

# RESOURCE GUIDE



## Dechlorination Made Easy



### **Dechlorination Products & Equipment**

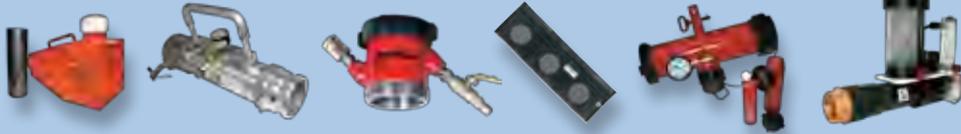
*Integra Chemical's technical support staff can provide assistance in addressing specific dechlorination requirements. Dechlorination may be as simple as placing tablets in a flow stream or delivering a mixed solution through a metering pump from a day tank.*



**800.322.6646**

For Technical Support on Dechlorination  
(800) 322-6646 / [Info@Vita-D-Chlor.com](mailto:Info@Vita-D-Chlor.com)

**[www.Vita-D-Chlor.com](http://www.Vita-D-Chlor.com)**



# Vita-D-Chlor Dechlorination Chemicals and Systems

As a leader in the industry, Integra Chemical's Vita-D-Chlor provides safe and effective dechlorination. A number of dechlorination systems are available to implement Vita-D-Chlor effectively and to safely and instantaneously remove chlorine without causing environmental problems. Key benefits are enhanced environmental protection, operator safety and public acceptance.



## Tablets and Slo-Tabs

Vita-D-Chlor Tablets are the only tablets that utilize Vitamin C chemistry. They are 100% soluble and 100% organic. Unlike tablets made with sulfur compounds, they contain no ingredients that could be toxic to fish and other aquatic life.

One Vita-D-Chlor Tablet is capable of neutralizing approximately 8,500 gallons of water with 1 ppm chlorine. Tablets are well suited for chlorine neutralization in hydrant flushes as well as line flushes of both municipal water and super-chlorinated water. They are fast-dissolving and can accommodate a high volume of water over a short period of time.

Vita-D-Chlor Tablets are commonly utilized with dechlorination/diffuser equipment as well as with simple tools such as socks, bags or mats. These tools make dechlorination while using tablets very simple, safe and practical for field use.

**NEW** Vita-D-Chlor Slo-Tabs utilize the same safe Vitamin C chemistry as our original Vita-D-Chlor Tablets. Slo-Tabs dissolve at a rate which is 7 to 10 times slower than the regular tablets, making them a viable option for applications that require longer periods between tablet changes, such as auto flushing units.

### US EPA Water Quality Criteria For Total Residual Chlorine (TRC)

- Acute Toxicity Criterion for receiving streams
- 0.019 mg/L (ppm)
- Chronic Toxicity Criterion for receiving streams
- 0.011 mg/L (ppm)

### Canadian Environmental Quality Guidelines

- 0.019 mg/L (ppm)  
1987 proposed Water Quality Criterion for receiving streams

**AWWA Standard C655-09** (under IIA US Regulations, last paragraph of subsection 1.)  
"Chlorine discharge limits in water releases into receiving streams and wetlands shall not exceed 0.01 mg/L (or a more stringent limit)."

### Vita-D-Chlor

#### TABLET SPECIFICATIONS:

<b>Active ingredient</b>	Ascorbic Acid
<b>Activity</b>	1 tablet neutralizes 8,500 gallons with 1ppm chlorine
<b>Quantity needed to neutralize 1ppm chlorine</b>	
<b>Diameter</b>	2 5/8"
<b>Thickness</b>	1"
<b>Weight</b>	115g (4 oz.)
<b>Appearance</b>	White tablet with citrus odor
<b>Packaging</b>	Plastic screw cap bottle and resealable plastic pail (airtight)
<b>Shelf life</b>	Up to 3 years
<b>Sizes</b>	6, 20, 40, 140 tablets

### Vita-D-Chlor

#### SLO-TAB SPECIFICATIONS:

<b>Active ingredient</b>	Ascorbic Acid
<b>Activity</b>	1 Slo-Tab neutralizes 7,500 gallons with 1ppm chlorine
<b>Quantity needed to neutralize 1ppm chlorine</b>	
<b>Diameter</b>	2 5/8"
<b>Thickness</b>	1"
<b>Weight</b>	115g (4 oz.)
<b>Appearance</b>	White tablet with citrus odor
<b>Packaging</b>	Plastic screw cap bottle and resealable plastic pail (airtight)
<b>Shelf life</b>	Up to 3 years
<b>Sizes</b>	6, 20, 40, 140 tablets





