



INDUSTRIAL WATER

PERASAN[®]-A
Antimicrobial Solution

EPA Reg No. 63838-1

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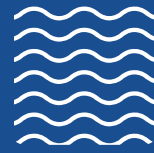
BIOSIDE[™] HS-15%
Antimicrobial Solution

EPA Reg No 63838-2

**EQUILIBRIUM
PERACETIC
ACID SOLUTIONS**



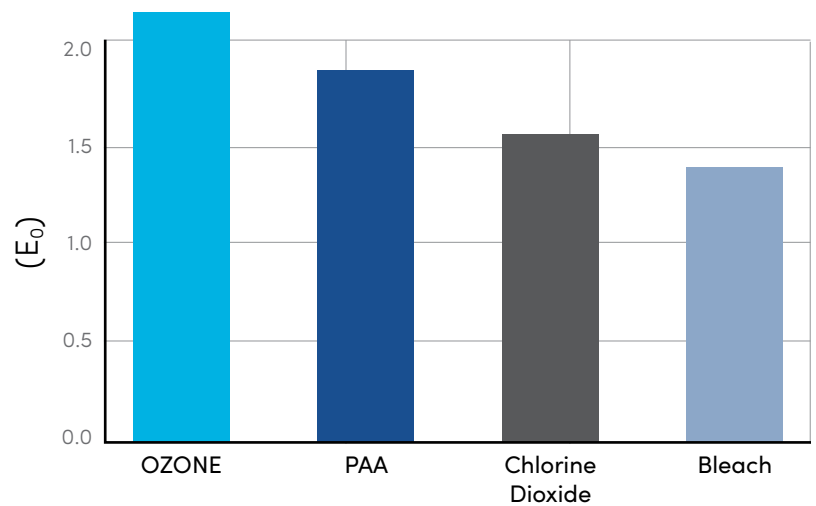
**THE ZERO
LIQUID
DISCHARGE
SOLUTION
CONTRIBUTES NO TDS**



Peracetic acid is an EPA registered biocide for the control of slime and bio-fouling in:

- Cooling towers
- Evaporative condensers
- Closed loop systems
- RO pretreatment
- Agricultural or irrigation water systems
- Ornamental water features

Oxidizing strength



Advantages

- Broad spectrum oxidizing biocide
- No halogenated by-products or THMs
- Unaffected by ammonia or many other nitrogen-based chemistries
- Compatible with common organic scale and corrosion inhibitors
- Optimum performance below pH 8.6, but effective up to pH 9.5
- Lowers alkalinity to allow higher cycles of concentration than hypochlorite
- Safe for discharge to land or for surface irrigation
- Does not contribute conductivity or TDS
- Effective against algae and slime as low as 1-2 ppm
- Biodegradable and organic
- Multiple analysis / monitoring options available
- Second only to ozone in oxidizing strength



Comparison with sodium hypochlorite bleach

	Peracetic	Acid NaOCl
Efficacy @ pH>8, or w/ NH ₃	High	Low
Degraded by UV	Slight	T _{1/2} =45 mins
Contributes Na ⁺ /EC	No	1.8 lb NaCl/gallon
Shelf-Life	>1 year	Weeks
Aquatic Toxicity	Low	High

Physical properties

	BioSide [™] HS-15	Perasan [®] A
Peracetic Acid (% wt)	14.8-15.7	5.5-5.9
H ₂ O ₂ (% wt)	21.5-22.5	26.5-27.5
Acetic Acid (% wt)	15-16	7-8
Density 20°C (68°F) (g/mL)	1.14	1.12
Vapor Pressure 20°C (68°F) (mbar)	27	27
pH 10% solution	1.8	1.8
pH 1% solution	2.8	2.8
Flash Point °C (°F) DIN	>98 (207)	>98 (207)
Freezing Point °C (°F)	-5 (23)	-5 (23)

Shipping and transport

Peracetic acid products are available in pack sizes of 5, 15, 30, 55, & 300 gallons. **Perasan[®] A** antimicrobial solution is shipped as:

Hydrogen peroxide and peroxyacetic acid solution, stabilized, 5.2, (8), UN3109, PG II

BioSide[™] HS-15 antimicrobial solution is shipped as:

Organic peroxide type F, liquid (Peroxyacetic Acid), 5.2 (8) , UN3109, PG II



Handling and storage

Store product in original container, in an upright position.

The storage area should be well ventilated and shaded from sunlight as well as protected from sources of radiant heat.

Contamination of the product, especially heavy metal ions and alkali, must be avoided.

Do not store near reducing agents, fuels, organic material, or other non-compatible materials.

Avoid temperatures above 86° F.

Use first in, first out storage management.

Containers must be vented.

Shelf life is at least one year without notable loss of active oxygen if stored properly.