



## DE-CHLORINATION PRODUCTS

There are several products available throughout the industry to neutralise chlorine down to legal residual discharge limits, this article looks at some of them.

### LPD-Chlor

#### For treating water with a Chlorine levels up to 5PPM

The manufacturer states that the composition of the LPD-Chlor tablets are 81.3% sodium sulphite and the rest is a water soluble binder.

LPD-Chlor is suitable for the removal of up to 5PPM Chlorine or chloramines, where the issues of using Sulphites are not an issue.

Usage approximately 10 LPD-Chlor tablets will neutralise 10,000gals water

LPD-Chlor eliminates the dangers and problems with sulphur dioxide gas systems as well as the mixing and handling of concentrated sulphite solutions.

- Tablet size 65mm diameter 20mm thick
- Available in Pails of 140 tablets.

### VITA-D Chlor TM

#### For treating water with a Chlorine levels up to 5PPM

The manufacturer states that it is the only Ascorbic Acid (Vitamin C) with NSF certification for de-chlorinating water. Vita-D Chlor TM is 100% organic, completely soluble and provides a safe, rapid and complete method of de-chlorination. Vita-D Chlor TM meets the new EPA regulations for de-chlorinating water prior to disposal in to creeks, rivers and lakes. Vita-D Chlor TM is a more environmentally conscious method of de-chlorination than the traditional sulphur based compounds. Unlike sulphur based compounds Vita-D ChlorTM is not toxic to humans or animals nor does it deplete oxygen in treated waters. Vita-D Chlor TM neutralises chlorine at a rate of approximately 2.5:1 and is the most effective method for use is to make a solution used to feed into chlorinated waters. The active ingredient 100% ascorbic acid and it is granular in form with a maximum solubility of 2.5 lbs per gal.

VITA-D Chlor TM is a granule and available in 2.5, 12 or 25kg pails

## **VITA D Chlor TM Neutral**

### **For treating water with a Chlorine levels up to 5PPM**

Vita-D Chlor TM Neutral (Sodium Ascorbate) which carries NSF certification for de-chlorinating water. Vita-D Chlor TM Neutral provides all the environmental benefits of de-chlorinating with Vita-D Chlor TM, however for those situations where pH is a concern Vita-D Chlor TM Neutral has an added benefit. A feed solution made with Vita-D Chlor TM Neutral will have a pH around 7.5 and will not adversely affect water that has a neutral pH of around 6-8. Vita-D Chlor TM Neutral is designed to use when pH is a concern Neutral will take approximately 10% more product to achieve the same chlorine neutralisation as Vita-D Chlor TM The active ingredient in Neutral is 100% sodium Ascorbate and it is granular in form with a maximum solubility of 5lb per gallon.

VITA-D Chlor TM Neutral is a granule and available in 2.5, 12 or 25kg pails

## **Vita-D Chlor TM Tablets**

### **For treating water with a high Chlorine up to 5PPM**

These are the only tablet currently on the market that utilizes Vitamin C chemistry. Vita-D Chlor TM is 100% organic, completely soluble and provides a safe, rapid and complete method of de-chlorination. Unlike tablets made with sulphur based compounds they contain no ingredients that could be toxic to fish and other aquatic life. The tablets are well suited for chlorine neutralisation in hydrant flushes as well as line flushes municipal waters. They are fast dissolving and can thus accommodate the high volume of water over a short period. They offer this product for use with Socks and bags where other equipment cannot be easily set up. The active ingredient is 75% Vita-D Chlor TM with an inert ingredient of 25% water soluble organic binder. The tablets are 65mm diameter and 25mm thick.

### **Availability**

VITA-D Chlor TM Tablets pails of 6, 20, 40, 140

## **Vita-D Chlor TM and Vita-D Chlor TM Neutral**

The new USA EPA regulations for the de-chlorination of water prior to releasing in to stream, rivers, creeks, lakes and ground water has prompted the Industry to find safer and more environmentally conscious methods of de-chlorination.

Vita-D Chlor TM is the answer the industry has been looking for.

Vita-D Chlor TM is a specially formulated product available for safe, rapid and complete de-chlorination of water.

There are several powerful arguments for using Vita-D Chlor TM instead of sulphur based compounds. Vita-d Chlor utilizes Ascorbic Acid chemistry for de-chlorination. It is made with an essential vitamin for humans and many animals, which is known to boost the immune system

in fish. Sulphur-based compounds can be toxic to both humans and animals. Vita-D Chlor is 100% organic and is completely soluble. Other de-chlorination compounds eventually decompose and may leave behind inorganics, including sulphur. The addition of excess sulphite and sulphate chemicals to our waters has always been a concern because they are known to cause oxygen depletion in treated waters. Vita-D Chlor, however, does not cause oxygen depletion and contains nothing known to be harmful to the environment. Vita-D Chlor meets the same standards of purity as the ascorbic acid used in the pharmaceutical industry.

