

SUPER DECHLORPRO™ DECHLORINATING SYSTEM

Always wear Personal Protective Equipment like Safety Glasses, Gloves, and Work Boots.

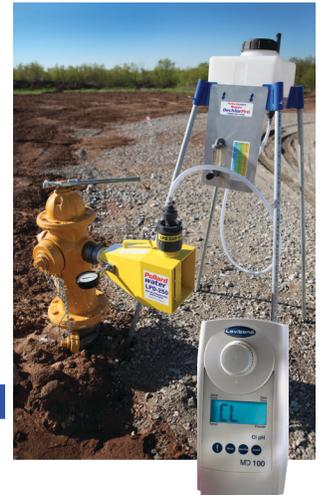
SUPER DECHLORPRO™ OVERVIEW

The Super DechlorPro™ dechlorinating system is for high chlorine concentration projects using a gravity fed dechlorination chemical in a discharged flow through the LPD-250 Dechlorinating Diffuser to minimize site disturbance and maximize efficient use of field chemical treatment.

The recommended dechlorination chemical is Captor® Calcium Thiosulfate, but other liquid dechlorinating agents may be used (*other chemical agents may require a different flow meter assembly*). Captor® is commonly used due to its non-hazardous and non-oxygen depleting properties and is an economical and safe chemical to handle.

ON SITE CONSIDERATIONS

- Level ground for system stability and proper gravity flow
- Discharge location is lower in elevation to assure maximum gravity feed
- Pre-test chlorine level of discharge and periodically test during process to ensure dechlorination
- Make certain all safety procedures and job site safety precautions have been addressed



Cl₂ Colorimeters
(order separately)

QUICK SET UP GUIDE

1. Remove Legs from Storage Tube.
2. Insert Legs in to Tank Cradle and secure Thumb Screws.
3. Set Cradle Assembly near Hydrant and make level.
4. Hang aluminum Flow Panel onto Cradle Pins.
5. Open Chemical Tank and remove LPD Cap and Hoses, set aside for now.
6. Place Tank on Cradle with Outlet facing away from Flow Panel.
7. Use Pipe Thread Tape (*provided*) and install Tank Valve / Vent in Tank Outlet.
8. Install Hose from Tank Valve / Vent to Back Panel Flow-In connection.
9. Install Hose with 90° elbow to Back Panel Flow-Out connection.
10. Install Cap Assembly on to LPD-250 (*order separately*) and connect Hose.



SUPER DECHLORPRO™ OPERATING INSTRUCTIONS

DETERMINE SCOPE OF DECHLORINATION PROJECT

1. Determine the Total Volume of water to be dechlorinated in gallons.

$$\text{Volume in Gallons} = 3.14 * (\text{radius of pipe in feet squared}) * \text{Length of Pipeline in feet} * 7.48$$

For Example: 5000 Feet of 8" Ductile Iron Pipe

$$3.14 * (.333 * .333) * 5000 * 7.48 = 13,023 \text{ Gallons to be Dechlorinated}$$

**rounded up*

VOLUME OF WATER IN A PIPELINE CHART

Nominal Pipe Size	Gallons Per Foot	Gallons Per Pipeline Length					
		100	200	300	400	500	1000
4	0.65	65	130	196	261	326	652
6	1.47	147	294	440	587	734	1,468
8	2.61	261	522	783	1,044	1,305	2,610
10	4.08	408	816	1,223	1,631	2,039	4,078
12	5.87	587	1,174	1,762	2,349	2,936	5,872
14	7.99	799	1,598	2,398	3,197	3,996	7,992
16	10.44	1,044	2,088	3,132	4,176	5,219	10,439
18	13.21	1,321	2,642	3,963	5,285	6,606	13,212
20	16.31	1,631	3,262	4,893	6,524	8,155	16,311
24	23.49	2,349	4,697	7,046	9,395	11,744	23,487

DETERMINE AMOUNT OF CHLORINE TO BE DECHLORINATED

2. Determine the Parts Per Million (ppm) of Chlorine (Cl₂) to be Dechlorinated.

- For super chlorinated water Test Strips are most commonly used.
- Always test the water before dechlorination as Cl₂ levels may have changed.
- NOTE: In cases of new watermain installations, most State, County or Municipal agencies require chlorination up to a specified concentration (ppm). This chlorinated water, over a period of specified time, disinfects and kills any active and harmful bacteria. The Cl₂ levels may be lower than the starting point depending on how much Cl₂ was used up in the disinfection process.



Cl₂ Test Strips
(order separately)



