



Catalogue 2022/23

Water Care for Commercial Swimming Pools



THE EXPERT BRAND

STABILISER-FREE
CHLORINE

EQUIPMENT & ANALYSIS

STABILISED CHLORINE

WATER BALANCE

PREVENTION / SOLUTIONS

MAINTENANCE

SAFETY

SOLENIS & hth

SUPPORTS

Over 60 Years of service of public swimming Pools

Public pools are the subject of extremely strict rules of sanitation and seek processes that can guarantee maximum water quality and reliability while minimising the risks involved with pool operations.



The world leader in public pool treatments and number one manufacturer worldwide of calcium hypochlorite, the **hth**® brand offers equipment for quality treatment that is extremely simple to use.

The patented easilo® feeder can be used to treat all types of pools.

THE EXPERT BRAND

Designed to be easily identified through a colour coding system, the **hth**® products are organised into seven families:

-  Analysis products and equipment
-  Stabiliser-free chlorine disinfectants
-  Stabilised chlorine disinfectants
-  Water balance products
-  Prevention products and specific solutions
-  Cleaning products
-  Accessories



EXERCISE CAUTION WHEN USING CHEMICAL POOL TREATMENTS.

BEFORE USING, READ THE LABEL AND INFORMATION ABOUT THE PRODUCT ON HTH-PRO.COM



ASSISTANCE by **hth**[®]

- An expert at your disposal to **answer all your water treatment questions**.
From Monday to Friday, +33(0)826102395 (€0.15/min + price of a call) or on hotlinepiscine@solenis.com.
- Improvement of your knowledge, staff training, perfecting, etc., **hth**[®] offers **training sessions** delivered by its own training facility (see page 53).
- **Website** to be consulted for any information: www.hth-pro.fr: tips, products, regulations, etc.

A partnership between **hth**[®] & STEIEL

- **hth**[®] develops equipment, manufactured by STEIEL under licence.
- This combination of **skills, strengths** and **professionalism** enables us to improve **effectiveness** for all our customers of the EMEA region.



The feeders (p.11)

hth[®] easiflo[®] FIRST 20/50/100



Contents

Over 60 years of service for public swimming pools	2-4
Regulatory information	5
STABILISER-FREE CHLORINE	6
Calcium hypochlorite	6-7
The advantages of calcium hypochlorite	8
Regular disinfection	9
Shock disinfection	10
EQUIPMENT & ANALYSIS	11
hth [®] feeders	11
easiflo [®] compared to other treatment systems	12
hth [®] easiflo [®] feeders	13
easiflo [®] 20 FIRST- easiflo [®] 50 FIRST	14-15
Feeder maintenance	16-17
INNOVATION - hth [®] easiflo [®] 10 FIRST	18-19
INNOVATION - hth [®] easiflo [®] Eco	20-21
Why use a control system?	22
hth [®] CYCL'EAU [®] Pro (amperometric)	23
hth [®] CYCL'EAU [®] Pro control systems in details	24
Lumiso 6 photometer	25
Dosing pumps	26
STABILISED CHLORINE	27
Isocyanurates	27
Regular disinfection	28
Shock disinfection	29
WATER BALANCE	30
The key to balanced water	30
pH minus	31
pH plus	31
Miscellaneous	32-33
PREVENTION / SOLUTIONS	34
Preventing and resolving issues	34
Anti-algae	35
Flocculants	35
Miscellaneous	32-36
Winterising	37
MAINTENANCE	38
Meeting stringent hygiene standards	38
Pool maintenance	39
SAFETY	40
Better information for better protection	40-41
Solenis [™] and the hth [®] brand	42-43
Supports / www.hth-pro.com	44-45
hth [®] distributors	46

For Better Preserved Water

No 1
manufacturer
worldwide of
calcium
hypochlorite
since 1928

With the world's first calcium hypochlorite, invented in 1928 by the Innovative Water Care* laboratories, calcium hypochlorite was first used to disinfect water intended for human consumption under the **hth**® brand.

Used for more than 60 years in public pools and authorised as a disinfectant product by the European Chemical Association as part of the Biocidal product authorisation scheme, calcium hypochlorite is recognised as a high-quality, effective and economic product.

Public pools are subject to extremely strict rules of sanitation and seek processes that can guarantee **maximum reliability as regards water quality**, while minimising both the risks and costs involved with swimming pool operations.

As the world leader in public pool treatments and number one manufacturer of calcium hypochlorite worldwide, we offer patented equipment for quality treatment that is effective and simple to use.

The **hth**® easiflo™ feeder systems can be installed anywhere and treat all sizes of pools.

To maintain pool water under healthy bathing conditions and prevent cross-contamination, chlorine remains the reference in terms of disinfectant. Currently, there is no known treatment that can destroy bacteria more rapidly and economically, while chlorine arrives in many forms, calcium hypochlorite is becoming an increasingly popular choice. Calcium hypochlorite is inorganic, non-stabilised chlorine that is frequently used to disinfect swimming pool water, whether soft or hard.

hth easiflo® System: The optimal solution for treating water in public pools

To treat public pool water, **hth**® has developed practical, safe and efficient automatic systems.

Each **hth**® System relies on the combination of the 3 following elements:

- **hth**® easiflo® BRIQUETTE calcium hypochlorite containing the most efficient anti-scale additive. Their formulation patented by **hth**® prevents clogging issues in the feeders, which often occur with other calcium hypochlorite tablets.
- An **hth**® easiflo® FIRST (10, 20, 50, 100).
- An **hth**® CYCL'EAU®Pro amperometric control system.



The combination of these 3 **hth**® products guarantee regulated, reliable and simple disinfection. It enables the full and safe automation of your pool treatment.

* and its previous entities



www.hth-pro.com

CLS
COMMERCIAL LEISURE SUPPLIES

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

In Compliance with Regulations

The expertise of our regulatory department allows us to serve all our customers with up to date, fully approved regulatory compliance.

CLP/SGH PICTOGRAMS*



DANGER

CAUTION

As for all chemicals, pool treatment products must comply with very strict regulations. The precautions for use and safety instructions must be detailed on all the labels. Where applicable, pictograms (black symbols over an orange or white background) must also be included to warn of the hazards linked with the concentrated product.

CLP is the regulation on the classification, labelling and packaging of substances and mixtures. This regulation brings the former EU legislation on the classification, labelling and packaging of chemical substances in line with that of the GHS (Globally Harmonised System for classifying and labelling chemicals). Its main aims are to facilitate the international trade of chemicals and maintain the existing level of health and environmental protection.

These pictograms are associated with a "Danger" or "Caution" warning according to the hazard category corresponding to the product classification (the same pictogram may be associated with either the "Danger" or "Caution" mention).

*CLP Classification, Labelling, Packaging
*GHS Global Harmonised System

BIOCIDAL PRODUCT REGULATION (BPR)

EU Regulation No. 528/2012 on Biocidal Products, the Biocidal Product Regulation (BPR), covers the sale and use of biocidal products that are used to protect humans, animals, equipment or items against harmful organisms, such as harmful animals and bacteria, through the action of active substances contained in the biocidal product. This regulation aims to improve the working of the biocidal product market within the European Union, while guaranteeing a high level of protection to human health and the environment.

BPR IMPLEMENTATION:

Step 1: ACTIVE SUBSTANCES (AS) used to formulate biocidal products must be subject to approval per type of product at European level (e.g.: disinfectant (TP2), repellent (TP19), etc.)

Step 2: BIOCIDAL PRODUCTS (BP) formulated with approved active substances must obtain an authorisation before going onto the market.

The European Review Programme to examine active substances counts nearly 900 AS/PT combinations, of which a little over 260 were approved in mid-2020. It continues until 2024, which explains why the implementation of this regulation is gradual.