## Applications

*Vita-D-Chlor provides a solution to a variety of dechlorination requirements.*

- Hydrant flushing
- Water main installations and maintenance
- Reservoir overflow
- Fire flow testing
- Filter backwash
- Permit compliance
- Reservoir and tank draining and cleaning
- Dewatering
- Well cleaning
- Highly chlorinated water release to wastewater treatment plant

## Granular and Neutral

Vita-D-Chlor is the only Ascorbic Acid (Vitamin C) with NSF certification for dechlorinating water. Vita-D-Chlor Neutral is the only Sodium Ascorbate with NSF certification for dechlorinating water. Vita-D-Chlor and Vita-D-Chlor Neutral are both 100% organic, completely soluble, and provide a safe, rapid and complete method of dechlorination. These products completely neutralize both chlorine and chloramines.

Vita-D-Chlor is a more environmentally conscious method of dechlorination than traditional sulfur-based chemicals. Unlike sulfur-based compounds, Vita-D-Chlor is not toxic to humans or animals nor does it deplete oxygen in treated water. In fact, it is made with an essential vitamin for humans and many animals, which is known to boost the immune system in fish.

Vita-D-Chlor Neutral has all of the same dechlorination benefits as Vita-D-Chlor, plus a few more. It is over four times more soluble, which allows it to dissolve more quickly and easily. Vita-D-Chlor Neutral can be used to make a more highly concentrated feed solution than original Vita-D-Chlor. Additionally, Vita-D-Chlor Neutral will not adversely lower the pH of waters being treated, even when used in high concentrations.

### Vita-D-Chlor

#### GRANULAR SPECIFICATIONS:

<b>Active ingredient</b>	Ascorbic Acid
<b>Activity</b>	1 gram per 100 gallons
<b>Quantity needed to neutralize 1ppm chlorine</b>	22 lbs. per 1 million gallons
<b>Form</b>	Easy dissolving fine granular
<b>Quality</b>	NSF Certified (Dechlorination and antioxidant chemical) Meets pharmaceutical industry standards for purity (USP)
<b>Packaging</b>	Plastic screw cap bottle and resealable plastic pail (airtight)
<b>Shelf life</b>	Up to 3 years
<b>Sizes</b>	2.5 kg (5.5 lbs.), 12 kg (26.5 lbs.), 25 kg (55 lbs.)

### Vita-D-Chlor

#### NEUTRAL SPECIFICATIONS:

<b>Active ingredient</b>	Sodium Ascorbate
<b>Activity</b>	1 gram per 100 gallons
<b>Quantity needed to neutralize 1ppm chlorine</b>	22 lbs. per 1 million gallons
<b>Form</b>	Easy dissolving fine granular
<b>Quality</b>	NSF Certified (Dechlorination and antioxidant chemical) Meets pharmaceutical industry standards for purity (USP)
<b>Packaging</b>	Plastic screw cap bottle and resealable plastic pail (airtight)
<b>Shelf life</b>	Up to 3 years
<b>Sizes</b>	2.5 kg (5.5 lbs.), 12 kg (26.5 lbs.), 25 kg (55 lbs.)



# deChlorinator

**CHLORINE LEVELS**

0–200 ppm

**FLUSH RATE**

175–900 gpm

**SETUP TIME**

2–7 minutes



**Benefits/Features**

- ▶ Dechlorinates full-range of chlorine levels
- ▶ Utilizes NSF granular material for lowest-cost operations
- ▶ Durable construction, small, compact design
- ▶ Dechlorinate or chlorinate with one unit
- ▶ Sample port for untreated water sampling and feed solution makeup
- ▶ Connects directly to hydrant or hose extension

**Procedure**

1. Setup the deChlorinator on the hydrant (diffuser should be used for safety)
2. Mix suitable quantity of Vita-D-Chlor into a pail of water (measurement chart supplied)
3. Set needle valve to setting listed on the measurement chart
4. Place feed tube into the pail and begin flush
5. Adjust needle valve for greatest efficiency and test for complete dechlorination

