

POOL TESTING TIPS

1. Rinse test tubes before and after each test.
2. Swirl mixtures 5 seconds for best results.
3. Obtain Pool Samples from below the surface of the water by inverting tube to trap air; submerge to 18"; reverse tube to release air and obtain sample; shake out excess.
4. Hold Dropper - Bottle vertically and add drops slowly to insure full size drop.
5. Perform tests in shaded area. Match colors against light background.
6. Store kit in a cool dark place. Always use the fresh solutions to start each season.
7. When needed, add acid in the MORNING and add chlorine in the EVENING. Do not add acid and chlorine at the same time..

SIZE OF POOL IN GALLONS	PINTS OF MURIATIC ACID NEEDED FOR EACH DROP OF SOLUTION #3 TO ADJUST pH									
	1	2	3	4	5	6	7	8	9	10
5,000	1/4	1/2	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
10,000	1/2	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5
20,000	1	2	3	4	5	6	7	8	9	10
30,000	1 1/2	3	4 1/2	6	7 1/2	9	10 1/2	12	13 1/2	15
40,000	2	4	6	8	10	12	14	16	18	20
50,000	2 1/2	5	7 1/2	10	12 1/2	15	17 1/2	20	22 1/2	25

POOL CAPACITY ESTIMATE (Gallons)

RECTANGULAR OR SQUARE POOLS: AVERAGE DEPTH X LENGTH X WIDTH X 7.5

ROUND POOLS: AVERAGE DEPTH X DIAMETER X DIAMETER X 5.9

OVAL POOLS: AVERAGE DEPTH X LENGTH X WIDTH X 5.9

4-WAY TEST KIT INSTRUCTIONS

CHLORINE/BROMINE TEST

1. Fill the small tube to mark with pool water.
 2. Add five drops of Solution No. 1
 3. Place cap on tube and invert several times to mix.
 4. To obtain chlorine reading, match the colors within 10 seconds. The result is read in parts per million (ppm). A continuous development of color indicates combined chlorine. The reading at 5 minutes will give total combined chlorine. A large difference between the readings indicates a need for superchlorination. Readings are as follows:
Unstabilized pools - 0.4 min; 0.6 ideal; 1.0 max.
Stabilized pools - 1.0 min; 1.5 ideal; 3.0 max.
- A minimum of 8 ppm should be sufficient for superchlorination. A gallon of liquid chlorine will give about 8 ppm in 20,000 gallons of water.

pH TEST

(degree of acidity or alkalinity)

1. Fill large tube with pool water to the upper mark.
2. Add 1 drop of Solution No. 4 and swirl to mix.
3. Add 5 drops of Solution No. 2 and swirl to mix.
4. Compare the color with the pH color standards. Matching colors indicate the pH of your pool water.

Note: If the pH reading is more than 7.6 save the water sample and continue with the acid demand test to determine how much acid is required. If the pH reading is less than 7.2, add soda ash to bring the pH into proper range.

ACID DEMAND TEST

1. Using water sample from the pH test. Add Solution No. 3 a drop at a time, swirling between drops and counting the drops until the color matches approximately the 7.4 color standard. Do not count the drop which lowers the pH to 7.2 or below.
 2. Calculation: Each drop indicates a requirement of $\frac{1}{2}$ pint of muriatic acid for each 10,000 gallons of water in your pool.
- Example
1 drop (10,000 gallon pool) = $\frac{1}{2}$ pint
1 drop (20,000 gallon pool) = 1 pt.
2 drops (20,000 gallon pool) = 2 pt.
- A chart is provided below for those who prefer to use it. If the first drop does lower the pH to 7.2 or below, it is an indication that the total alkalinity is too low.

CAUTION: Do not add more than 1 pt. of muriatic acid per 10,000 gallons in one day. Add only when filter is running and away from skimmer and other metal fixtures.

TOTAL ALKALINITY

1. Rinse large tube with pool water and fill to the lower line.
 2. Add 1 drop of Solution No. 4 and swirl to mix.
 3. Add 1 drop of Solution No. 5 and swirl to mix.
 4. Add Solution No. 3 by drops, swirling between drops and counting drops until color changes from purple to a permanent clear or yellow.
 5. Calculation: Multiply number of drops by 10 to determine the total alkalinity.
Example: 7 drops = 70 ppm (parts per million is expressed as calcium carbonate).
- Note: Total alkalinity of 80 to 100 is desirable. If alkalinity is less than 80 ppm, add sodium bicarbonate. If alkalinity is more than 100, acid is generally required. Determine amount by taking acid demand test.

**KEEP OUT OF REACH OF CHILDREN
TEST ON REGULAR BASIS TO ASSURE PROPER POOL MAINTENANCE**