BPR STATUS FOR SOLENIS:

Solenis will be the first company to obtain a Union authorisation from Europe for its calcium hypochlorite products following the positive opinion of the European Chemicals Agency. The authorisation number will be communicated in 2023.

WHAT WILL CHANGE:

- Product effectiveness assessed and approved in all Union countries.
- Less languages included on the labels.
- Different conditions of use for the products depending on the type of application: either for residential or public pools.
- For the residential market an obligation to provide a dosing tool to prevent direct contact with the product.

Why Choose Calcium Hypochlorite?



The calcium released by calcium hypochlorite can extend the life span of the metallic elements of your pool facility as well as limit grout deterioration.

Nowadays, the **hth**[®] solution is recommended by most pool managers who have tested the power of **hth**[®] calcium hypochlorite.

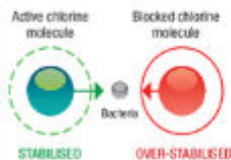
✓ Save water

The cyanuric acid released by stabilised chlorine helps protect the disinfectant from destruction by the sun's UV rays, however, if excessively concentrated, it adversely affects the effectiveness of the disinfectant. The more stabilised chlorine is added, the more stabiliser is also added. The disinfectant action of chlorine is then blocked and the water is no longer disinfected, this is commonly known as "over-stabilisation".

Calcium hypochlorite limits the need for water changes during the summer due to over-stabilisation. You will spend less and waste less water. Stabiliser is only added if necessary to maintain a correct chlorine content in the pool.

Over-stabilisation

The stabiliser (cyanuric acid) provided by "classical" chlorines (tablets, sodium dichloroisocyanurate (NaDCC) granules or trichloroisocyanuric acid (TCCA)) protect chlorine against the destructive action of UV rays. However, the uncontrolled addition of stabilisers through these isocyanurate derivatives ends up blocking their disinfectant action. The water can become green or cloudy, as the more chlorine is added, the more stabiliser is also added.



✓ Reduce the total dissolved salts of pool water (TDS), as well as the risks of corrosion and damaging equipment

The total salinity (named TDS) corresponds to the dissolved salts concentration in the pool water, which comes from the salts contained in the top up water and the implementation of chemicals for treatment. High TDS levels increase the electrochemical activity of the solution concerned, and thus increase the corrosion of the facilities containing it. The maximum recommended TDS levels for pool water are not more than 800 mg/l above the source water entering the pool.

Adding calcium to the water through calcium hypochlorite minimises the corrosion risks on the equipment and facilities, as well as tile grout deterioration

✓ Obtaining good quality water

Improved comfort for bathers. With a properly analysed and regularly maintained water, you will improve the effectiveness of the products and ensure optimum comfort for the bathers.

Calcium hypochlorite gives you crystal clear and healthier water

✓ Enable safe implementation

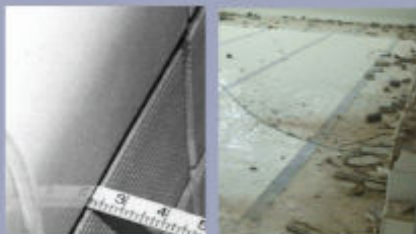
The irritant gas emanations when the product is dissolved are minimised

Handling calcium hypochlorite in solid form is simpler and less dangerous for the user compared to chlorine gas or sodium hypochlorite (bleach). This treatment increases safety in pool technical rooms and for the personnel in charge of pool maintenance. The number and quantity of pails will be reduced, so moving and handling of heavy chemical drums is reduced by a factor of 7 when compared to 20l sodium hypochlorite pails.

✓ Optimised conservation and storage

When stored in a cool dry location, with the lid closed, calcium hypochlorite retains its efficacy for 30 months starting from its manufacturing date.

You will use up to 5 times less calcium hypochlorite compared to sodium hypochlorite (bleach).



DID YOU KNOW?

Above 250 mg/l of calcium hardness (TH), tile grout protection is observed.



STABILISER-FREE CHLORINE

Calcium Hypochlorite

hth® calcium hypochlorite is manufactured according to the "sodium process", of much better quality than the "calcium process" and compliant with the BPR file and the EN 900 standard: 2014

Thus, the calcium hypochlorite formulated by Innovative Water Care is registered and traded under the **hth**® brand and is available under 5 forms:

- **hth**® easiflo® BRIQUETTE 7g
- **hth**® STICK 300 g
- **hth**® GRANULAR
- **hth**® SHOCK®
- **hth**® ADVANCED®

hth® Red Range

hth® BRIQUETTE

The briquettes developed by **hth**® to be used with the **hth**® easiflo® feeder enables you to save up to 10% chlorine compared to ordinary tablets and granules. Paired with the **hth**® easiflo® feeder technology, they ensure you simple and perfect disinfection of your pool.

- Disinfectant action: Provides permanent chlorination for the destruction of bacteria, viruses, fungi and algae
- Average amount of chlorine-equivalent dose to 68%
- Formula containing a stable anti-scale agent with chlorine.
- Free from isocyanuric acid (stabiliser)
- Can be used in hard water (high T.H.)
- Compatible with all filtering equipment
- Minimised storage degassing compared to isocyanurates



As the No. 1 manufacturer of calcium hypochlorite worldwide, **hth**® developed and patented the first calcium hypochlorite **hth**® easiflo® briquettes in 7g tablets, complete with an anti-scale formula. They offer superior performance compared to other tablet formats available on the market.

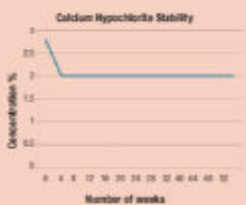
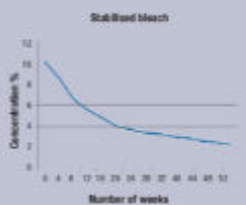




www.hth-pro.com

7

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

The Advantages of Calcium Hypochlorite Compared to Sodium Hypochlorite

	Calcium Hypochlorite	Sodium Hypochlorite (Bleach)
Cost	<p>The average pH of 1% calcium hypochlorite solutions, i.e. 10 g/L, is of 11.5. Using calcium hypochlorite instead of bleach can offers savings in acid corrector (pH MINUS) that can be up to 50% of the consumption of acid. However, this value depends significantly on the pH values of the water being added.</p>	<p>The average pH of bleach solutions is around 13. Plus a pool requires 7 times more product to be added to the pool at a higher pH.</p>
Conservation period	<p>The chlorine solution manufactured in real time by feeder and controller system, i.e. hth® easiflo® feeders, has a concentration in stable active chlorine close to 2%. In addition to this, as the stability of hypochlorite solutions is inversely proportional to their concentration, the solutions produced by hth® easiflo® feeders are much more stable over time than more concentrated bleach solutions.</p> 	<p>Bleach degrades very quickly when stored, even more so when it is subjected to UV rays or high temperatures. This leads to dosing problems and difficulty maintaining an adequate chlorine level.</p> 
Storage	<ul style="list-style-type: none"> - Requires little space in the utility room. - 25 kg of calcium hypochlorite contains up to 70% active chlorine, which corresponds to 168 kg of bleach.  <p>25 kg of calcium hypochlorite</p>	<ul style="list-style-type: none"> - Requires a lot of space due to its low concentration in active chlorine which demands significant amounts to reach the required levels. - 25 litres of liquid bleach weigh 30 kg for an average of 10% active chlorine.  <p>168 kg of bleach</p>

Calcium hypochlorite is a cheap, effective and practical product.