## **Why haven't I heard of Vita-D Chlor before?**

Vita-D Chlor is a relatively new development of an existing and proven process utilizing Ascorbic Acid (Vitamin C). Environmental analysis and evaluation is an evolving process. Treatment methods that previously appeared adequate have been shown to create some concerns, such as depleting oxygen levels in water. EPA and Federal Bodies mandate that we carefully consider all the effects of treated water and wastewater.

Recently, because of these environmental concerns, Ascorbic Acid (Vita-D Chlor) de-chlorination has received increased attention for treating water and wastewater being released in to the environment. Vita-D Chlor efficiently removes chlorine from the water, it does not reduce the oxygen levels in the water, and it is a necessary nutrient for the fish and other aquatic life.

The use of Ascorbic Acid (Vitamin C) has a lengthy history. It has long been used in EPA and APHA methods for the de-chlorination of laboratory samples. In the medical industry, it is the standard for critical applications such as, dialysis, where the introduction of chlorinated water or toxic chemicals would be catastrophic; Breeders of rare fish also choose this method for de-chlorination.

## **What is Vita-D Chlor and how is it different from other de-chlorination methods.**

Vita-D Chlor TM is NSF-certified Ascorbic Acid (Vitamin) for use in de-chlorinating water; it is 100% organic, completely soluble and provides a safe, rapid and complete method of neutralizing both chlorine and chloramines.

### **Vita-D Chlor TM benefits compared with other methods,**

- It has a much faster reaction time than sulphur based products. This fast reaction time results in accurate measurements of the neutralization process and thus excess chemicals are not added.
- It does not reduce water oxygen as sulphur based compounds do.
- It is an important nutrient for fish and other aquatic life.

### **Why should I switch from using sulphur based de-chlorination chemicals to Vita-D Chlor TM.**

- Vita-D Chlor TM (Ascorbic Acid/Vitamin C) de-chlorination has been proven in the medical and analytical industries for many years as a safe, consistent method with little or no adverse effects on biological systems. It is in fact, a required nutrient for nearly all

life on earth. Sulphite based chemicals have been shown to significantly reduce oxygen levels in water resulting in a high risk of fish and other aquatic life kill.

- Vita-D Chlor TM (Ascorbic Acid/Vitamin C) is more efficient at neutralizing chlorine and chloramines in water than sulphite-based products.
- Vita-D Chlor TM (Ascorbic Acid/Vitamin C) is easily adapted to existing de-chlorinating equipment and methods.
- Vita-D Chlor TM (Ascorbic Acid/Vitamin C) offers reduced hazards in handling and use.
- Vita-D Chlor TM (Ascorbic Acid/Vitamin C) provides a decreased liability for using a safe chemical and better public perception. The public may perceive it as better, but the fish know it is better

## **BSP Captor NSF**

### **For treating water with a high Chlorine up to 300PPM**

Captor NSF (Calcium Thiosulphate Solution) is relatively new product, an excellent solution for de-chlorinating both potable and super-chlorinated water systems Captor is a clear, nearly odourless liquid solution with practically neutral pH. It is completely water soluble, in no way harmful to aquatic life and carried NFPA hazard rating 0,0,0. In addition to agricultural applications and de-chlorination, Captor is also currently being utilized in wastewater treatment plants and for ozone quenching. Captor is a calcium Thiosulphate solution of 30% concentration. It is environmentally safe and virtually non-corrosive, this product can safely neutralise chlorine/Chloramines down to within legal limits while causing no harm to ecology, wild life and/or their natural habitats.

BSP Captor NSF is:

- A safe, non –hazardous solution
- No potential SO<sub>2</sub> exposure
- Water clear
- Maintain a low freezing point
- Applicator Friendly
- A less corrosive material
- No off gassing
- Nearly odour less
- Harder to crystallize
- Carrier water not required

## **Methods of Application.**

### **Vita-D Chlor TM (Ascorbic Acid)**

This is Ascorbic Acid in granule form and need to be made in to a solution.

The solution can be added to a reservoir or tank, for use in a water main the solution has to be injected in by means of a chemical injector,

### **Vita-D Chlor™ Neutral**

This is Sodium Ascorbate (NSF) in granule form and need to be made in to a solution.

The solution can be added to a reservoir or tank, for use in a water main the solution has to be injected in by means of a chemical injector,

### **Vita-D Chlor™ Tablets**

The Ascorbic acid is in Tablet form.

The tablets can be used in, LPD 250 Diffusers or De-chlorination Mats

### **BSP Captor**

Captor is Calcium Thiosulphate in liquid form.

The solution can be added to a reservoir or tank, for use in a water main the solution has to be injected in by means of a chemical injector,

### **Conclusion.**

These are many products to de-chlorinate water, you need to look at your need and tailor the product to suit your requirements.

AWIS Pty Ltd is the South East Asian Agent for Pollard Water and between us we have a vast knowledge of the products, chemicals and the de-chlorination process.

When we are aware of your requirements we can recommend chemicals and equipment suitable to your requirements.

We stock a range of products and chemicals in Australia to suit your immediate needs and we can adjust our stocks to suit your operational needs and usage.

I can be contacted on Mob + 61 417 052 443 or email [david@awis.com.au](mailto:david@awis.com.au) to discuss your operations.

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