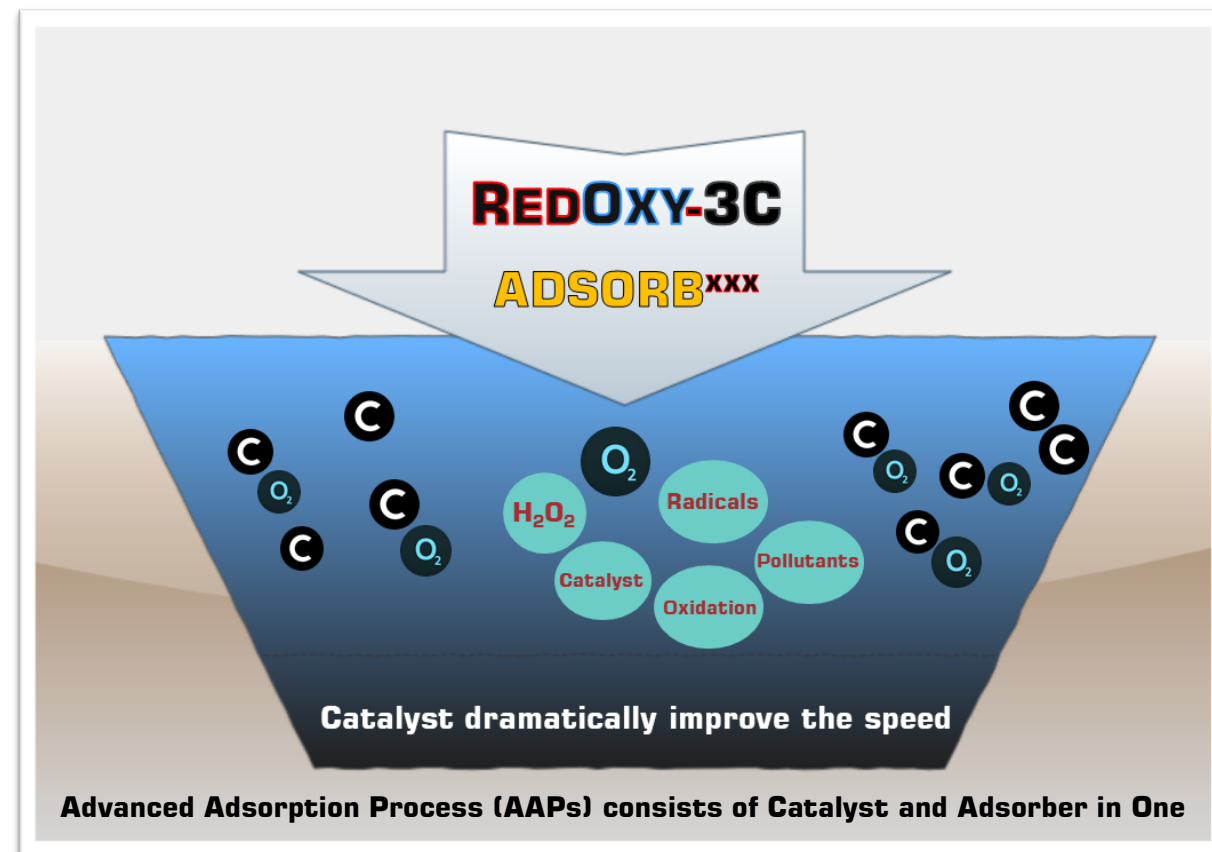


# Advantages

- Rapid decrease of **BOD & COD**
- Dissolved oxygen rapidly increase
- **Inexpensive** and helps to reduce the cost of wastewater treatment
- Intensive **biodegradation** process
- Releasing **oxygen** day and night over long period of time
- Elimination of **hydrogen sulfide** and **ammonia**
- Improves **water quality**
- Once settle to the bottom of any **water tank**, an immediate increase in the sludge biodegradation.
- Using **Oxy<sup>xxx</sup>** will effectively kill **Pathogenic** bacteria
- Staphylococcus aureus and **Escherichia coli** will be **destroyed 100%**
- Simple, easy to use, safe and most effective way to produce **oxygen micro-bubbles**
- Achieving **rapid** sterilized **oxygen**

