

CHLORINE-SAVER^{MD}

ELECTRONIC COPPER IONIZER

HELPS PREVENT ALGAE GROWTH

READ THE LABEL AND THE INSTRUCTION BOOKLET BEFORE USING

COMMERCIAL USAGE

Warning: staining of pool surfaces may occur due to deposits of copper salts. Excessive levels of copper will increase the probability of this occurrence.

CANADIAN MANUFACTURER OF
WATER TREATMENT SYSTEMS

REG. NO. 26444 PCP ACT

Les Designs MICAD Inc
1316 Chemin du Lac
Lery, Quebec Canada J6N 1B1
Tel.514-946-6215

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PLEASE RETAIN FOR FUTURE REFERENCE

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INTRODUCTION

THANK YOU FOR PURCHASING A CHLORINE-SAVER WATER TREATMENT SYSTEM. CHLORINE-SAVER WILL ALLOW YOU TO SWIM IN A MINIMUM OF CHLORINE (ALWAYS MAINTAIN 0.6-3PPM OF FREE AVAILABLE CHLORINE. HOWEVER, THE BASIC SWIMMING POOL MAINTENANCE IS NOT TO BE NEGLECTED.

Summary

Introduction	2-3
Operation	3-4
Basic maintenance	4
Cleaning	5
Installation	6
Verification of copper concentration	6
Winterizing	7
Warranty	7-8

CHLORINE-SAVER Helps prevent algae growth

IMPORTANT SAFETY INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions should always be followed including the following.

READ LABEL AND GUIDE BEFORE USING. FOLLOW ALL INSTRUCTIONS.

WARNING-To reduce the risk of injury; do not permit children to use this product unless they are closely supervised at all times.

WARNING-Risk of electric shock. Connect only to an 110VAC grounding type receptacle protected by a ground fault circuit interrupter (GFCI). Contact a qualified electrician for installation or if you cannot verify that the receptacle to be used is protected by a GFCI.

WARNING-Do not bury cord. Locate system and cord to minimize abuse from lawnmowers, trimmers and other equipment.

WARNING-To reduce the risk of shock, replaced damaged cord immediately.

WARNING- To reduce the risk of electric shock, do not use with extension cords. Connect only to a properly installed and located electrical outlet.

WARNING-Do not sprinkle granular chlorine into the water. It can settle on the bottom undissolved and may cause black stains.

Save these instructions. Refer problems to qualified personnel. Do not attempt to dismantle or repair. No user serviceable parts. Warranty void if tampered with.

OPERATION

The CHLORINE-SAVER system automatically supplies the necessary quantities of copper in water. The copper ions kill algae, while the residual 0.6 ppm of free available chlorine kill viruses and bacteria usually found in swimming pools.

The electric flow which circulates between the electrodes is controlled by a position switch. Position ((1)) indicates the lowest copper transfer level in water. Position ((9)) indicates the highest. Note, the electric current depends on the water conductivity.

It will take from 3 to 10 days for the copper concentration to reach the recommended level, when the system is set at its maximal intensity at position 9. Maintain 1-3ppm of free available chlorine until the copper concentration reaches 0.2-0.4ppm. Until then, copper levels should be checked daily with the test kit.

Once the copper concentration has reached the desired level, set control to position 2. Copper concentration should be maintained between 0.20 and 0.40ppm, during the following weeks by adjusting the power flow to a low setting starting at position 2 or according to the copper test results. Always maintain 0.6-3ppm of free available chlorine once this concentration of copper is reached.

Should the copper concentration level exceed 0.40ppm, adjust the power flow to a lower setting.

If your CHLORINE-SAVER indicates the number 0, it means that power

is no longer circulating. You must then clean the electrodes or increase the intensity of the CHLORINE-SAVER system by 1.

BASIC MAINTENANCE

1. Keep ph between 7.2 and 7.8
2. Keep copper between 0.2 and 0.4 ppm*
3. Keep the total alkalinity between 80 and 120 ppm
4. Keep total dissolved solids (TDS) between 500 and 2,000 ppm.
5. Keep calcium hardness between 200 and 300 ppm
6. To control bacteria and to keep water clarity use 0.6-3ppm of chlorine every day and a shock treatment of chlorine on demand, according to the number of swimmers.

* ppm: parts per million

(These pool water parameters are to be respected in order to ensure warranty coverage)

Maintain 1-3ppm of free available chlorine until the copper concentration reaches 0.2-0.4ppm. Once this level of copper is reached, maintain 0.6-3ppm of free available chlorine.

Very important: Before operating your CHLORINE-SAVER system, make sure to have determined the copper concentration in the swimming pool water with the help of the test kit. If copper is found in the water this means that either your water heater or the source of water or copper piping is adding copper to the water. Empty the pool halfway and fill it up again with fresh water. Excess levels of copper may cause staining of pool surfaces.

CLEANING

Depending on the size of the swimming pool, the water temperature, length of the swimming season and the treatment of the pool, the life expectancy of the electrodes may vary between twelve to forty-eight months.

Cleaning will remove oxidation. Some deposits have a tendency to form on the electrodes depending on the water conditions. It is not the green sediment which usually forms on electrodes and which can be removed if it becomes too heavy.

