



OXYONE

WATCH[®]
ER
WATCH WATER
a Water Company

**OXIDATION, PURIFICATION
AND DISINFECTION
CHEMISTRY FROM OUR
DOSING AND DISINFECTION**

www.watchwater.de

OXYONE

WATER AND WASTEWATER TREATMENT

Watch Water[®] delivers Oxidation, Purification and disinfection chemistry from our dosing and disinfection businesses. From our company roots in Germany, Oxidation products have been the wastewater and water treatment industry pioneer for over 40 years. Watch Water[®] has thousands of dosing and disinfection systems, including some of the world's largest oxidation applications.

With branches all over North America, Canada, South America, Africa, Asia, and China: Watch Water can deliver to any customer around the world. Trust Watch Water[®] delivers the highest quality Oxidation Technology solutions to meet even the most difficult treatment challenges.



OXYONE CHEMISTRY FOR ANY POLLUTANT REMOVAL

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WHERE CAN IT BE APPLIED?

OxyOne® has many advantages over other oxidants. These advantages are the reasons why OxyOne® technology is the high-quality process standard for many applications.

- ▶ Advanced Oxidation Process (AOP)
- ▶ Strongest Oxidation on the market
- ▶ Disinfection without By-products
- ▶ Very short contact time

COMPOUNDS OXIDIZED

- ① Algae and Cyanobacteria
- ② Ammonia and amine compounds
- ③ Aldehydes, including formaldehyde
- ④ Arsenic
- ⑤ Bad Bacteria and Viruses
- ⑥ Compounds that contribute to
 - ⑥.1 Biological Oxygen Demand (BOD)
 - ⑥.2 Chemical Oxygen Demand
 - ⑥.3 Total Organic Carbon
- ⑦ Color, taste, and Odour
- ⑧ Cyanides and thiocyanates
- ⑨ Dyes and Pigments
- ⑩ Food waste or By-products
- ⑪ Hydrogen sulfide and organic sulfides
- ⑫ Micropollutants
- ⑬ Microorganism
- ⑭ Nitrates Oxidation
- ⑮ Nitrite oxidizing bacteria (NOB)



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- ⑩ Organic Amines
 - ⑩.1 Amino acids
 - ⑩.2 Biogenic amines
 - ⑩.3 Triethylamine
 - ⑩.4 Aromatic amines
- ⑪ Organic Sulphides
 - ⑪.1 Selective Oxidation
 - ⑪.2 Organic Sulphides
 - ⑪.3 Sulfides to Sulfoxides
- ⑫ Persistent Organic Pollutants (POPs)
 - ⑫.1 Pesticides (such as DDT)
 - ⑫.2 Polychlorinated Biphenyls (PCBs)
 - ⑫.3 Dioxins and Furans
- ⑬ Pharmaceuticals
- ⑭ Phenolic Pollutants
- ⑮ Quinolines
- ⑯ Synthetic Fragrances



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OxyOne® Three Component Compound can solve water treatment challenges. OxyOne® is a game-changing water and wastewater treatment technology for enhanced degradation of a wide variety of highly persistent, mobile and toxic organic pollutants such as already explained (compounds Oxidized). Our Three compounds are integrated with Watch's Three novel catalysts and provide decentralized treatments for industrial, commercial, municipal effluents and remediation projects for the treatment of contaminated water.

SURFACE WATER

GROUND WATER

WASTE WATER

LAGOON WATER

Watch Water® unique Oxidation technology relies on the activation of our proprietary all-porous catalysts using highly scalable and cost-effective energy sources such as micro bubbling. Increasing the oxidation number.

// An increase in Oxidation number during a reaction corresponds to oxidation. //

$\text{CO}_3^{\cdot-}$ is a carbon trioxide which is Carbon or Oxocarbon reactive Oxide. Carbon trioxide can be present in a negative Corona discharge drift area due to atomic oxygen (O) produced by free electrons in the plasma from molecular oxygen. $\text{CO}_3^{\cdot-2}$ the carbonate Radical.

OxyOne® generates Three Radicals. One product and hundreds of benefits

- ▶ Carbonate Radicals
- ▶ Hydroxyls Radicals
- ▶ Sulfate Radicals

Carbonated Radicals offer additional advantages over hydroxyl radicals due to their higher reactivity, longer lifetime, and greater selectivity.

Oxidant	Oxidation Potential
Carbonate Radical [$\text{CO}_3^{\cdot-2}$]	3.2 v
Hydro Radial [HO]	2.7 v
Sulfate Radical	3.1 v
Total	9.0 v

OxyOne® can be applied on all applications as explained (compounds Oxidized)



**Powder Dosing for direct application
Preparation of concentrated solution,
for automated/continuous dosing
AOP activation of OxyOne® solutions,
for boosted performance and reaction
times against persistent pollutants.**

Watch-Water® GmbH
Fahrlachstraße 14, 68165 Mannheim, Germany
Tel. +49 621 87951-0 | Fax +49 621 87951-99

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