

# WATER GUARD, INC

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## TECHNICAL BULLETIN ~ OP 37 AND OP 50

WATER GUARD'S OP 37 and OP 50 are clear, water-white, odorless blends of poly and orthophosphates used to both sequester metals and prevent corrosion of the water distribution system. OP 37 and OP 50 are effective in sequestering up to 1 ppm of iron and 0.5 ppm of manganese. They also prevent the build-up of iron and manganese on the internal piping system by forming a coating on the walls preventing the corrosion and pitting of any metal components of the distribution system.

The distinguishing characteristic of OP 37 and OP 50 from Water Guard's LIQUID POLY BLENDS is the concentration of orthophosphate in the product that prevents the leaching of copper and lead into the system water. OP 50 is a 50% Ortho-Poly blend while OP 37 is a 30% Ortho to 70% Poly blend.

### REGISTRATIONS

#### National Sanitation Foundation

Water Guard's OP 37 and OP 50 are NSF/ANSI 60 certified for use in drinking water for corrosion and scale control purposes. Their maximum use level should not exceed 27 and 28 mg/L, respectively.

### ANALYSIS AND SPECIFICATION

OP 50		OP 37	
Total Phosphate	<b>36%</b>	Total Phosphate	<b>34%</b>
Ortho Concentration	50%	Ortho Concentration	30%
Poly Concentration	50%	Poly Concentration	70%
Specific Gravity	1.38	Specific Gravity	1.38
Weight per Gallon	11.50	Weight per Gallon	11.50
pH	4.20	pH	4.20
Maximum Use	28 mg/L	Maximum Use	27 mg/L

### CALCULATING THE FEED RATE OF OP 37 AND OP 50 BLENDS

OP 50 and OP 37 should be fed into the water system by means of a chemical feed pump. The recommended dosage is 6 ppm of OP 50 or 4 ppm of OP 37 for each ppm of iron. (This is approximately 67 ounces of OP 50 or 45 ounces of OP 37 in 120,000 gallons of system water.) For controlling manganese, feed OP 50 at a rate of 12 ppm or 8 ppm of OP 37 for each ppm of manganese. (This is approximately 134 ounces of OP 50 and 90 ounces of OP 37 for 120,000 gallons of system water.) If both iron and manganese are present, feed OP 50 or OP 37 at the combined rates of each metal.

Initially, OP 50 and OP 37 should be fed at the maintenance dose described above plus 5 ppm. This will also sequester metals to prevent further buildup on the system walls. If this the first introduction of a polyphosphate into the system, we recommend a systematic flushing program especially at "dead-end" lines. The polyphosphate will cause any iron and manganese that has deposited to break off and enter the water. This may cause discolored water for a period of time until the metals have been flushed from the system.