**Benefits/Features**

- ▶ Simple, low cost
- ▶ Dissipates/diffuses discharge water
- ▶ Utilizes tablets for simplified operations
- ▶ Tablets are contained within the device
- ▶ Traps debris in the discharge
- ▶ Accepts pitot for flow measurement
- ▶ Connects directly to hydrant or hose extension
- ▶ No pre-flush solution mixing
- ▶ No connections to an external chemical source are required
- ▶ Available in steel or lightweight aluminum

**Procedure (Treatment up to 5ppm chlorine)**

1. Setup the LPD on the hydrant
2. Put stainless steel Vita-D-Chlor Tablet Screen in the tablet chamber
3. Place 4 Vita-D-Chlor Tablets into the Tablet Screen
4. Flush and test for complete dechlorination

# LPD-250

**CHLORINE LEVELS**

0–10 ppm

**FLUSH RATE**

200–1,250 gpm

**SETUP TIME**

1–3 minutes

**Equipment Options**

- Vita-D-Chlor Screen
- Pitot Kit
- Hitch Mount
- Extension Hose



# Hydro-Hitch, Aqua-D-Chlor

## CHLORINE LEVELS

0–50 ppm

## FLUSH RATE

200–1,500+ gpm

## SETUP TIME

1–3 minutes



## Benefits/Features

- ▶ Simple, low cost and economical
- ▶ Accepts both 2.5" and 5" Storz connections
- ▶ Allows flushing from hydrant side outlet or steamer port.
- ▶ Built in hitch mount
- ▶ Lightweight aluminum construction with powder coat finish
- ▶ Adjustable tablet dissolve rates
- ▶ Accepts pitot for flow measurement

## Procedure (Treatment up to 3ppm chlorine)

1. Set connection hose between hydrant and Hydro-Hitch
2. Place tablet screen in the Aqua-D-Chlor unit
3. Place required amount of Vita-D-Chlor tablets in the screen
4. Flush and test for complete dechlorination

## Benefits/Features

- ▶ Dechlorinate while flow-testing or flushing
- ▶ Minimal friction loss
- ▶ Does not stress hydrant nozzles
- ▶ Available in 2.5", 4" and 4.5" models
- ▶ Durable construction
- ▶ Small, compact design

## Procedure (Treatment up to 3ppm chlorine)

1. Setup the Dechlor Demon to hydrant (Hose Monster diffuser should be used for safety)
2. Add Vita-D-Chlor Tablets to mixing tank
3. Fill tank with water and connect to Dechlor Demon
4. Open ball-valve halfway
5. Begin flush and adjust ball-valves for greatest efficiency and test for complete dechlorination

# Dechlor Demon

## CHLORINE LEVELS

0–50 ppm

## FLUSH RATE

150–900 gpm

## SETUP TIME

2–7 minutes



## Bazooka

### CHLORINE LEVELS

0–25 ppm

### FLUSH RATE

200–785 gpm

### SETUP TIME

1–5 minutes



### Benefits/Features

- ▶ Accurate control of chemical usage with rotameter rate valve
- ▶ Liquid Feed Adaptor available to dechlorinate up to chlorine level of 200 ppm
- ▶ Lightweight, durable construction
- ▶ Reasonable price
- ▶ Small, compact design

### Procedure (Treatment up to 3ppm chlorine)

1. Setup the Bazooka on the hydrant (diffuser should be used for safety)
2. Place 1 Vita-D-Chlor Tablet into the tablet chamber
3. Set rotameter at 1 gpm and begin flush
4. Adjust rotameter for greatest efficiency and test for complete dechlorination

## Taby Mat

The Vita-D-Chlor Taby Mat offers a simple solution to dechlorinate water from a water main break or any other unexpected water release. It also offers a simple way to dechlorinate flush water without having to set up specialized equipment.

Taby Mat holds up to three tablets. The mat is constructed of durable nylon mesh "silt-fabric" for long life. Use a rope or cord through the grommet, tied to a heavy object to hold mat in place in the flow stream. A stake or long nail can also be used to hold the mat in place while allowing the water to flow over the tablets.



