

GUIDE to WATER TREATMENT specific to pools equipped with salt electrolysis

Expert since 1928

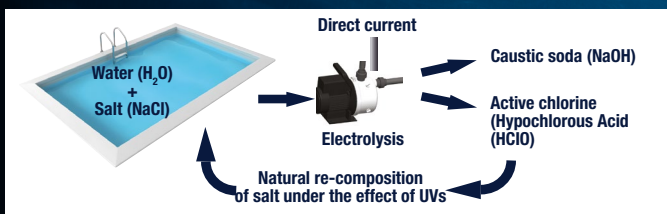


How does salt electrolysis work?

Salt electrolysis is a treatment procedure that generates chlorine in a perpetual cycle: the chloride ions in the salt (sodium chloride) are transformed into active chlorine which, after acting, returns to its initial state in the form of chlorides.

The salt water passes through an electrolysis system. This device is composed of polarised titanium plates in which a current passes that allows the salt to be transformed into sodium hypochlorite, in other words diluted bleach.

The principle of electrolysis



For the system to function correctly, the pool water should be slightly salty (between 3 and 5 grammes of salt per litre or 3,000 to 5,000 ppm depending on the model).





Finally, the salt used should be compliant with the standard EN 16401 which guarantees that the metal ions are not present in very high concentrations as they are liable to stain the lining and/or disturb the proper functioning of the electrolysis cell.

Under these conditions, the electrolysis can treat the water (disinfection + oxidation).

Electrolysis does not mean neglecting water analysis

Salt electrolysis does not limit human intervention in adding salt when this is required and adjusting the pH if this is not automated.

It is important to know the volume of water in your pool to correctly dose the treatment products:

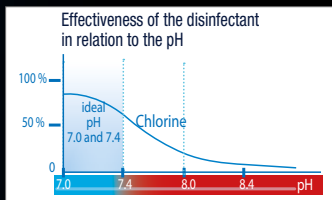
Rectangular 	Round  x 0,78
Oval  x 0,89	Free form  x 0,85

Visit the section about “How to calculate the volume of water in your pool “ on our website:

hth-pool.com

Salt pool maintenance

Even though the system is automated, you will need to carefully monitor the pH level of the water, because the caustic soda produced by the electrolysis has an important effect on raising the pH level of the water. Chlorine loses its effectiveness in water with elevated pH levels.



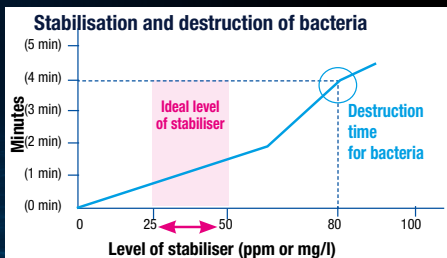
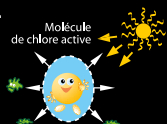
Check the pH regularly using a **Chlorine/pH/TAC** analysis KIT, then adjust it if necessary with **hth[®] pH PLUS** to raise the pH level or **hth[®] pH MINUS** to lower it.

- During frequent use or before a storm, shock the pool with **hth[®] SHOCK[®]** using 150 g for 10 m³ of water. The shock feature of the electrolysis system does not guarantee sufficient over-chlorination.

During shock treatments, it is recommended that you switch off the electrolysis system for a few hours in order to protect the cell.

- To protect the chlorine from the destructive effects of the sun's UV rays, use **hth[®] STABILIZER**. Do not forget that the level of stabiliser should be between 30 and 50 ppm. Above 75 ppm, the excess stabiliser ends up blocking the disinfectant feature of the chlorine. The water is no longer disinfected and will turn bad.

This phenomenon is **over-stabilisation!**



- In order to optimise filtration and have crystal-clear water, add cartridges of **hth[®] REGULARFLOC[®]** flocculation for sand filters to the skimmer every fortnight.
- In order to clean and extend the life span of the cell, use **hth[®] FILTERWASH** at least at the end of the season and during pool season if necessary.



EXERCISE PRECAUTION WHEN USING CHEMICAL POOL TREATMENTS. BEFORE USING, READ THE LABEL AND INFORMATION ABOUT THE PRODUCT ON HTH-POOL.COM

Opening the pool

Temperature
> 15°C

1 CLEAN THE POOL

- Check that your equipment is in good working order (filter, pump...)
- Clean the water line and the skimmers with **hth**[®] BORKLER[®] GEL.
- Remove dirt from the pool using the accessories by **hth**[®].



