

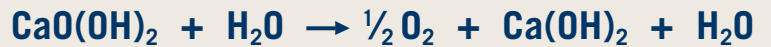


## Highest amount of active oxygen in a controlled-release, oxygen producing compound

PRODUCT OVERVIEW

ORC Advanced® is the state-of-the-art technology for stimulating aerobic bioremediation. It offers unparalleled, maximum oxygen release for periods up to 12 months on a single injection and is specifically designed to minimize oxygen waste while maximizing contaminated site remediation.

ORC Advanced is a formulation of calcium oxyhydroxide which, upon hydration, releases oxygen and forms simple calcium hydroxide and water.



### PRODUCT BENEFITS

#### HIGHEST AVAILABLE OXYGEN CONTENT

More active oxygen (17%) plus Regensis' patented Controlled Release Technology (CRT™) saves time and money by increasing degradation rates and improving remediation performance by providing more oxygen on a single injection. It is particularly effective at higher demand sites where oxygen may be limited and scavenged by competing carbon sources.

#### PATENTED CONTROLLED-RELEASE TECHNOLOGY (CRT™)

Based on the same proven technology employed in the industry standard Oxygen Release Compound (ORC®), CRT allows for an efficient, long-term release of oxygen providing the optimal conditions for sustained aerobic biodegradation. This can save time and money by reducing the potential need for multiple applications. Also, oxygen release "lock-up" is avoided – an unfortunate problem experienced with commodity chemicals.

#### IN-SITU APPLICATION

Remediation with ORC Advanced is typically more cost-effective than ex-situ treatments. With the use of ORC Advanced there is minimal site disturbance with no above-ground piping or mechanical equipment, no operations and maintenance costs and no hazardous materials handling or disposal.

PRODUCT BENEFITS

### DEFINING THE SCIENCE BEHIND CONTROLLED-RELEASE TECHNOLOGY (CRT™)

Early on, Regensis researchers noted that in order to optimally stimulate the natural attenuation of aerobically degradable contaminants, biologically usable oxygen was best supplied in low but constant concentrations. Big bursts of oxygen are wasteful and simply "bubble off", often generating undesirable foaming and producing unwanted preferential flow paths in the subsurface. Regensis sought to solve this problem by controlling the rate of oxygen release from solid oxygen sources.

The answer was provided by the development of CRT. The CRT process involves intercalating (embedding) phosphates into the crystal structure of solid peroxygen molecules. This patented feature, now available in the ORC Advanced® formulation, slows the reaction that yields oxygen within the crystal, minimizing "bubble off" which can waste the majority of oxygen available in common solid peroxygen chemicals.

CRT provides "balance" – it slows down the rate of oxygen release while at the same time preventing "lock-up". Commodity solid peroxygen chemicals, when in contact with water, will produce an initial rapid and uncontrolled-release of oxygen. Then, as hydroxides form, a significant portion of the oxygen deeper in the crystal is made unavailable or becomes "locked-up." This undesirable effect is inefficient and costly. CRT prevents lock-up and controls the rate of oxygen release, representing the state-of-the-art technology in passive oxygen delivery.



FIGURE 1:  
FILLING A PUMP WITH  
ORC ADVANCED SLURRY

CRT