easy@Home

Pool and SPA

7 in 1 Test Strip

Cat. No.: EZWQ-S

PRODUCT INTRODUCTION

The Easy@Home Pool and SPA 7 in 1 Test Strip is a quick-read water quality test strip which provides results of water's total hardness, total chlorine, free chlorine, bromine, pH, total alkalinity and cyanuric acid levels in less two minutes.

HOW DOES IT WORK?

The Pool and SPA 7 in 1 Test Strip consists of a plastic strip and seven reaction pads. When the reaction pads touch water they will rapidly change color depending on the concentration of water's total hardness, total chlorine, free chlorine, bromine, pH, total alkalinity and cyanuric acid present. The test pads will occur chemical reactions with high specificity.

WARNING

1. DO NOT touch the bottle with wet fingers or hands.
2. Avoid touching or polluting the Testing Zone of strip.
3. Close the cap tightly after removing a test strip.
4. For accuracy read the results in natural daylight.
5. Store in a cool and dry place.

STORAGE AND STABILITY

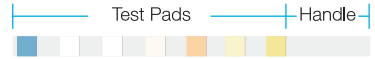
These test strips have a 2-year expiry date from manufacture date. Please take proper care for long term use. For best results use within 90 days of opening the canister. Proper care and storage can help the strips last longer.

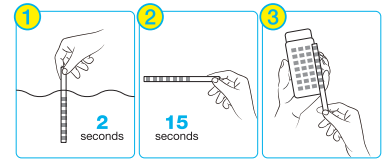
CONTENT

100 * Test Strips
1 * User Manual

INSTRUCTIONS

1. Remove the strip from the closed canister or the sealed pouch and use it as soon as possible. Immediately close the canister tightly after removing the required number of strip(s).
2. Completely immerse the strip in water for 2 seconds and immediately remove the strip to avoid dissolving the reagents.
3. Hold the strip horizontally for 15 seconds. DO NOT shake off excess water.
4. Read the result in 30 seconds and compare with the color chart for accurate results.





LIMITATION

1. The test strip can not test water quality of salt water pool, or you will get inaccurate results.
2. Too much free chlorine concentration will affect the accuracy of other test items.

TEST ITEMS

• Total Hardness
Meaning: Total hardness refers to the amount of calcium and magnesium in pool or spa water.

Danger: Low levels of hardness causes long term damage to your pool equipment, plumbing and surfaces. It causes serious damage to concrete and stone pools and spas. It is essential to keep within the correct range. Too hard water makes water occur precipitates and water turns cloudy.

• Free Chlorine
Meaning: Chlorine is the most common and popular type of disinfectant for pool and spa. Chlorine protects swimmers by sanitizing, disinfecting and oxidizing contaminants in the water. The chlorine, which is active and able to sanitize and oxidize contaminants in the water, is referred to as free chlorine residual. And the chlorine, which has already used up its ability to sanitize by reacting with contaminants, is called combined chlorine. Total chlorine means the sum of both free chlorine residual and combined chlorine.

Danger: Having too little chlorine means your pool will be unsanitary, will develop algae and be unsafe for swimmers. Having too much chlorine causes skin and eye irritation and since high chlorine levels lower the pH of the water, it becomes more acidic which is not good for the pool.

• Bromine
Meaning: Bromine is another common disinfectant, primarily used in pools and spas.

Danger: Like Chlorine, some people experienced irritated skin and eyes when water has been treated with bromine. High levels of bromine in the water may cause damage to pool surfaces and equipment. Direct contact with bromine liquid can cause severe rashes or blistered skin.

• Cyanuric Acid
Meaning: Cyanuric acid, also called "stabilizer" or "conditioner", makes chlorine more stable when exposed to the sun's ultraviolet rays. Two types of chlorine compounds, dichlor and trichlor, contain some cyanuric acid. The level of cyanuric acid will build up with the continued use of either of these sanitizers.

Danger: Having no/too little cyanuric acid in your pool means you will need to add a lot more chlorine to keep the pool crystal clear. Having too much cyanuric acid will mean that the chlorine will lose its effectiveness so it will need to be lowered for the chlorine to work well again.