FOCUS

Take the case of a pool measuring 240 m³ that switches from treatment with sodium hypochlorite to treatment with calcium hypochlorite. The annual savings are as follows:



Calcium hypochlorite	Sodium hypochlorite
One weekly control	High level of 13ppm
Residual shock solution	High dosing solution, difficult to handle for a residential user
Cost efficient treatment	High instability
Average pH of 11.5	Average pH of 13
Easy storage, use and handling	Higher risk during handling
Free storage 25kg = 10% available chlorine	Storage 40 buckets 25kg = 10% available chlorine

Safety - General Information on Calcium Hypochlorite

You must read **all** the instructions and **all** the safety recommendations **before** implementing the products.

Caution!

Any contamination or unsuitable use of the product may cause a fire, an explosion or the release of toxic gases. Never let this product enter into contact with any other substance whatsoever, including other pool water treatment products. Never place or mix this product with any other product (including another chlorine-based product) in any location. If in contact with insufficient volumes of water, this product may react violently, producing heat and toxic gases, and may cause splashes. Never pour water onto this product. Always place the product in water. Never mix this product with insufficient volumes of water. Highly corrosive. May burn skin or eyes. May cause death if ingested.

This product poses risks for health and the environment; we recommend the different agents of the distribution network to read the safety data sheet as well as the implementation and safety advice included on the product packaging.

If the free chlorine level in the pool water exceeds 4 mg/l*, do not bathe in it.



DANGER

hth® easiflo® BRIQUETTE 7g

CALCIUM HYPOCHLORITE IN 7 G

hth® FEEDER REFILL TABS

Exclusive formula

- With anti-scale additive.



Reference	Kg	Packing list	Pallet
00205902	10	1	48
00206576	25	1	24
00206041**	45	1	16
00206118**	45	1	16
00205036	45	1	16

Without easiflo® anti-scale additive

Application

- Permanent chlorination to disinfect pool water

Characteristics

- Disinfectant action
- Average amount of chlorine-equivalent of 68%*
- Formula containing a stable anti-scale agent with chlorine
- Exempt from isocyanuric acid (stabiliser)
- Can be used in hard water (high T.H.)
- Compatible with all filtering equipment
- Minimized storage (degassing compared to isocyanurates)

How to use

**DO NOT MIX WITH ANY OTHER PRODUCT
NEVER DISSOLVE BEFORE USE**

Make sure the injection system does not contain any stabilised chlorine (with trichloroisocyanuric acid or sodium dichloroisocyanurate); to be checked on the packaging labels.

hth® easiflo® BRIQUETTE 7g approved by the French Health Ministry under no. 685 on 29 April 2003

Place the briquettes in the **hth® easiflo®**, or any other type of feeder, provided it is compatible with **hth® easiflo®** briquettes.

Adjust the injection to keep a chlorine level upon analysis in line with the local regulation. In the absence of regulatory obligations, we recommend to maintain an active chlorine content between 1 and 3 mg/l.

The daily product consumption is of 0.5 to 1.0 kg for 100 m³. The consumption increases with the number of bathers and sun exposure. In open-air pools, the addition of a stabiliser may help reduce the consumption of calcium hypochlorite.

For perfectly balanced water, maintain a total alkalinity titre (T.A.C.) between 60 and 120 mg/l.

Composition

Calcium Hypochlorite (65%) - 1,000 g/kg



DID YOU KNOW?!

The **hth®** BRIQUETTE contains on average less than 4% insolubles (in distilled water).

hth® STICK 300 g

THE FIRST REGULAR DISINFECTION STICK WITHOUT STABILISER!



Reference	Kg	Packing list	Pallet
00205037	45	1	16

Application

- Permanent chlorination to disinfect pool water

Characteristics

- Disinfectant action
- Average amount of chlorine-equivalent of 68%*
- Exempt from isocyanuric acid (stabiliser)
- Can be used in hard water (high T.H.)
- Compatible with all filtering equipment

How to use

NEVER remove the plastic cover enveloping the product. Make sure the filtration is running. Sticks are designed to be placed in the skimmer.

Adjust the injection to keep a chlorine level upon analysis in line with the local regulation. In the absence of regulatory obligations, we recommend to maintain an active chlorine content between 1 and 3 mg/l.

The daily product consumption is of 0.5 to 1.0 kg for 100 m³. The consumption increases with the number of bathers and sun exposure. In open-air pools, the addition of a stabiliser

may help reduce the consumption of calcium hypochlorite. For perfectly balanced water, maintain a total alkalinity titre (T.A.C.) between 60 and 120 mg/l.

Tablets are also designed to be used in foot baths. In this case, place a tablet in the foot chlorine and renew this operation whenever necessary. In the absence of regulatory obligations, we recommend to maintain an active chlorine content of 5 mg/l (DPD1).

Composition

Calcium Hypochlorite (Min. 65%) - 1,000 g/kg

hth® STICK® approved by the French Health Ministry under no. 685 on 29 April 2003

*Or the maximum level as given by the country you are based within.

**Tested on samples kept in our Charleston plant.

*Please contact your **hth** representative to find out the languages available on the packaging.

hth® GRANULAR

CALCIUM HYPOCHLORITE GRANULES FOR THE PERMANENT AND SHOCK CHLORINATION OF POOL WATER

Fast-dissolving

Powerful ■ active ingredient 68 %



Adjust the injection to keep a chlorine level upon analysis in line with the local regulation. In the absence of regulatory obligations, we recommend to maintain an active chlorine content between 1 and 3 mg/l.

The daily product consumption is of 0.5 to 1.0 kg for 100 m³. The consumption increases with the number of bathers and sun exposure. In open-air pools, the addition of a stabiliser may help reduce the consumption of calcium hypochlorite.

Instructions to prepare chlorine solutions:

1. Always used a clean preparation bin, which must remain exclusively reserved to prepare chlorine solutions.
2. Determine the quantities of ester and calcium hypochlorite needed to reach the desired active chlorine concentration level (see table below).
3. Pour at least 90% of the quantity of water needed (as per the table) into the preparation bin.
4. While stirring, slowly introduce the required quantity of calcium hypochlorite into the preparation bin.
5. Then, add the rest of the water needed in order to bring the total volume in the preparation bin up to the expected level.
6. Keep stirring for at least 15 minutes, until the product is fully dissolved.

For perfectly balanced water, maintain a total alkalinity titre (T.A.C.) between 60 and 120 mg/l.

Composition

Calcium Hypochlorite (65%) - 1,000 g/kg

hth® GRANULAR® approved by the French Health Ministry under no. 685 on 29 April 2003

Reference Kg Packing list Pallet

hth® GRANULAR

00205115**	10	1	48
00205116**	10	1	48
00205036	40	1	18

With blue lid

00205036**	45	1	16
00251152**	45	1	16

hth® GRANULAR Dedusted

00205590	25	1	24
00205028	40	1	18

hth® GRANULAR eadillo®

00205030	40	1	18
----------	----	---	----

hth® GRANULAR 70

00205114**	45	1	16
00223442**	45	1	16
00251145**	45	1	16
00251148**	45	1	16

Application

- Permanent chlorination to disinfect pool water

Characteristics

- Average amount of chlorine-equivalent of 68 %*
- Minimised production of insolubles (less than 3 % in distilled water)
- Exempt from isocyanuric acid (stabiliser)
- Can be used in hard water (high T.H.)
- Compatible with all filtering equipment
- Minimised storage degassing compared to isocyanurates

How to use

DO NOT MIX WITH ANY OTHER PRODUCT

This product must never be in contact or mixed with any another treatment product in any location (bucket, feeder, skimmer, container, etc.).

Make sure the processing bin and feeder pump do not contain any stabilised chlorine (with trichloroisocyanuric acid or sodium dichloroisocyanurate; to be checked on the packaging labels).

