

Selectroicide[®] Pure Chlorine Dioxide

General Overview



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Selectroicide[®] Technology

- ❑ Selective Micro Technologies' (SMT) Selectroicide[®] Technology is a revolutionary way to safely and cost-effectively produce pure chlorine dioxide (ClO₂) for point-of-use applications.
 - Just add water - safe to use anywhere and anytime
 - Pure ClO₂ is a selective and highly effective disinfectant
 - Bacteria, viruses, molds, mildews and more
- ❑ Selectroicide[®] is manufactured by p4mX's sister company, *Industrial Chemical and Packaging, LLC.*



EPA Registered Product

Bacteria Disinfection Claims

100 ppm/10-minute contact time

- *Pseudomonas aeruginosa*
- *Staphylococcus aureus*
- *Salmonella enterica (choleraesuis)*
- *Methicillin-resistant Staphylococcus aureus (MRSA)*
- *Vancomycin-resistant Enterococcus faecalis (VRE)*
- *Candida albicans*
- *Trichophyton mentagrophytes*
- *Listeria monocytogenes*
- *Klebsiella pneumonia*
- *Mycobacterium bovis (TB) BCG*

50 ppm/20-minute contact time clean-in-place applications

- *Pseudomonas aeruginosa*
- *Staphylococcus aureus*
- *Salmonella enterica (choleraesuis)*
- *Candida albicans*
- *Methicillin-resistant Staphylococcus aureus (MRSA)*
- *Vancomycin-resistant Enterococcus faecalis (VRE)*

Virucidal Claims

100 ppm/10-minute contact time)

- *Human Immunodeficiency Virus type 1 (HIV-1)*
- *Norovirus (feline calicivirus surrogate)*
- *Pandemic 2009 H1N1 Influenza A virus*
- *Coronavirus*
- *Feline Calicivirus*
- *Hepatitis A virus Strain*
- *Poliovirus-1*
- *Rotavirus Strain WA*
- *Influenza-A virus*
- *Rhinovirus type 37*
- *Canine Parvovirus*
- *Adenovirus type 5*
- *Herpes Simplex virus type 2*
- *Vaccinia virus*

Bacteria Sanitizer Claims

20 ppm/5-minute contact time hard, non-porous non-food contact surfaces

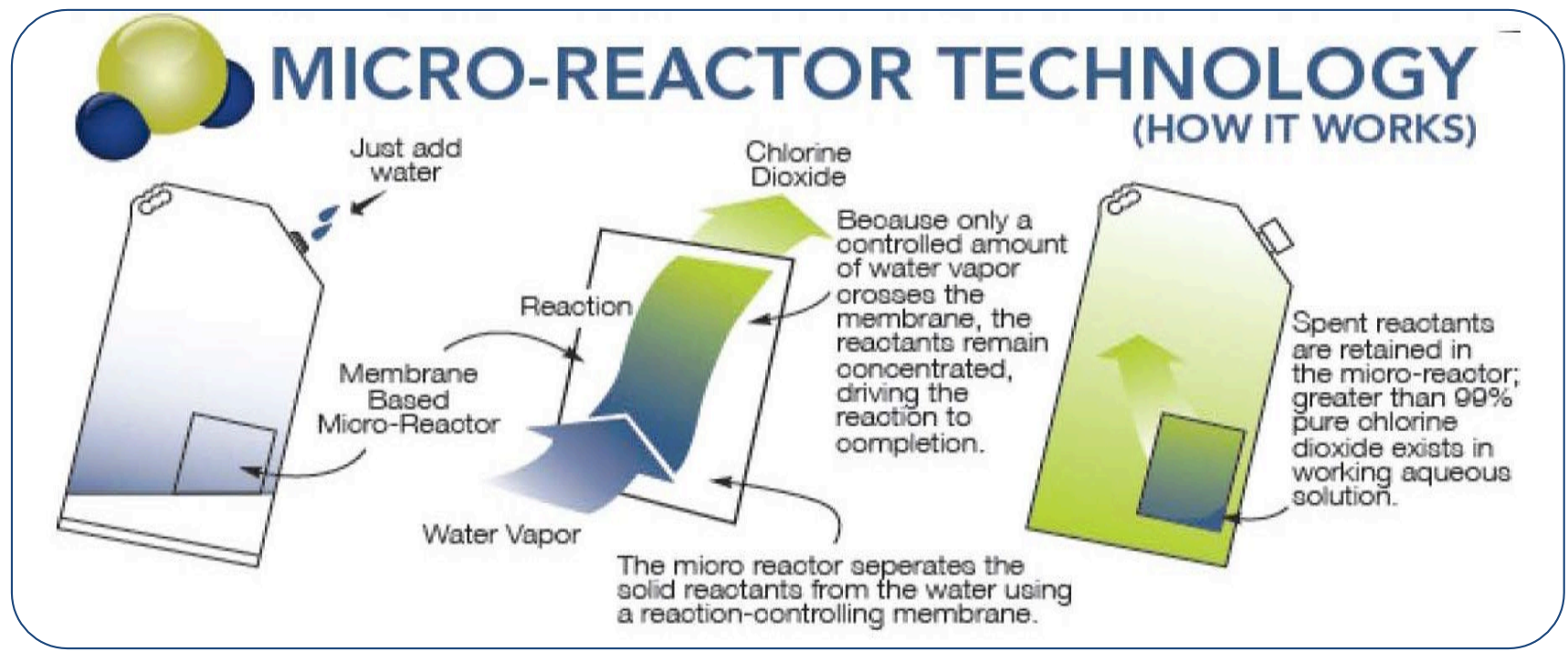
- *Staphylococcus aureus*
- *Klebsiella pneumonia*
- *Listeria*

