

TECH BRIEF



SANITIZATION SYSTEM ASSESSMENT WORKSHEET

**FOR PURE WATER SYSTEM STORAGE TANK
AND DISTRIBUTION LOOP DISINFECTION**

**SIMPLE. PROVEN.
OZONE TECHNOLOGY.**

IS YOUR SYSTEM READY FOR OZONE DISINFECTION?

Improving the efficiency of your pure water sanitization systems can dramatically reduce overhead costs, minimize downtime and increase production with better effectiveness. Save time with shorter cleaning cycles, lower energy costs by not heating water, reduce water use with fewer rinses and reuse, and eliminate the need for storage and handling of chemicals with our disinfection solutions. Assess your existing system with the following questions.

1. Have you had a microbial issue with your pure water system?

☐ Yes ☐ No ☐ Don't Know

2. How often do you sanitize now?

☐ Daily ☐ Weekly ☐ Monthly
☐ Twice Per Year ☐ Annually ☐ Never

3. What do you use?

☐ Chemical ☐ Heat ☐ Ozone
☐ Nothing

4. Is it a validated system?

☐ Yes ☐ No ☐ Don't Know

5. How much do you spend per sanitization?

☐ Less Than \$5K ☐ \$5K - \$10K
☐ \$10K - \$20K ☐ More Than \$20K
☐ Other _____

6. Select the 3 most important improvements needed in your system.

☐ Better Microbial Efficacy
☐ Reducing Sanitizing Time
☐ Reducing Water Usage
☐ Reducing Energy Usage
☐ Reducing Waste Discharges
☐ System Automation

7. What is the tank size?

☐ 100 - 500 gallons ☐ 500 - 1000 gallons
☐ 1000 - 3000 gallons ☐ 000 - 6000 gallons
☐ More Than 6000 gallons

8. What is the distribution loop distance?

☐ Overall Length Less Than 300 feet
☐ Overall Length More Than 300 feet

9. Is the tank/system inside or outside?

☐ Inside ☐ Outside

10. What are the tank, piping, filter and diaphragm materials?

☐ Stainless Steel (304/316) ☐ CPVC ☐ PVC
☐ Polyethylene (PE) ☐ Polypropylene (PP)
☐ Teflon (PTFE) ☐ Kynar (PVDF)
☐ Fiber-reinforced Plastic/Polymer (FRP)
☐ Don't Know / Other _____

11. What are the seal and valve materials?

☐ Ethylene Propylene Diene Terpolymer (EPDM)
☐ Teflon (PTFE) ☐ Viton (FKM)
☐ Nylon ☐ Neoprene (Polychloroprene)
☐ Nitrile Rubber (Buna N, NBR)
☐ Natural Rubber
☐ Don't Know / Other _____

12. Do you have a UV system now?

☐ Yes ☐ No ☐ Don't Know

Any special system configurations or application requirements?