Available in  
3, 6 & 24 tablet sizes



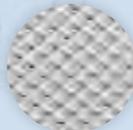
## Tablet Sock

The Vita-D-Chlor Tablet Sock was created as a low-cost, disposable tool to utilize Vita-D-Chlor Tablets for a variety of dechlorination situations. Under most circumstances when dechlorinating potable water at approximately 1 ppm chlorine, three tablets in the sock will be enough to neutralize 25,000 gallons. Sock is constructed from filter fabric and is available in either fine or coarse. The fine fabric reduces or slows the dissolve time of tablets. The coarse fabric allows faster tablet dissolve time and is intended for use with high flow rates or higher chlorine levels.

Fine



Coarse



## SenSafe® Test Strips

Free Chlorine test strips combine a wide range of detection with a patented free chlorine indicator. Free chlorine is perfect for determining whether or not you have the correct amount of sanitizer present and for determination of the correct amount of Vita-D-Chlor necessary for dechlorination of potable and mildly chlorinated water.

Free Chlorine Test Strips are available in bottles of 50.

### FREE CHLORINE 0-6 ppm

Graduated at 0, 0.05, 0.1, 0.2, 0.4, 0.6, 0.8, 1.2, 1.5, 2, 2.6, 4 & 6 ppm (mg/L)

### FREE CHLORINE 0-25 ppm

Graduated at 0, 0.25, 0.5, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 15, 20 & 25 ppm (mg/L)

### FREE CHLORINE 0-120 ppm

Graduated at 1, 5, 10, 20, 40, 80 & 120 ppm (mg/L)

### FREE CHLORINE 0-750 ppm

Graduated at 0, 25, 50, 100, 200, 300, 400, 500 & 750 ppm (mg/L)



## WaterWorks® 5-Way Test Strips

5-Way test strips report results for free chlorine, total chlorine, pH, total alkalinity and total hardness—all on the same strip. Utilizing a single dip-and-read method, these strips offer accurate and reliable results in less than 30 seconds.

5-Way Test Strips are available in bottles of 50.

### SENSITIVITY; FREE AND TOTAL CHLORINE 0-10 ppm

Graduated at 0, 0.5, 1, 2, 4 & 10 ppm (mg/L)

### pH 6-8.5

Graduated at 6.2, 6.8, 7.2, 7.8, 8.4

### TOTAL HARDNESS 0-425 ppm

Graduated at 0, 25, 50, 120, 250, 425 ppm

### TOTAL ALKALINITY 0-240 ppm

Graduated at 0, 40, 80, 120, 180 & 240 ppm

# www.Vita-D-Chlor.com

Visit [www.Vita-D-Chlor.com](http://www.Vita-D-Chlor.com) for additional information and technical resources that can be used when planning for a variety of dechlorination projects. Be sure to check out the on-line calculators for help with determining the quantity of Vita-D-Chlor required for pipeline and reservoir dechlorination projects. A calculator for venturi/injection dechlorination is also provided.

If you require further information or have additional questions, simply call us at 800.322.6646, or visit [www.Vita-D-Chlor.com](http://www.Vita-D-Chlor.com)

### North America municipal users:

Seattle	Philadelphia
Tacoma	Atlanta
Portland	Anchorage
San Francisco	Tucson
San Jose	Phoenix
Los Angeles	Kelowna
Dallas	Raleigh
Denver	Durham
Ft. Worth	Ottawa
Long Beach	Ann Arbor
Salt Lake City	



**Equipment:**  
Up-to-date information on equipment available for field dechlorination.



**Use Calculations:**  
Formulas for determining the amount of Vita-D-Chlor needed for your dechlorination project are provided. Three working calculators for pipeline, reservoir, and injection system applications are also available.





1216 6th Avenue North  
Kent, WA 98032

## Dechlorination Made Easy

**VITA-D-CHLOR™**

*Vitamin C based chemistry for dechlorination*

### NEW AWWA Standard #C655-09

"Field Dechlorination" is now effective. It covers procedures, materials, and requirements for the dechlorination of chlorinated and chloraminated water discharges.

**800.322.6646**

**www.Vita-D-Chlor.com**

Contact us to purchase Vita-D-Chlor. We are your local distributor in Hawaii & The Pacific

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Serving Hawaii Since 1914

• 2363 North King Street  
Honolulu, HI 96819

• P. O. BOX 3616  
Honolulu, HI 96811

• Ph: (808) 841-4265  
Fax: (808) 842-1067

[www.HawaiiScientific.com](http://www.HawaiiScientific.com)

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[Sales@HawaiiScientific.com](mailto:Sales@HawaiiScientific.com)