# REDOXY-3C ADSORB<sup>XXX</sup>

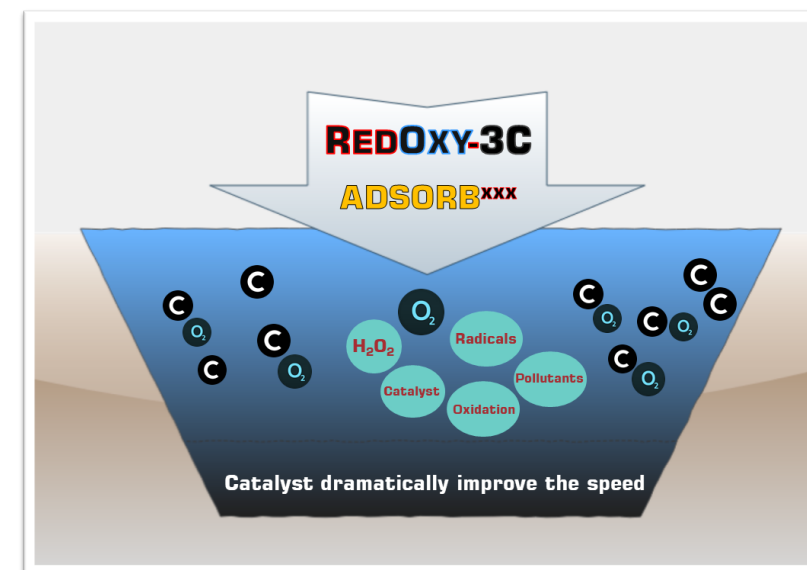
The first **Granular Ferrous Sulfate** is an inexpensive catalyst to speed up the reaction by helping the ferrous catalyst do a better job and persist in its original form of **Ferrous Hydroxide** to **adsorb phosphorous, nitrates, Toxic Metals** and almost all **heavy metals** like **arsenic, copper** and **chromium** including **uranium, cesium** and **radium**. Only catalyst and adsorber has created small ferric-sulfate granules with very large surface area to increase catalyst performance.



# REDOXY-3C ADSORB<sup>xxx</sup>

**Advanced Adsorption Process (AAPs)** are a group of chemical processes that use oxygen to remove organic materials from water. The reactions are performed by strong hydroxyl radicals ( $\cdot\text{OH}$ ) created by the decomposition of **Oxy<sup>xxx</sup>** and **Adsorb<sup>xxx</sup>** very powerful oxygen agents that is used in removal of both organic and inorganic pollutants. **REDOXY-3C** technologies are an appealing way to recycle contaminated wastewater, lakes, rivers, ponds and a brand new technology for **IN-PIPE-TREATMENT**, since the end product of **REDOXY-3C** decomposition are  $\text{H}_2\text{O} + \text{O}_2 + \text{CO}_2$

**Watch Water®** has showed and proved that adding three components as a mix- called **REDOXY-3C** can dramatically improve the speed and efficiency of the reaction. As the global demand for clean water continues to grow, this is the reason we have developed a universal cost **effective technologies to de-contaminate** all kinds polluted water.



# REDOXY-3C ADSORB<sup>XXX</sup>

**REDOXY-3C** discovery provides the perfect **catalytic system** to improve an already promising **biological process** with application's in lakes, rivers, ponds, landfill leachate, industrial applications and municipal water and wastewater treatment.

**As Excellent** composition for **decomposition** of all pollutants in advanced oxidation process

**Faster, Cheaper, Water & Wastewater treatment process with Oxidation reaction's.**

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