Prepare the chlorine solution in the processing bin of the feeder pump, while respecting the proportion of 2 to 2.5 kg of hth® GRANULAR for 100 litres, and while carefully following the instructions set out below.

Application

- Permanent and shock chlorination to disinfect pool water.

Characteristics

- The most concentrated calcium hypochlorite available on the market.
- Very high average amount of chlorine-equivalent of 78%
- Minimum amount of chlorine-equivalent of 75%
- Minimised production of insolubles (less than 6 % in distilled water)
- Exempt from isocyanuric acid (stabiliser)
- Can be used in hard water (high T.H.)
- Compatible with all filtering equipment
- Minimised storage degassing compared to isocyanurates

How to use

Make sure the processing bin and feeder pump do not contain any stabilised chlorine (with trichloroisocyanuric acid or sodium dichloroisocyanurate; to be checked on the packaging labels).

Prepare the chlorine solution in the processing bin of the feeder pump, while respecting the proportion of 2 to 2.5 kg of hth® SHOCK for 100 litres, and while carefully following the instructions set out below.

Adjust the injection to keep a chlorine level upon analysis in line with the local regulation. In the absence of regulatory obligations, we recommend to maintain an active chlorine content between 1 and 3 mg/l.

The daily product consumption is of 0.5 to 1.0 kg for 100 m³. The consumption increases with the number of bathers and sun exposure. In open-air pools, the addition of a stabiliser

may help reduce the consumption of calcium hypochlorite.

Instructions to prepare chlorine solutions:

1. Always used a clean preparation bin, which must remain exclusively reserved to prepare chlorine solutions.
2. Determine the quantities of water and calcium hypochlorite needed to reach the desired active chlorine concentration level.
3. Pour at least 90% of the quantity of water needed into the preparation bin.
4. While stirring, slowly introduce the required quantity of calcium hypochlorite into the preparation bin.
5. Then, add the rest of the water needed in order to bring the total volume in the preparation bin up to the expected level.
6. Keep stirring for at least 15 minutes, until the product is fully dissolved.

For perfectly balanced water, maintain a total alkalinity titre (T.A.C.) between 60 and 120 mg/l.

Composition

Calcium Hypochlorite (Min. 75%) - 1,000 g/kg

hth® SHOCK® approved by the French Health Ministry under no. 685 on 29 April 2003.

hth® SHOCK® Powder

FAST-DISSOLVING POWDER FOR THE PERMANENT AND SHOCK CHLORINATION OF POOL WATER

Extra strong ■ Average level of available chlorine of 78%

Fast-dissolving

No degassing

Little residues



Reference Kg Packing list Pallet

Shock chlorination format - small public pools

00205120	5	2	48
----------	---	---	----

Regular chlorination format - public pools

00226556	20	1	24
----------	----	---	----

*Tested on samples kept in our Charleston plant.

**Please contact your hth® representative to find out the languages available on the packaging.

10

www.hth-pro.com

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

A feeder generates chlorine; it allows you to adapt the chlorine dosage to your needs. The **hth**[®] **easiflo**[®] feeders are easy to install, use and maintain. The combination of **hth**[®] **easiflo**[®] feeders and tabs enables you to produce a constant chlorinated solution (between 1.2% and 2% at 1 Bar, depending on the model) to maintain chlorine at a precise level in the pool.



HOW DOES A FEEDER WORK?

Chlorine briquettes are contained in a dry hopper inside the feeder system. When the controller indicates that chlorine is required in the pool, the filtered pool water enters the feeder to be sprayed onto the briquettes, thereby producing a chlorine solution that is immediately injected into the pool circulation system using a venturi system.



Watch the demo video for the **easiflo**[®] system.

THE NEXT GENERATION of **hth**[®] feeders

- ✓ French design by **hth**[®]
- ✓ Manufactured by STEIEL **MADE IN ITALY**
- ✓ Improved elimination of insolubles: system for rinsing the walls and base
- ✓ Lid safety: when the lid is open, the spraying of the briquettes stops to prevent the operator from being sprayed
- ✓ Double overflow protection:
 - Electric safety switch: the upper level sensor (indicating that the feeder is full) shuts off the solenoid valve as well as the valve for spraying the briquettes to avoid tank overflow
 - Hydraulic safety switch: placed over the top part of the feeder, in the event of an electrical defect, it can evacuate excess chlorine solution to the drain before it even reaches the briquettes
- ✓ Feeder capacity adapted to the size of the pools to be treated



- 1 Main circulation pump
- 2 Filter
- 3 Heat exchanger
- 4 Controller inlet (between the pump and filter)
- 5 pH injection
- 6 By-pass for **hth**[®] **easiflo**[®] compressor
- 7 Venturi kit / Inlet kit
- 8 **hth**[®] **easiflo**[®] FIRST feeder
- 9 Flocculant injection
- 10 pH dosing pump
- 11 Flocculant dosing pump
- 12 **hth**[®] CYCLEAU[®] Pro control system

hth® easiflo® compared to other treatment systems

PREPARATION with Pump and tank dosing system

Manual mixing

Place at the bottom of the bin (unless a mixer is used)

Additional maintenance cost (dosing pump)

hth® easiflo® feeder

No manual mixing, automatic spraying of the briquettes

Limited deposits due to the curved bottom of the base, which limits clogging

Low maintenance costs due to the materials used



BLEACH CONTAINER with dosing Pump

Low concentration in active chlorine of average 10%

Bulk storage

Difficult to implement (risk of damage to work clothes and mixing of products)

Additional maintenance cost (dosing pump, foot valves and pressurised dosing lines)

Short shelf life of bleach: the product deteriorates quickly, especially in warmer climates

hth® easiflo® feeder

Active chlorine content of 70% at manufacture (calcium hypochlorite)

Reduced storage (concentrated product)

Solid product: no splashing or risk of confusing it with liquid pH minus (7g briquettes)

Low maintenance costs

hth® easiflo® BRIQUETTE can be stored for several years

STABILISED CHLORINE TABLET FEEDER

High cost of water dilution due to over-stabilisation

Strong and unpleasant smell of chlorine in the plant room, especially when filling up the airtight feeder (release and accumulation of gas in the feeder)

Unavoidable corrosion of the facilities in the plant room

Dangerous handling and interventions (equipment under pressure)

hth® easiflo® feeder

No over-stabilisation risk (calcium hypochlorite is a stabiliser-free chlorine)

No release of irritant gas, due to the design of the feeder and the nature of the product used

The use of **hth® easiflo® BRIQUETTE** preserves the life of your plant room (piping, tile grout)

Easy to handle and safe to work on



CHLORINE GAS with venturi

High cost to make the installation safe (safety of the site)

High transport constraints

Very low storage limits (regulation)
Cost to rent the bottle

Dangerous handling (bottle under pressure)

Additional maintenance cost (venturi)

hth® easiflo® feeder

No major costs to meet safety regulations (less strict regulation)

Low transport constraints

High storage limit

Easier handling (chlorine tabs)