• Total Alkalinity
Meaning: Total alkalinity measures the amount of alkaline substances (primarily, bicarbonates and carbonates) in the water.
Total alkalinity shall be maintained between a minimum of 60 ppm and a maximum of 180 ppm as CaCO3. The total alkalinity is in the ideal range at 100 to 120 ppm (parts per million) if sodium dichlor, trichlor, chlorine gas, and bromine compounds are used as sanitizers. Total alkalinity level of 80 to 100 ppm is considered to be the ideal range if calcium hypochlorite, lithium hypochlorite, and sodium hypochloriteare are used as sanitizers.

Danger: Your pool, spa or hot tub water being too alkaline (test result over 240) means that the spa will naturally try and balance itself, causing a cloudy appearance and a build-up of scale which can form on the sides of the spa and on your plumbing. Not having the correct level of total alkalinity will mean that there will not be enough buffering and the pH can quickly spiral out of control.

- pH

Meaning: pH is the scale of whether the water is acidic (1-6), neutral (7) or alkaline (8-14).

Danger: A high pH or alkaline water can cause cloudiness and the build-up of scale as we mentioned in the previous section. A low pH can cause skin and especially eye irritation when you are in the water. Keeping pH in the correct range is essential for long term pool maintenance. Not doing this can also result in improper chlorine disinfection and concrete corrosion / pool staining.

SWIMMING POOL AND SPA WATER STANDARDS

The International Aquatic Foundation (IAF) and National Spa & Pool Institute (NSPI) have developed a set of guidelines for chemical maintenance of water quality.

ANSI/APSP/ICC Standard for **Swimming pools** (2019 Operational Parameters)

	Minimum	Ideal	Maximum
Total Hardness ppm	150	200-400	500-1000+
Free Chlorine ppm	1.0	1.0-3.0	4.0
Bromine ppm	2	2-4	NONE
Total Chlorine ppm	1.0	1.0-3.0	4.0
Cyanuric Acid ppm	30	30-50	100
Total Alkalinity ppm	60	80-100* 100-120**	180
pH	7.2	7.4-7.6	7.8
Combined Chlorine, ppm	NONE	NONE	0.4

* (for Liquid Chlorine,Calcium Hypochlorite and Lithium Hypochlorite)
**(Dicholor and Trichlor Compounds)

ANSI/APSP/ICC Standard for **Spas** (2019 Operational Parameters)

	Minimum	Ideal	Maximum
Total Hardness ppm	150	200-400	500-1000+
Free Chlorine ppm	1.0	1.0-3.0	4.0
Bromine ppm	2	2-4	NONE
Total Chlorine ppm	1.0	1.0-3.0	4.0
Cyanuric Acid ppm	30	30-50	100
Total Alkalinity ppm	60	80-100* 100-120**	180
pH	7.2	7.4-7.6	7.8
Combined Chlorine, ppm	NONE	NONE	0.4

* (for Liquid Chlorine,Calcium Hypochlorite and Lithium Hypochlorite)
**(Dicholor and Trichlor Compounds)

WARNINGS FOR HANDLING CHEMICALS

- Do not add chemicals when swimmers are in the water!
- Always follow chemical manufacturer's directions.
- Always add acid to water; never add water to acid.
- All chemicals used for any purpose in or around the pool should be handled very carefully and precautions noted by the manufacturer followed.

REFERENCE

1. ANSI/APSP/ICC-11 2019 American National Standard for Water Quality in Public Pools and Spas
2. Murphy JL, Arrowood MJ, Lu X, Hlavsa MC, Beach MJ, Hill VR. Effect of cyanuric acid on the inactivation of Cryptosporidium parvum under hyperchlorination conditions. Environ Sci Technol. 2015 Jun 16;49(12):7348-55
3. 2009 White's Handbook of Chlorination Andalternative Disinfectants. 5th ed.New York: John Wiley andSons,Inc
4. The Association of Pool and Spa Professionals. APSPService Tech Manual, 4t ed. Alexandria, VA.

EXPLANATION OF SYMBOLS

	Keep away from sunlight
	Keep dry
	Do not reuse
	Contains sufficient for<n> tests
	Consult instructions for use

Questions or Comments?
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