Cleaning Methods:

1. Unplug the swimming pool's filtration system.
2. Unplug the CHLORINE-SAVER device.
3. Empty the water pipe between the pump and CHLORINE-SAVER by removing the pumps cover causing the water from the pipe to drain.
4. Unscrew the two bolts that hold down the electric wire from the electrodes and disconnect the wires.
5. Unscrew the plug of the electrode unit. Clean the flat face of the electrodes using a smooth file and some water. The surface does not need to be "polished", simply remove any traces of oxidation and other sediments.
6. Remove the old Teflon tape, use new tape and wrap it around six times. Screw the plug back in. Make sure the electrodes are aligned in order to ensure a free flow of water. Place the plug in such a manner as to allow the water to circulate between the two bolts which hold the electrodes. Never use glue to attach the plug.

INSTALLATION

The CHLORINE-SAVER water treatment system is easy to use and to install. It can work on 110 volts or 220 volts. Furthermore, it can be placed either inside or outside since it is water resistant.

Please follow these installation instructions carefully:

1. Unplug the filtering system
2. Empty the water pipe between the pump and the filter by removing the pumps cover causing the water from the pipe to drain.
3. Cut a section of the water-supply pipe between the pump and the filter.
4. Replace this part by the ((T)) of the CHLORINE-SAVER device.
5. Make sure that the electrodes are vertical in order to allow maximum contact with water and to avoid dirt formation or air pockets around the electrodes. (Place the plug in such a manner as to allow the water to circulate between the two bolts which hold the electrodes.)
6. Plug in the device's electrical cord.
7. Plug in the filtering system
8. When replacing the electrode, only use replacement electrodes having a label that clearly states that it is a replacement electrode for the copper ionizer CHLORINE-SAVER, Registration Number 26444 Pest Control Products Act. In order to achieve an even wear of the electrodes, the system is programmed to alternate the direction of the current between the electrodes every five minutes. (approx.)

VERIFICATION OF COPPER CONCENTRATION

Copper levels in the pool water should be monitored using a test kit for copper. Follow the instructions provided with the test kit.

CHLORINE-SAVER WINTERIZING

When the temperature drops the swimming pool requires less maintenance. The pH level will not vary as much in Fall as in Summer. Check the pH at least once every two weeks. When it's cold, once every month will do. PH level should be Kept between 7.2 and 7.8. The total alkalinity level should be kept between 80 and 120ppm. Keep adding an oxidant every second week. Maintain copper concentration level between 0.2 and 0.4ppm

If you reside in regions where you must shut off your pool because of cold temperatures, the residual copper ions will keep the water clear and sparkling during winter. However, if leaves or other dirt fall in the water and algae starts to form, it will be necessary to add chlorine and a winter treatment kit.

If you reside in a region where there is frost, there are certain preventive measures which must be taken to avoid damaging your CHLORINE-SAVER Systems. You must unplug and remove your system from its installation. The water inside the device must be removed and the device must be stored in a warm place.

WARRANTY

The CHLORINE-SAVER water treatment system has a five-year limited warranty against all manufacturing defects. The device will be replaced or repaired at our head office and this, within the first fifteen work days following a claim. This warranty is in effect starting the date of purchase and is only applicable to the purchaser who has returned the warranty card properly filled in to the manufacturer.

The warranty does not cover damages caused by lightning, abuse, inadequate installation of the device, frost or lack of maintenance. The warranty does not cover stains which form on surfaces or in the bottom of pool due to improper maintenance.

To make a claim, send the device to the following address, indicating the nature of its malfunction (s):

WARRANTY CARD. PLEASE RETURN BY MAIL TO

Les Designs MICAD Inc
1316 Chemin du Lac
Lery, Quebec Canada J6N 1B1
Tel.514-946-6215

CHLORINE-SAVER PRE-INSTALLATION WATER ANALYSIS

CHLORINE _____ ppm
PH _____ ppm
ALKALINITY _____ ppm
COPPER _____ ppm
HARDNESS _____ ppm

INSTALLED BY:

NAME _____ .
ADDRESS _____ .

CHLORINE-SAVER OWNER

NAME _____ .
ADDRESS _____ .
CITY. _____ PROVINCE STATE _____ .
ZIP CODE _____ .
DATE OF PURCHASE _____ .
SERIAL NUMBER _____ .
COMMENTS _____ .

NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

Text for large Electrode;

Chlorine Saver Electrode

P/N: L-020-0081

Electrode must only be used on these models
of copper ionizers, Chlorine Saver Reg.No.22118&26444
Read label & instructions for Chlorine-Saver before using
Les Designs MICAD Inc. 1316 Chemin du Lac, Lery, Quebec,
Canada J6N-1B1 Tel.: 514-946-6215

Text for small Electrode;

Chlorine Saver Electrode

P/N: S-010-9181

Electrode must only be used on these models
of copper ionizers, Chlorine Saver Reg.No.22118&26444
Read label & instructions for Chlorine-Saver before using
Les Designs MICAD Inc. 1316 Chemin du Lac, Lery, Quebec,
Canada J6N-1B1 Tel.: 514-946-6215

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