Low maintenance costs

Feeder characteristics

hth easiflo® FIRST feeders

easiflo® FIRST 20



easiflo® FIRST 50



easiflo® FIRST 100

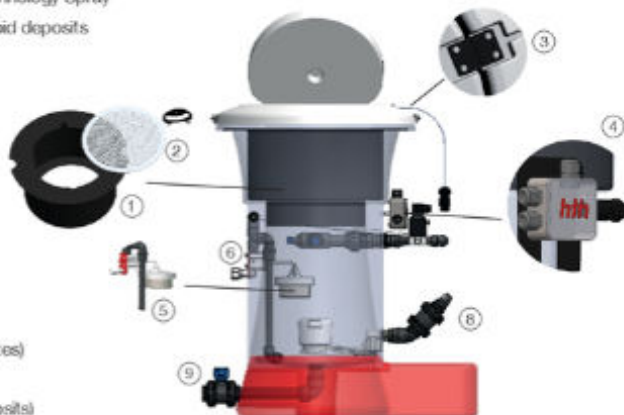


hth® briquette capacity in kg	20	50	100
Number of jets	2	4	6
Wall rinsing system	yes	yes	yes
Base rinsing system	yes	yes	yes
Lid and overflow safety system	yes	yes	yes
Chlorination power (chlorine production) for 1 bar	1.20 %	1.6 %	2 %
Size (mm):			
Length	723	850	968
Width	555	660	860
Height with lid closed	860	982	1107
Height with lid open	1173	1335	1591
Weight (kg):			
Weight empty	15	20.5	41.5
Weight full	50	85	160
Maximum chlorine production (kg/day) / 1 bar	42 kg/day	85 kg/day	203 kg/day

hth® easiflo® feeders break down into 3 parts:

- A reservoir for briquettes
- A ramp of jets (to spray water onto the briquettes): "Technology Spray"
- A chlorine solution reservoir with a rinsing system to avoid deposits

Cross-section of the easiflo® FIRST feeder:



- ① Grid support
- ② Grid
- ③ Lid safety detector
- ④ Feeder connection box
- ⑤ Top float
- ⑥ Feeder input: spray kit (circuit for spraying the briquettes)
- ⑦ Feeder output: Venturi suction kit
- ⑧ Feeder output: flushing kit (to evacuate insoluble deposits)
- ⑨ Feeder output: flushing kit (to evacuate insoluble deposits)

hth® easiflo® 20 FIRST

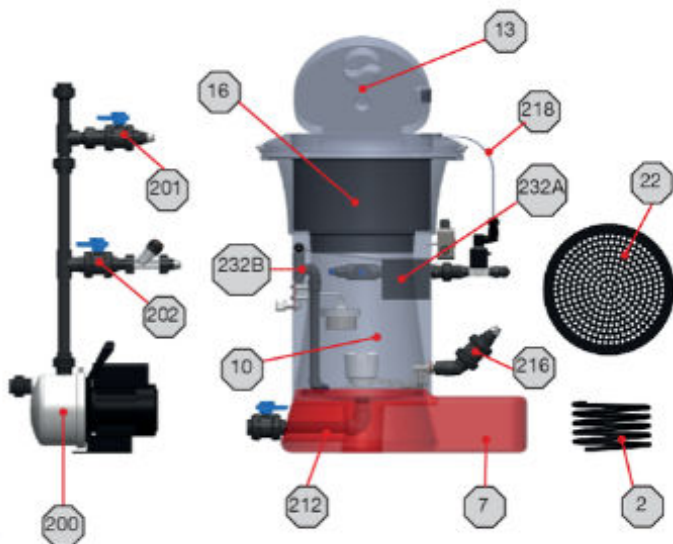


BRIQUETTE capacity = 20 kg

- Length: 723 mm
- Width: 555 mm
- Height with lid closed: 860 mm
- Height with lid open: 1,173 mm
- Weight (empty): 15 kg
- Weight (full): 50 kg
- Chlorination power/1 bar: 1.20 %
- Maximum chlorine production (kg/day) / 1 bar: 42 kg/day

Reference	Name
00220649	hth® easiflo® 20 FIRST
00218145	MXAM compressor

Spare parts



No.	Reference	Designation
1	217916	SPRAY NOZZLE E20/50/100 (x10)
2	206490	1/2" TUBING (x100m)
3	938040	THREADED STRAIGHT CONNECTOR 1/2" D1/2 (x10)
5	216312	PROX DETECTOR
6	216313	ELECTRO MAGNET
16	218060	COMPLETE HOPPER E20
22	218066	GRID E20 (x9)
32	218077	BASE SPRAY NOZZLE E20/50/100 (x10)
94	218145	CIRCULATOR MXAM203
100	218132	1/2" FILTER Y
100	938033	BOTTOM FLOAT GASKET (x10)
110	206442	COMPLETE TOP FLOAT SYSTEM (x10)
110.4	206450	TOP FLOAT MECHANISM (x10)

No.	Reference	Designation
110.6	217927	TOP FLOAT FASTENING BOLT (ø14) (x10)
110.7	205483	THREADED STRAIGHT CONNECTOR 1/4" D1/2" (x10)
111	938034	DRAIN SCREW (x10)
112	206078	BOTTOM FLOAT ALONE NM (x10)
112.3	206079	BOTTOM FLOAT ARM (x10)
113	205540	TOP FLOAT GASKET (x10)
123	205870	SOLENOID VALVE 330 (x10)
201	218149	VENTURI KIT
202	218150	INLET KIT
212	220546	DRAIN KIT E20/FIRST
216	220850	SUCTION KIT E20 50 100/FIRST
218	220548	LID SAFETY KIT E20 50 100/FIRST
232	220545	NOZZLE KIT E20/FIRST

hth[®] easiflo[®] 50 FIRST

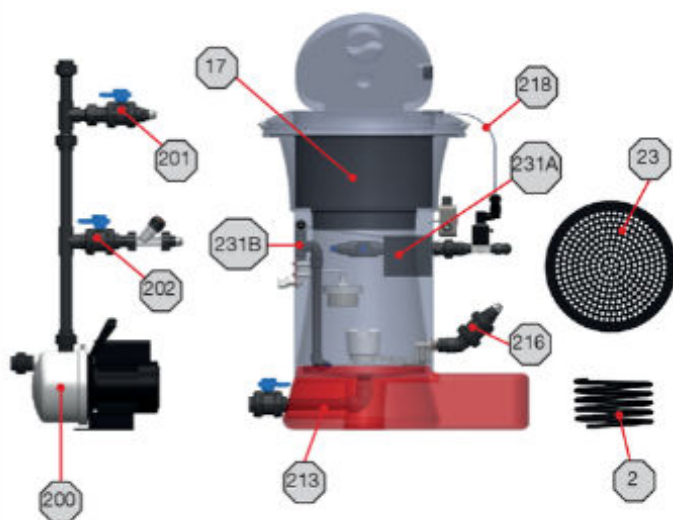


BRIQUETTE capacity = 50 kg

- Length: 850 mm
- Width: 660 mm
- Height with lid closed: 982 mm
- Height with lid open: 1,335 mm
- Weight (empty): 20,5 kg
- Weight (full): 85 kg
- Chlorination power/1 bar: 1.60 %
- Maximum chlorine production (kg/day) / 1 bar: 85 kg/day

Reference	Name
00220554	hth[®] easiflo[®] 50 FIRST
00218145	MXAM compressor

Spare parts



No.	Reference	Designation
1	217916	SPRAY NOZZLE E20/50/100 (x10)
2	205490	1/2" TUBING (x100m)
3	838040	THREADED STRAIGHT CONNECTOR 1/2" D1/2 (x10)
5	215312	PROX DETECTOR
6	215313	ELECTRO MAGNET
17	218061	COMPLETE HOPPER E50
23	218067	GRID E50 (x3)
32	218077	BASE SPRAY NOZZLE E20/50/100 (x10)
94	218145	CIRCULATOR MXAM203
100	219132	1/2" FILTER Y
109	938033	BOTTOM FLOAT GASKET (x10)
110	205442	COMPLETE TOP FLOAT SYSTEM (x10)
110.4	205450	TOP FLOAT MECHANISM (x10)

No.	Reference	Designation
110.6	217927	TOP FLOAT FASTENING BOLT (ø4) (x10)
110.7	205483	THREADED STRAIGHT CONNECTOR 1/4" D1/2 (x10)
111	938034	DRAIN SCREW (x10)
112	205078	BOTTOM FLOAT ALONE NM (x10)
112.3	206079	BOTTOM FLOAT ARM (x10)
113	205540	TOP FLOAT GASKET (x10)
123	205870	SOLENOID VALVE 330 (x10)
201	218149	VENTURI KIT
202	218150	INLET KIT
213	220547	DRAIN KIT E50/FIRST
216	220850	SUCTION KIT E20 50 100/FIRST
218	220548	LID SAFETY KIT E20 50 100/FIRST
231	220544	NOZZLE KIT E50/FIRST

Cleaning Procedure for **hth**[®] easiflo[®] Feeders

The formation of residues and the cleaning frequency both depend on the quantity of briquettes used, together with the pool water chemistry.