DETERMINE AMOUNT OF CAPTOR NEEDED FOR PROJECT

3. Determine the amount of Captor® Calcium Thiosulfate liquid needed for the project.

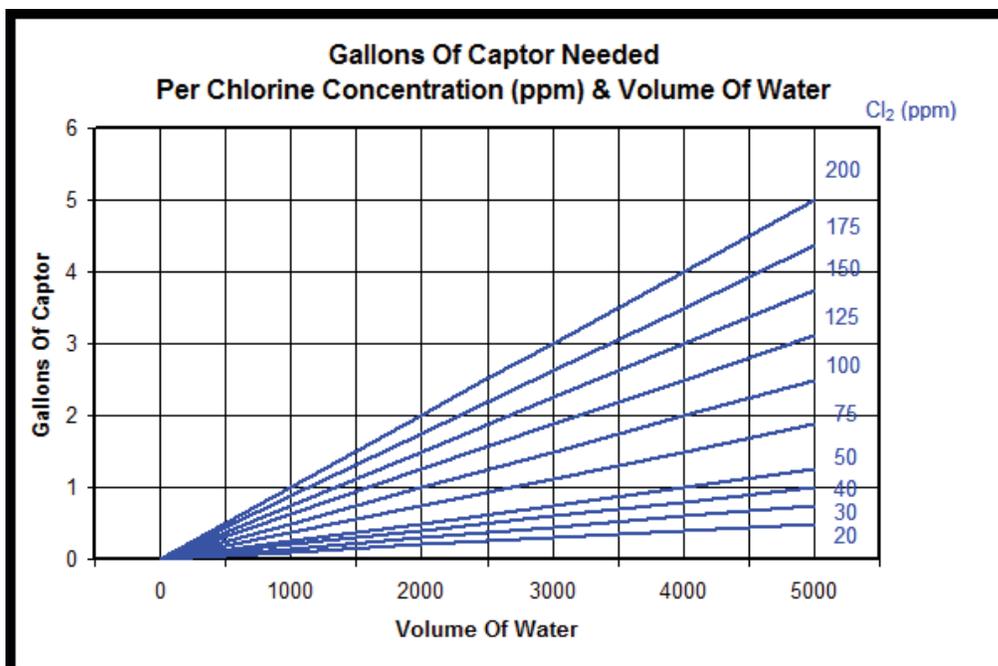
$$\text{Gallons of Captor}^{\text{®}} = \text{Volume H}_2\text{O (gallons)}^* \times \text{Cl}_2 \text{ Concentration (ppm)} / 200,000$$

For Example: 13,023 Gallons Water x 100 ppm Cl₂ / 200,000
6.5 Gallons of Captor® Needed

**rounded up*

GALLONS OF CAPTOR NEEDED CHART

PPM	Volume of H ₂ O									
	100	200	300	400	500	1000	2000	3000	4000	5000
200	0.10	0.20	0.30	0.40	0.50	1.00	2.00	3.00	4.00	5.00
175	0.09	0.18	0.26	0.35	0.44	0.88	1.75	2.63	3.50	4.38
150	0.08	0.15	0.23	0.30	0.38	0.75	1.50	2.25	3.00	3.75
125	0.06	0.13	0.19	0.25	0.31	0.63	1.25	1.88	2.50	3.13
100	0.05	0.10	0.15	0.20	0.25	0.50	1.00	1.50	2.00	2.50
75	0.04	0.08	0.11	0.15	0.19	0.38	0.75	1.13	1.50	1.88
50	0.03	0.05	0.08	0.10	0.13	0.25	0.50	0.75	1.00	1.25
45	0.02	0.05	0.07	0.09	0.11	0.23	0.45	0.68	0.90	1.13
40	0.02	0.04	0.06	0.08	0.10	0.20	0.40	0.60	0.80	1.00
35	0.02	0.04	0.05	0.07	0.09	0.18	0.35	0.53	0.70	0.88
30	0.02	0.03	0.05	0.06	0.08	0.15	0.30	0.45	0.60	0.75
25	0.01	0.03	0.04	0.05	0.06	0.13	0.25	0.38	0.50	0.63
20	0.01	0.02	0.03	0.04	0.05	0.10	0.20	0.30	0.40	0.50





DETERMINE FLOW RATE FOR LPD-250 DECHLORINATION DIFFUSER

4. Determine the dechlorination device's Flow Rate.

For most applications, the Super DechlorPro™ is used with the LPD-250 (order separately) diffuser fitted with a LPDPITOTKIT (order separately). This device has a maximum flow rate of 1,250 GPM. Knowing your flow rate prior to start is not critical, but it will be needed to adjust the feed rate of the dechlorination chemical once flow begins. Reference the Dual Read Gauge face on the LPDPITOTKIT to identify the flow rate in GPM being flowed.

DETERMINE CAPTOR FEED RATE

5. Identify the Captor feed rate.

Feed rate is determined by using the total amount of Captor needed in gallons, divided by the total amount of flow time based on your desired or set flow rate in GPM.

T6106991 Dual Read LPD-250 Gauge (order separately)

Feed Rate = Part 1
13,023 Gallons Water / 250 GPM (flow rate)
52.1 Minutes

Part 2
6.5 Gallons Captor / 52.1 Minutes
0.125 GPM

Feed rate would be 0.125 GPM

QUICK REFERENCE FEED RATE CHART

The Chart to the right is the same chart that is affixed to the Super DechlorPro™ Flow Panel.

It is a quick reference guide to help the operator in the field to quickly identify and adjust the Feed Rate as needed.

The Super DechlorPro™ comes standard with a 0.1 to 1.0 GPM flow meter.

GPM	Cl2 PPM	FLOW METER
250	25	0.03
	50	0.06
	100	0.13
	150	0.19
	200	0.25
	250	0.31
500	300	0.38
	25	0.06
	50	0.13
	100	0.25
	150	0.38
	200	0.5
750	250	0.63
	300	0.75
	25	0.09
	50	0.19
	100	0.38
	150	0.56
1000	200	0.75
	250	0.94
	300	1.13
	25	0.13
	50	0.25
	100	0.5
1250	150	0.75
	200	1
	250	1.25
	300	1.5
	25	0.16
	50	0.31
	100	0.63
	150	0.94
	200	1.25
	250	1.56
	300	1.88

