



E Coli



MRSA



Legionella



Norovirus

## **ANTI-MICROBIAL ACTION**

Proven effective against MRSA, Norovirus, Legionella pneumophila, and E coli in testing conducted by certified independent laboratories under GLP conditions submitted to the USEPA. **Vital Oxide** is a broad-spectrum antimicrobial that performs against a wide variety of bacteria, yeasts, viruses, fungi, spores, molds, mildews and other microbes. It is very effective at low concentrations, over a wide pH range.

# **PREVENTS MOLD & MILDEW ON HARD SURFACES & FABRIC**

#### Results of University of Tulsa Study: Effectiveness of Vital Oxide for Controlling Fungal Contamination on Building Materials.

- Vital Oxide inhibited spore germination of test fungi.
- Pretreatment with Vital Oxide inhibited the growth of fungi on sheetrock and ceiling tiles.
- Spray applications of **Vital Oxide** were effective in stopping fungal growth even in saturated conditions.



Vital Oxide Treated Sterile Water Control

Pretreatment of ceiling tiles with Vital Oxide inhibited growth of Stachybotrys 7 months following treatment.

	Mean colony diameter (cm) of fungi after 30 days incubation on sheetrock saturated with Vital Ox-ide "Ready To Use" (RTU) or sterile water Control		
Fungi	Control	VO - RTU	50% RTU
Alternaria alternata	>6.0	0	0
Aspergillus fumigatus	>6.0	0	0
Aspergillus versicolor	3.6	0	0
Chaetomium globosum	>6.0	0	0
Penicillum sp.	>6.0	0	0
Stachybotrys chartarum	>6.0	0	0



Vital Oxide Treated Sheetrock Exhibits No Fungal Growth Even in Saturated Conditions

Percent Germination of Stachybotrys Spores



# VITAL OXIDE ® USES THE POWER OF OXYGEN

#### KILLS HARMFUL BACTERIA & VIRUSES & REMOVES MOLD & MILDEW

### THE TECHNOLOGY

The chlorine dioxide molecule has one chlorine atom and two oxygen atoms. This combination creates a molecular free radical—a magnetic like attraction that seeks out electron donors and selectively oxidizes harmful bacteria and mold.

### THE ENVIRONMENTALLY SOUND ALTERNATIVE TO



Although chlorine dioxide (CLO2) has chlorine in its name, its chemistry is radically different from that of chlorine itself. Technically speaking both chlorine and CLO2 are oxidizing agents. Yet these fundamentally different chemistries react in distinct ways with organic compounds result-ing in very different by-products.

VS

#### STABILIZED CLO2

## metabolic toxin and will not ai

- CLO<sub>2</sub> is not a metabolic toxin and will not aid in developing antibiotic resistance in bacteria.
- CLO<sub>2</sub> and its primary by-product chlorite, break down to sodium chloride (simple salt).
- CLO2 works through Highly Selective Oxidation, reacting with vital amino acids in the cell to eliminate bacteria, viruses and denature proteins, while being relatively un-reactive to other organic material—thus reducing the level of CLO2 required to do the job.

#### **CHLORINE BLEACH**

- Chlorine produces harmful by-products (THM) trihalomethanes and (HAAS) haloacetic acids which are linked to cancer.
- Chlorine is highly corrosive to tissues and treated articles.
- Chlorine has a poor shelf life & stability.
- Chlorine has strong unpleasant odor.
- Chlorine's large molecule can't penetrate porous surfaces thus making it ineffective against mold mycelia (roots).

### THE HISTORY

CLO2 has been recognized for its powerful disinfecting properties since the early 1900's. It is used by municipalities to purify drinking water. Environmentalist now recommend its use in eco-friendly paper production. Produced on site, these treatments require sophisticated chemical generation equipment and limit practical use to only large scale industrial operations.

In an effort to commercialize CLO2 for the general public several companies have developed methods to produce "stabilized CLO2". These products usually require a two-step process mixing an acid "activator" into a chlorite solution to produce CLO2. Yet, even though products claim to have even the same amount of this key ingredient it certainly can not be assumed that they will perform in an equal manner. The results are solutions of varying strength —and safety—with a shelf life of a few days to just a few hours.

### THE BREAK THROUGH

Vital Oxide is a super effective, ecologically sound cleaner & odor eliminator, with proven broad-spectrum anti-microbial action. (USEPA registered #82972-1) Shelf stable & Ready To Use—no mixing required, just spray, wipe, or fog right from the bottle. Non-irritating to the skin, and not corrosive to treated articles.