This procedure is the simplest solution to remove both residues and lime scale deposits.

We recommend you use the **hth**[®] BANISOL[®] EXTRA cleaning solution along with the **hth**[®] NEUTRALISATOR sodium thiosulfate solution.



Do not use any hydrochloric acid for any of the steps of the cleaning procedure. Chlorine gas may cause serious injuries.



The operator must wear suitable personal protective equipment to conduct this procedure.



No. Operation

- 1 Isolate the feeder system by closing the inlet and outlet valves.
Lift the briquette reservoir (hopper) out of the unit and place the remaining briquettes in a clean and dry container, or in an empty and clean bucket. Make sure you remove all the briquette fragments. If needed, rinse the residues off the grid before continuing.
- 2 Pour 5 litres of water into the cleaning bin and add 150 grams of **hth**[®] NEUTRALISATOR. A clean and dry tub is also suitable.
Remove the grid, spray nozzle kits, sensor deflector and the top float. Place them in the dechlorination solution, and let them soak for 10 minutes. This will dechlorinate the parts before washing. Remove the parts from the cleaning bin and rinse them and the bin with fresh water. Eliminate the solution safely.
- 3 Fill the cleaning bin with 5 litres of water, add the parts to be de-scaled, and slowly pour 1 litre of **hth**[®] BANISOL[®] EXTRA into the bin. Let soak for at least 20 minutes to remove lime scale.
- 4 Add up to 150 ml water into the feeder tank, then add 150 g of **hth**[®] NEUTRALISATOR. Stir gently to obtain a homogeneous mixture. Leave for 10 minutes.
- 5 Purify the solution safely and rinse several times to eliminate all traces of the sodium thiosulfate solution.
- 6 Add up to 150 ml water into the feeder tank, then carefully add 1 litre of **hth**[®] BANISOL[®] EXTRA. Stir gently to help dissolve lime scale. Leave for 20 minutes.
- 7 Check for the presence of lime scale, and repeat step 6 if necessary, after safely emptying out the initial **hth**[®] BANISOL[®] EXTRA solution.
- 8 Rinse the tank several times to eliminate the acid solution.
- 9 Rinse all the components of the feeder in the water to eliminate all traces of the acid cleaning solution.
- 10 Reinstall all the parts in the feeder unit.
- 11 Let the feeder run for 15 minutes without any briquettes.
- 12 Add the briquettes and switch the feeder back on.

Maintenance Plan for **hth**[®] easiflo[®] Feeders



No.	Reference	Designation	Year of installation: N				
			N+1	N+2	N+3	N+4	N+5
1	00217916	SPRAY NOZZLE E20/50/100*		•			
2	00205490	1/2" TUBING (M)		x10		•	
3	00217938	THREADED STRAIGHT CONNECTOR 1/2" D1/2"		x3			
22	00218066	GRID E20			•		
23	00218067	GRID E50			•		
32	00218077	BASE SPRAY NOZZLE E20/50/100		•			
109	00205461	BOTTOM FLOAT GASKET	•	•	•		•
110.4	00205450	TOP FLOAT MECHANISM	•	•	•		•
110.7	00205483	THREADED STRAIGHT CONNECTOR 1/4" D1/2"		•			
112.3	00206079	BOTTOM FLOAT ARM	•	•	•		•
113	00205540	TOP FLOAT GASKET	•	•	•		•
216	00220859	SUCTION KIT E20 50,100 FIRST				•	
231	00220545	NOZZLE KIT E50 FIRST				•	
232	00220545	NOZZLE KIT E20 FIRST				•	

* E20 = x3 / E50 = x5 / E100 = x7 units



INNOVATION
2023

No 1
manufacturer
worldwide of
calcium
hypochlorite
since 1928

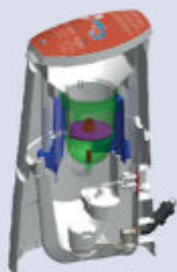
The perfect unit to disinfect small public pools of from 1m³ to 150 m³



- Ideal for hotels, therapy pools and leisure centres
- Easy to install, use and maintain
- No complex feeder pump or injection system is required
- Provides a ready-to-use chlorinated solution on demand
- Can be used with an automatic controller system
- To be used with **hth**[®] easiflo[®] briquettes, recognised for their exclusive anti-scale additive
- Very small footprint

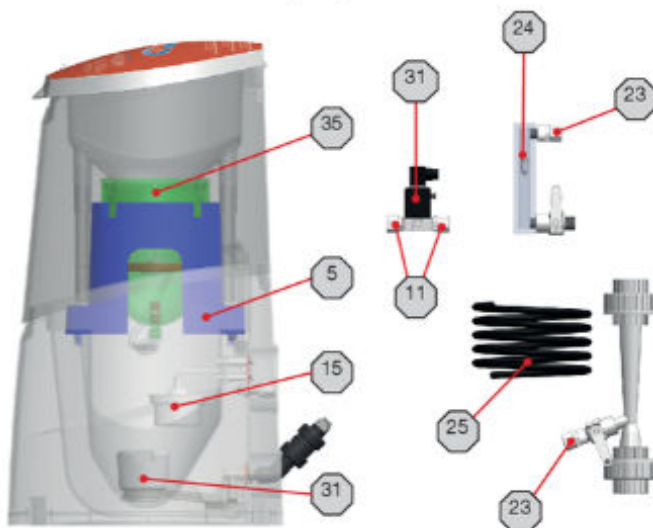


Spare parts



- Length: 500 mm
- Width: 390 mm
- Height with lid closed: 860 mm
- Weight (empty): 9 kg
- Feeder capacity: 13 kg
- Pool size: 1 -150 m³

Reference Name
876438 **hth easiflo FIRST 10**



No.	Reference	Designation
3	251588	GRID EASIFLO 10 FIRST
4	938033	BOTTOM FLOAT GASKET (x10)
5	251586	HCE BRACKET
8	868047	DIFFUSER EASIFLO 10 FIRST
10	205498	THREADED ELBOW CONNECTOR
11	205483	THREADED STRAIGHT CONNECTOR 1/4" D1/2 "(x10)
12	205496	3/8" TUBING (x100m)
13	251587	UNION ELBOW CONNECTOR
15	205442	COMPLETE TOP FLOAT SYSTEM (x10)
20	205450	TOP FLOAT MECHANISM (x10)
22	206079	BOTTOM FLOAT ARM (x10)
23	205466	THREADED STRAIGHT CONNECTOR 1/2" D1/2 (x10)
24	205634	FLOW METER EASIFLO 10 FIRST 0-2gpm
25	205490	1/2" TUBING (x100m)
29	938034	DRAIN SCREW (x10)
31	205968	BOTTOM FLOAT (x10)
33	206079	BOTTOM FLOAT ARM ALONE NM (x10)
34	251592	THREADED STRAIGHT CONNECTOR
35	227111	GRID SUPPORT EASIFLO 10 FIRST
38	251584	SPRAY NOZZLE EASIFLO 10 FIRST
39	205540	TOP FLOAT GASKET (x10)
41	217927	TOP FLOAT FASTENING BOLT (ø4) (x10)
45	205870	SOLENOID VALVE 350 (x10)
57	938040	THREADED STRAIGHT CONNECTOR 1/2" D1/2 (x10)



**INNOVATION
2023**

No 1
manufacturer
worldwide of
calcium
hypochlorite
since 1928

A solution to reduce your energy consumption by up to 75%*!



