

Fact Sheet: Pool Maintenance

Chemical Storage and Handling

Care must be taken when handling pool and spa chemicals, whether they are gas, liquid or solid.

Liquid chlorine, such as Sodium hypochlorite can burn clothing, skin and metals and once opened, it may deteriorate, especially in sunlight.

Solid chlorine, such as calcium hypochlorite may explode if it comes into contact with some other products. If its fumes combine with Cyanuric acid in a moist atmosphere, it may instantaneously combust.

Storage of Chemicals

- Store chemicals in single use, well labelled, air tight containers with the lid on firmly.
- Avoid exposing chemicals to light, air, moisture or heat.
- Do not mix different chemicals.
- Store chemicals away from food preparation area.
- Clean up any spillages immediately and dispose of them safely.
- Use clean and dry scoops for the chemicals.
- Do not store chemicals on top of each other.
- Never store Calcium hydrochlorite and Cyanurates in the same store room. Keep them as far apart as possible.

Handling of Chemicals

- Use respiratory protection when handling gaseous chlorine.
- Use gloves, preferably gauntlets, and eye protection when missing batches of chemicals.
- Handle powders away from air draughts or where the chemical can be blown around.
- Add powders and granules slowly to water while stirring and NEVER add water to chemical.
- Always follow manufacturers directions strictly.
- Clean spillages immediately.
- Ensure that you have a first aid kit and eye wash handy just in case.

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Guidelines for Pool Maintenance

Disinfection Concentrations

Concentration mg/L

Chlorine	FREE (min)	COMBINED
Outdoor Pool	1.0	1.0
Outdoor Pool Stabilised	3.0	N/A
Indoor Pool (< 26°C)	1.5	1.0
Indoor Pool (> 26°C)	2.0	1.0
Spa	2.0	1.0

- Cyanuric acid must not be used for indoor swimming pools, spas or with any other chemical other than chlorine.
- The cyanuric acid concentration should be kept within the range of 30 to 100mg/L.
- There should be only free chlorine and no combined chlorine in the pool at the start of each day.
- The level of free chlorine should at no time be less than half the total chlorine level (total chlorine = free + combined chlorine).
- Spa pools must be disinfected using a continuous dosing system. Calcium hypochlorite is not recommended as a chlorine source for spa pools.

Concentration mg/L

Bromine	FREE (min)	* CHLORINE EQUIV (min)
Outdoor Pool	2.25	1.0
Indoor Pool (< 26°C)	3.5	1.5
Indoor Pool (> 26°C)	4.5	2.0
Spa	4.5	2.0
Maximum	9.0	4.0

NOTE: *if measurements for bromine are made as a chlorine equivalent, then you multiply the result by 2.25 and you will have the bromine value. Bromine may be purchased as Spabrom or Aquambrom. Bromine is used in a continuous dosing system.

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Ozone

- A continuous dosing system must be used.
- It must be generated and dosed in a closed system.
- Ozone in the treated water must be quenched with an activated carbon filter or similar equivalent prior to the water being returned to the pool.
- The pool water should be chlorinated as specified above.

Other Standards

pH	Range 7.2 to 7.8 for Swimming Pools and Spas
Total Alkalinity	Range 80 - 200mg/L for Swimming Pools and Spas
Calcium Hardness	The value will vary from place to place. There is no standard value.

Clarity Standards

Pool bottom must be visible from the side of the pool.

Filtration turnover rates for pools*

Pool Type	Turnover Period (maximum)
Spa and Bubble Pools	½ hour
Pools <0.5m deep	½ hour
Pools >0.5m but <1.0m deep	1 hour
Pools >1.0m but <1.5m deep	1 ½ hours
Pools >1.5m but <1.8m deep	2 hours
Pools >1.8m but <2.0m deep	2 ½ hours
Pools >2.0m but <3.0m deep	3 ½ hours
Pools >3.0m deep	5 hours

***Note:** this means that time taken to filter a volume of water equal to that of the swimming pool

Further Information

If you have further enquiries in relation to information provided on this Fact Sheet please contact Council's Building Section on 1300 242 992