2 CLEAN THE FILTER

- Descale the sand filter or cartridge filter with **hth**[®] FILTERWASH filter cleaner.
- Adjust the water level of the pool.



3 ANALYSE AND TREAT THE WATER

- With a CHLORINE/pH/TAC TEST KIT :
 - Check the TAC and maintain it at between 8° f and 14° f (80 to 140 mg/l). Adjust it in stages of 3° f by 3° f with **hth**[®] ALKANAL.
 - Check the pH and adjust it if necessary with **hth**[®] pH PLUS to increase it or **hth**[®] pH MINUS to lower it.
- Shock the pool with 150 g of **hth**[®] SHOCK[®] for 10 m³ of water, with the filter in operation for a least 24 hours. Repeat the treatment if necessary after 48 hours.
- To protect the chlorine from the destructive effects of the sun's UV rays, adjust the level of stabiliser to between 30 and 50 ppm with **hth**[®] STABILIZER.



4 FILTRATION

Sufficient filtering time and maintaining a clean filter are essential for the balance of the water in your pool.

**Recommended filtration time:
water temperature / 2 + 1 hour**

**DO NOT HESITATE TO ASK YOUR POOL SPECIALIST
RETAILER FOR A FULL ANALYSIS OF YOUR WATER
TO RECEIVE A PERSONALISED PRESCRIPTION.**

Closing the pool

Temperature
> 15°C

1 PREPARE THE WATER AND CLEAN THE POOL

Prepare the water 2 or 3 days before winterising:

- Brush the floor and sides of the pool, the skimmer basket and the pre-filter of the pump.
- Measure the pH with an **ANALYSIS TEST KIT** and set it to between 7.0 and 7.4.
- Shock the pool with **hth® SHOCK®**, with non-stop filtration for 24 hours.
- Vacuum with the filtration in the “drain” position.
- Clean the water line with **hth® BORKLER® GEL**.



2 DESCALE THE CELL

- Clean the cell of your electrolysis system with **hth® FILTERWASH**.



3 WINTERISE

- Drain the pipes and lower the water level to below the discharge nozzles.
- Pour 1 litre of **hth® SUPER WINTERPROTECT** for 35 m³ around the periphery of the pool. This is a product with long-lasting effect designed to prevent the build-up of deposits that will be difficult to remove in the spring and to combat the proliferation of algae (this is not an anti-freeze product).



4 PROTECT THE POOL

- Install the line of **WINTER FLOATERS** diagonally across the pool.

Pool size	7 x 3	8 x 4	10 x 5	12 x 6
Number of floaters	16	20	24	28

- Place a bottle as anti-freeze in each skimmer and one rubber **PLUG** per discharge nozzle or suction point.
- Unplug the electric box and winterise your heating system as well as any other pool equipment (follow manufacturer instructions).

5 INSTALL A WINTER COVER

- The cover protects from leaves and various other forms of pollution and strengthens protection from algae by keeping the pool in darkness.
Caution! Include an additional 40cm around the pool.



Did you know?...

The demand for chlorine is virtually non-existent if the temperature of the water is under 10°C. If you opt for active winterising, it is preferable not to leave your electrolysis system plugged in.