- Electrical consumption reduced by 50% to 75% for a permanent filtration system.
- Compatible with all generations of **hth**[®] easiflo[®] feeders equipped with a compressor
- Easy to install and use
- Increases the compressor's lifetime.
- Manual feeder control
- Safety report for feeder alarms.
- Very small footprint

* Depending on the pool specifications and its use

hth[®] easiflo[®] Eco



- Length: 160 mm
- Width: 90 mm
- Height: 120 mm
- Power supply: 230 V

Reference	Name
876439	hth[®] easiflo[®] Eco

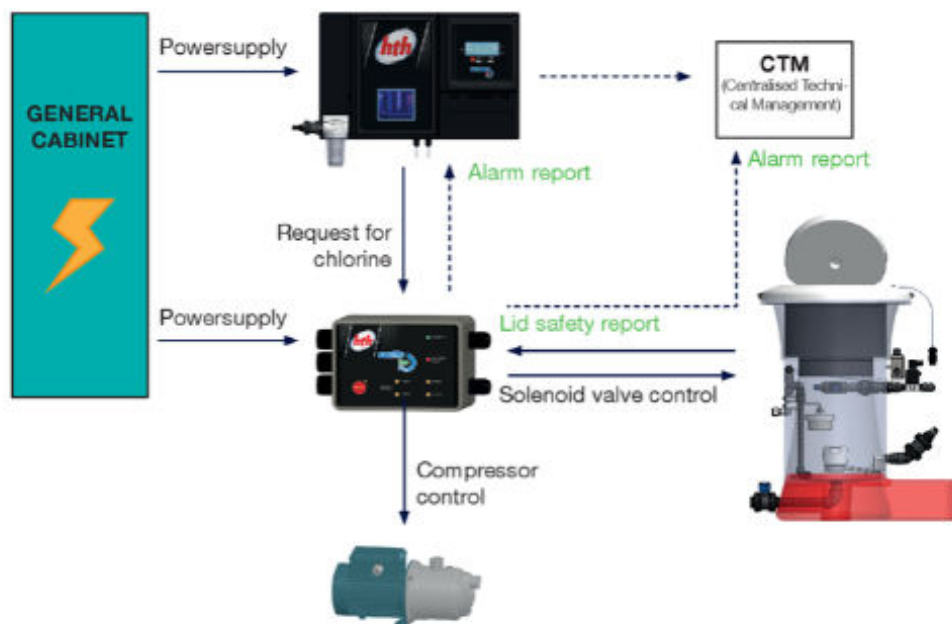
A device to manage the electrical consumption of **hth[®] easiflo[®]** feeders equipped with a compressor.

The first energy-saving module for water treatment is a vital option nowadays.

- ✓ Payback within 6-8 months of continual usey
- ✓ Option available: power surcharge protection
- ✓ Compatible with most automated systems (CTM type)



Operating diagram



WHY A CONTROL SYSTEM?

For optimal swimming pool operation to ensure optimal comfort for bathers, it is essential to regularly check the water balance and continually monitor the correct levels of chlorine and pH

- The pH defines the acid or alkaline nature of the water. It runs on a scale from 0 to 14, with pure water equal to 7. The recommended pH value for swimming pool water is between 7.0 and 7.4*.
- The water must be treated to remain permanently disinfected and oxidising, therefore there is a need to maintain a residual level of product. Regularly continual automatic checks of the free chlorine levels and pH in commercial pools is highly recommended to ensure safe water to swim in.

In France, the following is recommended:

- Maintain an active chlorine content (non-stabilised chlorine, stabiliser-free water) between 0.4 and 1.4 mg/l*
- Maintain an available chlorine content (stabilised chlorine, water with stabiliser) between 2 mg/l and 5 mg/l
- Have a combined chlorine content below 0.6 mg/l

Adopting an amperometric control system ensures the automatic and effective control of your pool water. The control system analyses and automatically adjusts the chlorine and pH levels of the pool in order to guarantee safety and comfort for the bathers.



*Please observe your local recommendations if they outside of this band.

*Outside of these guidelines, please refer to your own local recommendations or mandatory levels

Principle of the **hth**® CYCL'EAU® Control System Range

hth® CYCL'EAU® Pro

COMMUNICATING



MEASURES STABILISED AND NON-STABILISED CHLORINE

- Footprint: 770 x 590 x 180 mm
- Display: 124x45 blue backlit LCD screen
- Weight: 10 Kg
- IP: 65
- Surge protection: 315mA time-delay fuse 5x20 Glass
- Power supply: 230 V
- Power: 10 W Max
- Output:
 - 2 control outputs (pH and Chlorine) with electromagnetic relay; max load 3A resistive at 230 V
 - 1 Alarm output, programmable NC/NO, standard contact output; max load 3A resistive at 230 V
- Measurement range:
 - Chlorine: 0 to 10 ppm \pm 0.05%
 - pH: 0 to 14 \pm 0.02%
 - T°C: 0 to 100°C \pm 0.3%
- Safety:
 - User menu
 - Technician menu (password protected)



hth® CYCL'EAU® First, the simplified version

Reference	Name
00229503	hth ® CYCL'EAU® Pro
00218181	hth ® CYCL'EAU® FIRST
00218215	Annual maintenance kit

* For more information, please contact your sales representative.

The water from the pool passes through the filter and enters the sample chamber in which the flow detector, pH probe, chlorine sensor and temperature probe are found. The pH probe, the chlorine sensor and the temperature probe transmit a value that displays on the main screen.

It uses an amperometric membrane sensor to analyse the chlorine content in the water, with or without stabiliser.

hth® CYCL'EAU® control systems were designed to schedule proportional injections to reach the desired levels of chlorine and pH more easily. The proportionality is programmed with the controller is installed. However, it is preferable to programme it differently if it needs to work with an extremely large pool such as an Olympic sized pool or in contrast, with a spa.

The 3 functions of **hth**® CYCL'EAU® Pro:

✓ Control

Through its membrane sensor, **hth**® CYCL'EAU® Pro analyses and controls the chlorine and pH levels of the pool water.

Note: The same operation can be achieved with both stabilised and unstabilised disinfectants

hth® CYCL'EAU® Pro authorises proportional control. This process enables better smoothing of the control around chlorine and pH thresholds.

✓ Analyse

The water from the pool passes through the filter (1) and enters the sample chamber (2) in which the flow detector, pH probe, chlorine sensor and temperature probe are found. The pH probe, the chlorine sensor and the temperature probe transmit a value that displays on the main screen (3).

✓ Inform

In order to quickly inform the user on the injection sequences and alarms during control, 3 indicator lights (6) are located on the right-hand side of the box and the transparent part of the sample chamber sends light signals. In order to configure and visualise the settings, an intuitive 7-key pad (7) is located on the right-hand side of the box.

If an alert occurs, an indicator light flashes on the control panel and the sample chamber lights up/flashes red, depending on the case.



The advantages of **hth**® CYCL'EAU® Pro control systems:

✓ Economical:

Reduced user costs and lowers maintenance for the sensor. Furthermore, a proportional type control system avoids overdosing chemical products.

✓ Intuitive:

Direct reading of the parameters in the correct unit (temperature, pH, chlorine) and simplified user menu by eliminating the parameters that are only for technicians. Calibration feature accessible directly through the calibration button.

