

SWIMMING POOL DISINFECTION INSTRUCTIONS

1. Swimming pool chemical checks should be made a minimum of four times a day with a DPD test kit (OTA test kit is unacceptable). These tests should include free and residual chlorine, and pH. Total alkalinity and Calcium hardness need to be checked only once a week. Testing should be done at times before and after heavy bather loads as chemical concentrations can vary greatly at this time.

2. Required chemical ranges are stated in 105 CMR 435.29 Minimum Standards for Swimming Pools, State Sanitary Code Chapter V, and are as follows:

<u>Type of Disinfection</u>	<u>pH</u>	<u>Alkalinity (ppm)(mg/l)</u>	<u>Calcium Hardness* (ppm)(mg/l)</u>	<u>Residual Chlorine (ppm)(mg/l)</u>
Chlorine	7.2 - 7.8 ideal 7.4-7.6	50-150	200 - 300	1.0 - 3.0 Free 0.0 - 0.2 Combined
Bromine	7.2 - 7.8 ideal 7.4-7.6	50-150	200 - 300	2.0 - 6.0

* Recommended ranges.

Use of chlorine compounds containing cyanuric acid is prohibited. Chlorine gas should never be used.

All Hypochlorite solution shall be added to the pool water by positive displacement equipment, not by hand or through skimmers (435.06(4)). Extreme caution should be used when handling calcium hypochlorite and/or muriatic acid. Muriatic acid must never be added to hypochlorites and acid must be stored separate from hypochlorites. **Contact between the two may cause fire.** Thoroughly read and follow manufacturers instructions for the proper handling of all chemicals.

3. pH is a critical factor for pool disinfection. The pH should be kept at 7.6 to reduce eye irritation and burning of the mucous membranes. For accurate pH testing, phenol red indicator with chlorine inhibitor should be used. Some kits may contain a separate thiosulfate buffer as a chlorine inhibitor.

4. To adjust the pH, soda ash (raise the pH) or muriatic acid (to lower pH) should be added to the pool via a chemical feeder. Chemicals should never be fed by hand or through the skimmers while the pool is occupied! Chemical levels must be within the ranges stated in the regulations prior to opening the pool each day.

5. Chlorine samples should be taken between the pool inlet and outlet, at approximately a 12" depth.

6. All swimming pool equipment (including pumps, filters, chlorinators, brominators and other chemical feed equipment) shall be operated on a continuous 24hr basis.

7. The Milton Board of Health must be immediately notified of any change in equipment, interruption in treatment, loss of water clarity, construction activity or serious accident.