



## Certified Pool/Spa Operator® Course Water Balance Values

### **TOTAL ALKALINITY**

- The measure of a substance's resistance to change of ph

Acceptable Range: 60 – 180 ppm  
Ideal Range: 80 – 100 for Sodium Hypochlorite, Calcium Hypochlorite  
100 – 120 for Chlorine Gas, Trichlor, Dichlor

### **ph**

- The measure of whether a substance is an acid or a base

Acceptable Range: 7.2 – 7.8  
Ideal Range: 7.4 – 7.6

### **CALCIUM HARDNESS**

- The measure of the Calcium Ions in the water (65 – 70 % of total hardness)

Acceptable Range: 150 – 1000 ppm  
Ideal Range: 200 – 400 ppm

### **TEMPERATURE**

- These are recommended ranges (*temperature is not normally adjusted when doing S. I. problems*)

Competition	78 – 80 f
Recreation	82 – 84 f
Special Populations	86 – 88 f

Spas            Not to exceed 104 f

### **TOTAL DISSOLVED SOLIDS**

- The measure of all materials dissolved in the water

S.I. Index Factor:    Up to 1000 ppm use 12.1  
                              Over 1000 ppm use 12.2