5 ppm/1-minute contact time hard, non-porous food contact surfaces

- *Staphylococcus aureus*
- *Escherichia Coli*
- *Escherichia coli O157:H7*
- *Salmonella typhimurium (MDRS)*

Patented Design

- ❑ SMT products based on patented micro-reactor design
 - Dry-solids precursor for ClO_2 packaged in polymer membrane
 - The selective membrane (1) controls the reaction process, (2) releases *pure ClO_2* , (3) ensures *pH neutral* solution.





Selectroicide[®] is NOT....

- ❑ Chlorine or ‘stabilized’ chlorine dioxide
 - Chlorine and ‘stabilized’ chlorine dioxide are:
 - Corrosive
 - Form hazardous disinfection byproducts
 - Efficacy is very pH dependent
 - Leave residual byproducts
 - Not as effective as pure chlorine dioxide
 - 1/200th the disinfection capability compared to pure ClO₂
 - Stabilized chlorine dioxide products often list generic ingredients like “oxychlorine compounds”
 - These products actually generate very little ClO₂
 - Resultant solutions are also typically very acidic (low pH)



Selectroicide[®] vs. 'Stabilized ClO₂'

	"Stabilized" Product	Selectroicide [®]
pH of final solution	3.04 (acidic)	6.9 (neutral)
ClO ₂ concentration	3.2 ppm	75 ppm
Chlorite (ClO ₂ ⁻) concentration	134.0 ppm	0.6 ppm
Chlorate (ClO ₃ ⁻) concentration	3.0 ppm	0.2 ppm
% Pure ClO ₂	2.3%	99.9%



Cost-Effective Product Formats

- ❑ Selectroicide® Technology can be provided in product formats to suit almost any use - market application and scale of operation
 - From small-scale clinical use to products designed for restaurant and hotel applications to water treatment processes.



p4mX

Hard Surface Disinfection Products

- ❑ Example - 2L500 format weighs 2.6 oz
 - Add 2L of water to generates 500 ppm solution of ClO_2
 - Dilute in 1L spray bottles
 - 20 bottles at 25 ppm
 - 10 bottles at 50 ppm



You don't pay for water and you don't pay to ship water!

Closet System

- ❑ Designed for larger users
 - Hotels
 - Schools
 - Restaurants
 - Medical offices
- ❑ Benefits
 - Reduced costs
 - User friendly/safe handling
 - Automated dispensing
- ❑ Multifunctional
 - Clean
 - Disinfect
 - Deoderize





Hotels, Healthcare, Living Quarters

Clean, disinfect and deodorize all in one step with one product!

- ❑ Selectrocid[®] plus cleaner use saves time and money
 - 2L500 format ideal for routine hospitality and healthcare use
 - Generate ClO₂ per instructions
 - Dilute to 25 ppm in 1L spray bottle
 - Add SMT cleaner
 - Spray on all contact surfaces (including glass)
 - Wait, wipe, and go
 - Use 100 ppm solution for deep disinfection (1/day or 1/week)
 - Spray and go
 - See how easy it is to use:
 - <http://www.youtube.com/watch?v=XA5xPUqgT50>
 - See testimonials on efficacy and cost savings:
 - <http://www.youtube.com/watch?v=F-7K7RL9Lgg>



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