



ZERO LIQUID DISCHARGE
BIOSIDE HS 15% **PERASAN OG**

EXPLORE COST-EFFECTIVE WATER TREATMENT SOLUTIONS WITH US

PERACETIC ACID FOR OIL AND GAS WATER TREATMENT



THE CHALLENGES

Oil & Gas Water Treatment

Challenges Include:

- Fresh water, Flowback water and Produced water management & recycling
- Cost, efficiency and speed of treating water used in O&G
- Controlling microbiological contamination in ponds, pits and frac water tanks
- Minimizing corrosion potential from untreated water sources
- Ensuring water quality is acceptable and compatible with drilling fluids
- Biocidal efficacy against SRBs, APBs & general anaerobic bacteria
- Elimination of H₂S and FeS
- Free-water knockout (*FWKO*) oil/water separation unit contaminates
- High microbial contamination in post-separation water storage and H₂S contamination
- Expert support to address unique water treatment objectives

WE SOLVE

O&G Water Management Solutions:

Our environmentally friendly peracetic acid (PAA) solutions quickly eliminate microbial contamination; significantly reduce or eliminate H₂S in water, oil, or gas, remove oil-wet FeS emulsions and scale from production equipment and well structures, plus much more.

Advantages of PAA include:

- Single feed chemistry
(no on-site mixing or activation required)
- Effective over a broader pH-range compared to chlorine/bleach
- Zero residual remaining, does not contribute to TDS or conductivity
- Minimum 1-year shelf-life
- Broad spectrum oxidizing biocide – rapid antimicrobial efficacy against SRBs, APBs and general anaerobic bacteria.
- Not affected by organic contamination
- Compatible with drilling fluids, scale and corrosion inhibitors
- Safe for discharge to land or receiving bodies of water
- Biodegradable; breaks down to water and acetic acid (*vinegar*) and does not persist in the environment
- Easy to use concentration monitoring options available – (*Kemio/AquaPhoenix*)
- Effective in treating Salt Water Disposal (*SWD*) wells
- Enables the recycling of 100% of produced and flowback water in hydraulic fracturing operations

Lower Costs and Increase Production with Effective PAA Water Treatment

Our versatile oxidizing PAA biocides not only help meet your O&G water treatment challenges, but efficiently reduce your application operating costs by more than **50%**, while ensuring efficient use of water resources, optimum performance and enhanced oil recovery.



BIOSIDE HS 15%

Maximize production and remain competitive

| | |
|---------------------------------|------------|
| PAA: | 15% |
| H ₂ O ₂ : | 22% |

Contains a higher concentration of H₂O₂ which acts as a scavenger to oxidize organic materials in the water

USE FOR: oil, gas and secondary oil recovery systems, drilling muds, fracturing fluids, and packing fluid, injection water and floodwater

- Treats water used in primary or secondary oil and gas recovery systems to control anaerobic sulfate-forming bacteria and aerobic slime-forming bacteria.
- May be used in fresh or recycled water, secondary recovery systems, muds or fluids.
- Controls non-public health biofilm and slime deposits on products associated with oilfield and gasfield systems which are susceptible to contamination.
- Controls slime deposits downhole in water-bottoms.
- Recommended initial dosing levels of 5 to 100 ppm as active peroxyacetic acid. *(Add enough of this product to achieve satisfactory biological control).*

PERASAN OG

Lowest Treatment Cost, Low Risk, Max Production

| | |
|---------------------------------|------------|
| PAA: | 22% |
| H ₂ O ₂ : | 5% |

Higher concentration of PAA allows for a lower feed rate and decrease freight costs

USE FOR: oil, gas and secondary oil recovery systems, drilling muds and packing fluids

- Treats water used in primary or secondary oil and gas recovery systems to control anaerobic sulfate reducing bacteria (SRBs) and aerobic slime-forming bacteria.
- May be used in fresh or recycled water, secondary recovery systems, muds or fluids.
- Controls biofilm and slime deposits on products associated with oilfield and gasfield systems which are susceptible to contamination.
- Controls slime deposits downhole in water-bottoms.
- Recommended initial dosing levels of 5 to 100 ppm as active peroxyacetic acid. *(Add enough of this product to achieve satisfactory biological control).*

Physical Properties

| | BIOSIDE HS 15% | PERASAN OG |
|---|----------------|------------|
| Peracetic Acid (% wt) | 15 | 22 |
| H ₂ O ₂ (% wt) | 22 | 5 |
| Acetic Acid (% wt) | 15-16 | 40-50 |
| Density 20°C (68°F) (g/mL) | 1.135 | 1.11 |
| Vapor Pressure 20°C (PAA) (68°F) (mmHg) | <10 | <10 |
| pH 10% solution | <1 | <1 |
| Flash Point °C (°F) DIN | >98 (207) | >93 (200) |
| Freezing Point °C (°F) | <-5 (23) | <-8 (17) |

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.

Shipping and transport

- Peracetic acid products are available in drums, 300-gallon totes and bulk.
- **EnviroTech** has a fleet of bulk delivery tankers specifically designed for PAA delivery.
- **BioSide HS 15%** is shipped as: UN3109, Organic peroxide type F, liquid ($\leq 25\%$ peracetic acid with $\leq 26\%$ hydrogen peroxide), 5.2 (8)
- **Persan OG** is shipped as: UN3109, Organic peroxide type F, liquid ($\leq 25\%$ peracetic acid with $\leq 26\%$ hydrogen peroxide), 5.2 (8)

Contact us today!

EnviroTech's Peracetic Acid solutions were designed for maximum efficiency, environmental friendliness and cost effectiveness. Proven superior for 25+ years of use. Our dedicated, technical experts are ready to assist you with your O&G water treatment initiatives.