

## **POOL & SPA WATER TESTS**

1. Keep test kit out of reach of children.
2. Read precautions on all labels.
3. Store test kit in cool, dark place.
4. Replace reagents once each year.
5. Do not dispose of solutions in pool or spa. Instr. #5311
6. Rinse cells before and after each test.
7. Obtain samples 18" (45 cm) below water surface.
8. Hold dropper bottle vertically when dispensing reagent.

### **Free Chlorine Test**

1. Rinse and fill chlorine / bromine cell to mark with water to be tested.
2. Add 5 drops R-0001 and 5 drops R-0002. Cap and invert to mix.
3. Match color with color standard. Record as parts per million (ppm) free chlorine ( $\text{Cl}_2$ ). See Dosage Charts for adjustment.

### **Total Bromine Test**

1. Rinse and fill chlorine / bromine cell to mark with water to be tested.
2. Add 5 drops R-0001 and 5 drops R-0002. Cap and invert to mix.
3. Match color with color standard. Record as parts per million (ppm) total bromine ( $\text{Br}_2$ ). See manufacturer's instructions for adjustment.

### **pH Test**

1. Rinse and fill pH cell to mark with water to be tested.
2. Add 5 drops R-0014. Cap and invert to mix.
3. Match color with color standard. Record as pH units. If sample color is between two values, pH is average of the two. See Dosage Charts for adjustment.

### **Upgraded Kits Available**

This kit is designed for testing pools and spas with low bather loads. Upgrading to a **DPD kit with more tests** is recommended for those with higher usage or recurrent water problems such as pH "bounce," algae, strong odor, eye irritation, bleaching, staining, or corrosion.

# CHLORINE & pH DOSAGE CHARTS

## TO RAISE CHLORINE 1 PPM USING CHLORINE COMPOUND\*

Volume of Water (gallons/ liters)	% Available Chlorine					
	10%	12%	45%	60%	65%	75%
250 gal 1,000 L	0.32 fl oz 10.0 mL	0.27 fl oz 8.35 mL	0.07 oz 2.22 g	0.06 oz 1.67 g	0.05 oz 1.54 g	0.04 oz 1.42 g
400 gal 1,500 L	0.51 fl oz 15.0 mL	0.43 fl oz 12.5 mL	0.12 oz 3.33 g	0.09 oz 3.33 g	0.08 oz 2.31 g	0.07 oz 2.13 g
1,000 gal 4,000 L	1.28 fl oz 40.0 mL	1.07 fl oz 33.3 mL	0.30 oz 8.89 g	0.22 oz 6.67 g	0.21 oz 6.15 g	0.20 oz 5.83 g
5,000 gal 20,000 L	6.40 fl oz 200 mL	5.33 fl oz 167 mL	1.48 oz 44.4 g	1.11 oz 33.3 g	1.08 oz 30.8 g	0.96 oz 28.3 g
10,000 gal 40,000 L	12.8 fl oz 400 mL	10.7 fl oz 333 mL	2.97 oz 88.9 g	2.23 oz 66.7 g	2.06 oz 61.5 g	1.77 oz 56.3 g
15,000 gal 60,000 L	1.20 pt 600 mL	1.00 pt 500 mL	4.44 oz 133 g	3.34 oz 100 g	3.08 oz 92.3 g	2.66 oz 84.5 g
20,000 gal 80,000 L	1.60 pt 800 mL	1.33 pt 667 mL	5.94 oz 178 g	4.45 oz 133 g	4.11 oz 123 g	3.77 oz 113 g

## For Chlorine Chart

\*Chlorine products contain different amounts of available chlorine. Adjust treatment amounts accordingly.



## For pH Chart

\*\*Sodium bisulfate percentage may vary. Adjust treatment amounts accordingly.

Dosages obtained experimentally using pool water with the following values:

Total Alkalinity ~100 ppm CaCO<sub>3</sub>  
Calcium Hardness ~200 ppm CaCO<sub>3</sub>  
Total Dissolved Solids ~500 ppm  
Temperature ~75 F (24 C)

Dosages can vary if actual values differ from experimental values.



## TO LOWER pH TO 7.5 USING DRY ACID (SODIUM BISULFATE, 83.2%)\*\*

## TO LOWER pH TO 7.5 USING MURIATIC ACID (20 BAUME/31.45% HCl)

## TO RAISE pH TO 7.5 USING SODA ASH (SODIUM CARBONATE, 100%)

Volume of Water (gallons/ liters)	TO LOWER pH TO 7.5 USING DRY ACID (SODIUM BISULFATE, 83.2%)**			TO LOWER pH TO 7.5 USING MURIATIC ACID (20 BAUME/31.45% HCl)			TO RAISE pH TO 7.5 USING SODA ASH (SODIUM CARBONATE, 100%)		
	From 7.8	From 8.2	From 8.5	From 7.8	From 8.2	From 8.5	From 7.2	From 6.8	From 6.5
250 gal 1,000 L	0.35 oz 10.5 g	0.64 oz 19.2 g	0.88 oz 26.4 g	0.26 fl oz 8.25 mL	0.48 fl oz 15.2 mL	0.64 fl oz 20.3 mL	From 7.2	From 6.8	From 6.5
400 gal 1,500 L	0.56 oz 15.8 g	1.02 oz 28.8 g	1.41 oz 39.6 g	0.42 fl oz 12.8 mL	0.77 fl oz 22.8 mL	1.02 fl oz 30.5 mL	0.31 oz 8.70 g	0.96 oz 27.9 g	1.20 oz 33.8 g
1,000 gal 4,000 L	1.40 oz 42.0 g	2.56 oz 76.8 g	3.52 oz 106 g	1.04 fl oz 33.0 mL	1.90 fl oz 60.8 mL	2.56 fl oz 81.2 mL	0.50 oz 13.1 g	1.51 oz 40.5 g	1.92 oz 50.6 g
5,000 gal 20,000 L	7.00 oz 210 g	12.8 oz 384 g	18.0 oz 528 g	5.20 fl oz 165 mL	9.60 fl oz 304 mL	12.8 fl oz 406 mL	1.24 oz 34.8 g	3.84 oz 108 g	4.80 oz 135 g
10,000 gal 40,000 L	14.0 oz 420 g	25.6 oz 768 g	36.0 oz 1,06 kg	10.4 fl oz 330 mL	19.2 fl oz 608 mL	25.6 fl oz 812 mL	2.40 oz 68.0 g	7.20 oz 204 g	9.60 oz 270 g
15,000 gal 60,000 L	1.31 lb 630 g	2.40 lb 1,15 kg	3.30 lb 1.59 kg	15.6 fl oz 495 mL	30.0 fl oz 912 mL	40.0 fl oz 1,220 mL	1.60 pt 480 g	4.80 lb 1,360 g	6.40 lb 1,810 g
20,000 gal 80,000 L	1.75 lb 840 g	3.20 lb 1,54 kg	4.40 lb 2.11 kg	21.0 fl oz 660 mL	42.0 fl oz 1,220 mL	56.0 fl oz 1,620 mL	2.10 pt 630 g	6.30 lb 1,810 g	8.40 lb 2,360 g