

## **SPASA FACT SHEET No 4**

### **SANITISING THE POOL.....**

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The primary reason for treating pool and spa water with sanitising chemicals is to prevent the growth of bacteria which would make swimmers and bathers sick.

These bacteria can cause infections in ears, nose and throat and possibly other more dangerous diseases like Meningitis.

Bacterial control is easily accomplished by adding a sanitiser (most commonly Hypochlorous Acid or simply "chlorine" ) regularly, and then passing the water through a filter to remove the dead bacteria.

We then need to be sure that any additional bacteria entering the water is met by a "sanitiser residual" in sufficient concentration to kill this new bacteria as quickly as possible.

The primary source of bacteria is the swimmers and bathers themselves. Also top-up water and debris, such as leaves, grass, dust, etc. Animals can contribute significantly to bacteria levels. A large dog can contaminate up to twenty times the volume of water that a human can.

But don't worry! It is generally accepted that most harmful bacteria will be killed when exposed to a "free chlorine residual" as low as one milligram per litre or, in other words one part per million (ppm). By regularly testing the water and adding the required amount of chlorine to the pool, a residual level of 1.0 or 2.0 ppm is easily maintained.

#### **TYPES OF CHLORINE**

Chlorine is available in a number of different forms. Granular, liquid, or tablet, and can also be stabilised\* or unstabilised\*. Chlorine can also be generated by a salt water chlorinator. Each of these different forms has its own features and benefits. For instance, granular chlorine is convenient, easy to store and relatively cheap, however it cannot be dosed automatically. On the other hand, liquid chlorine is bulky and can't be stored for long periods, but can be dosed automatically. All are satisfactory sanitisers for your pool, so choose the type that best suits your budget and lifestyle. No matter which form you decide to use, the requirement for a residual of 1.0 to 2.0 ppm remains the same.

#### **Safety Note:**

Never mix chemicals - even different types of chlorine - fire and/or explosion may result

#### **SALT CHLORINATORS**

As the name suggests, these units generate chlorine in the pool water using a process of electrolysis to convert sodium chloride (salt) into hypochlorous acid. These units are available in different sizes to suit different size pools. Be sure the unit you select is capable of producing sufficient chlorine to meet your maximum requirements. No matter which one you choose, you may still need to add extra chlorine from time to time to make sure a satisfactory residual level is maintained.

\* Stabilising refers to the combining of isocyanuric acid with chlorine, to protect it from UV rays, which drastically reduce its effectiveness. Isocyanuric acid can also be added manually to the pool.

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Please note that if you are using stabilised chlorine products or are adding stabiliser to the pool, the level of stabiliser (Isocyanuric acid) in the water should be checked periodically, as in doing its job, it does not get used up like other chemicals in the pool. If the stabiliser level gets too high, it can actually inhibit the effectiveness of the chlorine.

## **CHLORINE SMELL**

Many people complain about the smell of chlorine and believe that the pool may have too much chlorine in it. In fact, the opposite is most likely the case. Not having enough chlorine in the pool will result in the chlorine smell and also lead to users suffering with sore eyes and itchy skin. The reason this is so, is that a by-product of chlorination is the production of chloramines. These chloramines are the smelly little beasts that cause all the hassle. To get rid of them, we need to add more chlorine. It is for this reason that, from time to time, the pool needs "superchlorination".

## **HEATED POOLS**

A heated pool will require more chlorine than a non-heated pool. This is because chlorine is used up much more quickly in hot water.

Stabilised chlorine products should not be used in heated pools as their effectiveness is greatly reduced.

## **MAJOR POINTS**

- Always maintain a chlorine residual of 1.0 to 2.0 ppm (milligrams per litre)
- Select the product that best suits you
- Chlorine smell generally means not enough chlorine
- A heated pool will require more chlorine
- NEVER MIX CHEMICALS

Alternative methods of sanitising pools and spas are available and are covered in Fact Sheet No 8. OZONE, Fact Sheet No 9. IONISERS and Fact Sheet No 12. SALT CHLORINATORS.

For further information on building, renovating or maintaining a pool, contact;

**SWIMMING POOL & SPA ASSOCIATION OF NSW LIMITED**  
**PO BOX 313, BURWOOD NSW 1805. Ph: (02) 9747-6644, Fax: (02) 9744-7916**