Problems & Solutions

Problem

Causes and remedies

<p>Milky or cloudy water</p>	<ul style="list-style-type: none"> • The pH is incorrect : Adjust the pH to between 7.0 and 7.4 with hth[®] pH PLUS or hth[®] pH MINUS. Perform shock treatment with hth[®] SHOCK[®]. • The treatment is not sufficient : Perform shock treatment with hth[®] SHOCK[®], flocculation with hth[®] REGULARFLOC[®] for sand filters or hth[®] RAPIDFLOC[®]. Wash the filter several times and leave the filtration running for 24 hours. • Insufficient filtration: Increase the filtration time. • Over-stabilisation : Check the stabiliser level (ideally between 30 and 50 ppm).
<p>Green water</p>	<ul style="list-style-type: none"> • Formation of algae : Perform shock chlorination, wash and rinse the filter, put one or several cartridges of hth[®] REGULARFLOC[®] flocculant in the skimmer and use a concentrated algaecide hth[®] SUPER KLERAL[®] • Over-stabilisation: Check the stabiliser level (ideally between 30 and 50 ppm).
<p>Clear green water</p>	<ul style="list-style-type: none"> • Presence of copper : Check the TAC - ideal value: 80 to 140 mg/l (8 to 14°f) and use the metal sequestrant hth[®] METALSTOP. If necessary, perform liquid flocculation with hth[®] RAPIDFLOC[®] with the filtration off for 12 hours, then vacuum the deposits, sending them directly to the drain.
<p>Brown / rusty / black water</p>	<ul style="list-style-type: none"> • Presence of iron or manganese : Adjust the pH with hth[®] pH PLUS or hth[®] pH MINUS and use hth[®] METALSTOP metal sequestrant. If necessary, perform liquid flocculation using hth[®] RAPIDFLOC[®] with the filtration off for 12 hours, then vacuum the deposits and send them straight to the drain
<p>Calcium deposits</p>	<ul style="list-style-type: none"> • pH too high : Adjust the pH to between 7.0 and 7.4 with hth[®] pH MINUS. • Very hard water : Add hth[®] STOP-CALC in relation to the addition of clean water
<p>Eye and skin irritation Chlorine odour</p>	<ul style="list-style-type: none"> • The chlorine level is insufficient and chloramines are present : Perform shock chlorination with hth[®] SHOCK[®] • The pH is too low: Adjust the pH to between 7.0 and 7.4 with hth[®] pH PLUS.

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HTH-POOL.COM

Problems & Solutions

Problem

Causes and remedies

Difficulty maintaining the chlorine level or incorrect pH	<ul style="list-style-type: none">• Insufficient chlorination in the event of frequent pool use : Perform shock chlorination with hth[®] SHOCK[®] and adjust the pH to between 7.0 and 7.4 with hth[®] pH PLUS or hth[®] pH MINUS.
pH is often high	<ul style="list-style-type: none">• Adjust the pH to between 7.0 and 7.4 with hth[®] pH MINUS. Active chlorine loses its effectiveness in water with a high pH level, so you will need to check the pH regularly using the Chlorine/pH/TAC TEST KIT by hth[®]. This also encourages calcium deposits and can lead to stains on the pool walls.
Unstable pH	<ul style="list-style-type: none">• The TAC is too high : Add hth[®] pH MINUS - ideal value between 80 and 140 mg/l (8 to 14[°]f)• The TAC is too low: Use hth[®] ALKANAL - ideal value between 80 and 140 mg/l (8 to 14[°]f)
pH incorrect	<ul style="list-style-type: none">• The pH is too high : Check and adjust the pH to between 7.0 and 7.4, add hth[®] pH MINUS• The pH is too low: Check and adjust the pH to between 7.0 and 7.4, add hth[®] pH PLUS.
Abnormally high pressure on the filter pressure gauge	<ul style="list-style-type: none">• The filter is dirty : Perform filter washing. If the pressure continues, clean the filter with hth[®] FILTERWASH filter descaler.
Cell limescale build-up	<ul style="list-style-type: none">• Adjust the reverse polarity time depending on the hardness of the water. Reverse polarity time is the frequency of cell cleaning. The harder the water (with high TH), the greater the reverse polarity frequency in order to ensure that limescale does not build up on the cell.• If the cell has limescale build-up: use hth[®] FILTERWASH filter and cell descaler, then thoroughly rinse the cell.

Any questions about treating your water?
Contact our Customer Service:

+44 (0) 1924 792909

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Expert since 1928



The families in the range

WATER BALANCE

Correct adjustment of the pH and TAC is essential to avoid a number of problems: development of algae, eye and skin irritation...



NON STABILISED CHLORINE

Calcium hypochlorite is both a disinfectant and a powerful oxidant that also does not generate cyanuric acid responsible for over-stabilising pool water.



STABILISED CHLORINE

Disinfection must be ongoing in order to prevent the proliferation of micro-organisms. A wide range covering the needs of above-ground and inground swimming pools.



BROMINE AND ACTIVE OXYGEN

These products offer bathing comfort for all the family.



PREVENTION / SOLUTIONS

A complete range of products to resolve problems related to water treatment and also to prevent their return.



Expert since 1928



Opening video

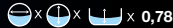


How to **calculate**
the **volume** of your pool?

Rectangular



Round



Oval



Freeform



How to **stabilize**
the **pH** of your pool?

Ideal pH value : 7.0 - 7.4



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