MATERIAL COMPATIBILITY WITH OZONE

MATERIAL	RATING (OZONE CONCENTRATION NOT SPECIFIED)	MATERIAL	RATING (OZONE CONCENTRATION NOT SPECIFIED)
ABS Plastic	B ¹ - Good	Kalrez	A ¹ - Excellent
Acetal (Delrin®)	C - Fair	Kel-F®	A - Excellent
Aluminum	B - Good	LDPE	C ¹ - Fair
Brass	B - Good	Magnesium	D - Severe Effect
Bronze	B - Good	Monel	C - Fair
Buna N (Nitrile)	D - Severe Effect	Natural Rubber	D - Severe Effect
Butyl	A - Excellent	Neoprene	C - Fair
Carbon Steel	C - Fair	Nylon	D - Severe Effect
Cast Iron	C - Fair	PEEK	A - Excellent
ChemRaz (FFKM)	B - Good	Polyacrylate	B - Good
Copper	A - Excellent	Polycarbonate	B ¹ - Good
CPVC	A - Excellent	Polyethylene	C - Fair (in air)
Durachlor - 51	A - Excellent	Polysulfide	B - Good
Durlon 9000	A - Excellent	PTFE (Teflon®)	A - Excellent
EPDM	A - Excellent	PVC	B - Good
EPR	A - Excellent	PVDF (Kynar®)	A - Excellent
Epoxy	A ¹ - Excellent	Santoprene®	D - Severe Effect
Ethylene - Propylene	A - Excellent	Silicone	A - Excellent
Fluorocarbon (FKM)	A - Excellent	Steel - Galvanized	C - Fair (in water)
Fluorosilicone	A - Excellent		A - Excellent (in air)
Glass	A - Excellent	Steel - Mild, HSLA	D - Severe Effect
Hastelloy-C®	A - Excellent	Stainless Steel - 304	B - Good
HDPE	C ² - Fair	Stainless Steel - 316	A - Excellent
Hypalon®	A - Excellent	Titanium	A - Excellent
Hytrel®	C - Fair	Tygon® (E-3603)	A - Excellent
Inconel	A - Excellent	Viton®	A - Excellent
		Zinc	D - Severe Effect

Source: www.coleparmer.com

Ratings - Chemical Effects

- A Excellent
- B Good - Minor effect, slight corrosion or discoloration
- C Fair - Moderate effect, not recommended for continuous use. Softening, loss of strength, swelling may occur
- D Severe Effect - Not recommended for ANY use
- N/A Information not available

Explanation of Footnotes

- 1 Satisfactory to 72°F (22°C)
- 2 Satisfactory to 120°F (48°C)

Warning

The information in this chart is to be used ONLY as a guide in selecting equipment/component for appropriate chemical compatibility.

Different material react differently to wet or dry ozone. DRY ozone has been dried to -60°F (-51°C) or lower, WET ozone may be dissolved in liquid or include moisture. Contact Pacific Ozone Technology to determine if your material is compatible.

Danger

Variation in chemical behavior during handling due to factors such as temperature, pressure, and concentrations can cause equipment/component to fail, even though it passed an initial test.

QUALIFIED PERFORMANCE, PRECISION CONTROL AND FOREVER RELIABILITY

Packaged Ozone Disinfection Systems generate ozone on-site (no storage) and include the ozone generator, feed gas (usually oxygen concentrator and/or air dryer), injection mass transfer, mixing and gas management devices, ozone monitors and control (ambient and dissolved ozone monitors), and an ultraviolet (UV) for dissolved ozone destruction.

Compressed air is used to generate the feed gas. The ozone generator uses corona discharge to generate ozone from oxygen in the feed gas. Ozone gas is transferred into the water stream using pressure with injection mass transfer. The ozone gas dissolves into the water to rapidly reach all wetted parts of the water system to rapidly disinfect and destroy microbes.

PACKAGED OZONE SYSTEMS

SUMMIT K1 OZONE DISINFECTION SYSTEM

Designed for a quick and seamless integration into your pure water system. The K1 provides an efficient production and delivery of 18-70g/h ozone with the latest safety features and is system commission and qualification ready.

- Compact Stainless Steel Construction
- Sanitary Design
- Efficient 18-70g/h Production & Delivery
- Ambient Ozone Detector Standard
- Easy-to-use Software & Large Touch Screen
- Auto-precision DO3 Control
- System Commission & Qualification Ready



6160 Egret Court, Benicia, CA 94510

+1 (707) 747-9600 pacificozone.com / evoqua.com

Pacific Ozone is a brand of Evoqua. All information presented herein is believed reliable and in accordance with accepted engineering practices. Evoqua makes no warranties as to the completeness of this information. Users are responsible for evaluating individual product suitability for specific applications. Evoqua assumes no liability whatsoever for any special, indirect or consequential damages arising from the sale, resale or misuse of its products.

© 2019 Evoqua Water Technologies LLC

Subject to change without notice

AN-Storage & Loop-0719