✓ Precise and reliable:

Due to its manufacturing procedure, the amperometric membrane sensor is not sensitive to water conductivity, which increases the reliability of the chlorine reading. A proportional type control system can stabilise the chemical values (chlorine and pH) as close as possible to the desired thresholds.

✓ Versatile:

Suitable for stabilised and stabiliser-free water. The results can be copied to other formats as an option (display, computer).

Benefits from a wide range of parameters to analyse chlorine (free, active or total), pH and water temperature in pools.

Spare parts



208

10

20

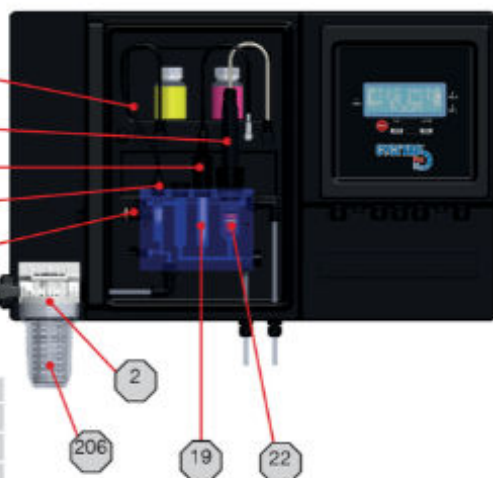
120

126

118

205

204



23

Typical Installation



Typical installation diagram for an **hth** CYCL'EAU[®] Pro control system with **hth** easiFlo[®] feeder

No.	Reference	Designation
2	248191	FILTER SUPPORT CYCL'EAU PRO
3	248192	CABINET POWER BOARD CYCL'EAU (mA)
3	817297	CABINET POWER BOARD CYCL'EAU (mV)
4	248193	CONTROL BOARD CYCL'EAU PRO / CYCL'EAU FIRST
10	248194	BNC PH CABLE CYCL'EAU PRO (x10)
19	218204	PH SENSOR (x10)
20	229502	BARE FREE CHLORINE SENSOR (mV)
20	218207	BARE FREE CHLORINE SENSOR (mV)
22	218217	FREE / TOTAL CHLORINE MEMBRANE (x10)
23	218218	FREE / TOTAL CHLORINE GEL (x10)
31	218210	BARE TOTAL CHLORINE SENSOR (mV)
51	218226	HTH CYCLEAU LINK
111	248198	BARE CYCL'EAU SENSOR UNIT
112	248199	CYCL'EAU FLOW ADJUSTMENT SCREW
115	248200	CYCL'EAU SAMPLE VALVE
116	248201	CYCL'EAU SAMPLE VALVE ADJUSTMENT SCREW
118	248202	CYCL'EAU INDUCTIVE FLOW SENSOR
119	248203	EQUAL 90° CONNECTOR Ø8 (x10)
120	248204	pH SENSOR SUPPORT
121	248205	3/8" Ø8 CONNECTING SLEEVE (x10)
122	248206	M8 CAP
123	248207	3/4" CAP
124/125	248208	CYCL'EAU CHLORINE SENSOR INF/SUP CONNECTOR
126	248210	CYCL'EAU TEMPERATURE SENSOR
127	218249	FLOAT 316TI
200	248211	5" CYCL'EAU PRO FILTER SUPPORT
204	248212	QUICK CONNECTOR 1/2" Ø10 (x10)
205	248213	Ø10-Ø8 REDUCER (x10)
206	248214	5" CYCL'EAU PRO FILTER CARTRIDGE (x10)
207	248215	FILTER DOOR SEAL (by 5)
208	218211	5x8 TUBING (x100m)

Photometer

hth® 6 IN 1 LUMISO 6 - PHOTOMETER



**100% WATERPROOF
6 TESTS**

**A SINGLE DEVICE TO ANALYSE
CHLORINE, BROMINE, pH, STABILISER,
HARDNESS AND ALKALINITY**

Delivered with:

- Six 10 ml test tubes
- 1 bottle brush
- 1 cleaning cloth
- Wipes
- One 10 ml syringe
- One 100 ml vial
- 1 stirrer
- 1 Cl and pH test tube
- 1 box with 50xDPD1 tabs and 50xDPD3 tabs
- 1 box with 50xpH tabs and 50xStabilisertabs
- 1 box with 40 alkalinity tabs,
30 Calcicool 1 tabs and 30 Calcicool 2 tabs

Reference	Name
00204784	hth® POOLTEST 6

- 6 factors: Chlorine; pH; bromine; cyanuric acid (stabiliser); alkalinity (T.A.C.); T.H. (calcium hardness)
- Easy to use
- Universal symbol
- Convenient zeroing
- Sturdy and waterproof, IP67
- Integrated cap
- Operates with two 1.5 V alkaline batteries
- Long autonomy: 20,000 tests can be conducted before needing to replace the batteries!



More user friendly:

- Large viewing screen (128 x 64 pixel LCD screen) making it easier to read
- New sturdier carry case
- More compact kit
- Bigger cell for greater sensitivity
- New tablet blister packs

It is recommended to calibrate the device once a year.

Note:

- Remember to set the "zero" (reference measurement)
- Do not handle the testing tablets
- Clean the analysis chamber now and again

Reference	Name	Packing list
00204784	Pooltest 6 CL/Briph/Stab/TAC/TH photometer (delivered with calibration test tube)	1
00215031	hth® DPD No.1 "BLACK" available chlorine - box of 100	1
00215035	hth® DPD No.3 "BLACK" total chlorine (after using DPD1) - box of 100	1
00215032	hth® DPD No.4 "BLACK" total chlorine - box of 100	1
00215040	hth® pH "Special photometer" - box of 100	1
00215051	hth® Stabiliser - box of 100	1
00215094	hth® Alkalinity TAC - box of 100	1
00215095	hth® Calcicool 1 x 2 - box of 100	1

Reference	Name	Packing list
00218340	hth® Pooltest 6 photometer glass test tubes	5



*Colour of the "DPD" letters on the packaging. Does not correspond to the colour of the tabs.



Feeder Pumps

hth® PERISTALTIC PUMP



**PERISTALTIC PUMP
EASY TO INSTALL AND USE.
PRECISE INJECTION IN MICRO-DOSING.**

Reference	Name
00218272	1.5 L/h peristaltic pump

- Ideal to inject:
 - Chlorine
 - pH
 - Flocculant
- Injection mode:
 - Continuous
- Flow rate: 1.5 L/h
- Unit capacity: 2.7 cc/tum
- Quiet
- Self priming

The tubing used for this model is 4 x 6 mm
 - Semi-rigid (100590) injection
 - Flexible (100595) suction

Technical information

hth® DLX-MA PUMP



**EASY TO INSTALL AND USE.
PRECISE INJECTION.**

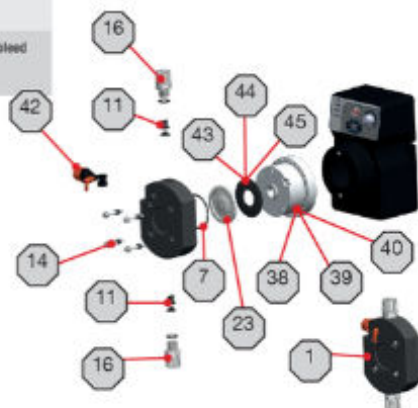
- Electromagnetic feeder pumps with pump body entirely in plastic and a feeder body in PVC, and not in Teflon.
- The tubing used for these 4 models is 4x6 mm.

Reference	Name
00218263	2 L/h PUMP - 220 V
00218265	5 L/h PUMP - 220 V
00218267	8 L/h PUMP - 220 V
00218269	20 L/h PUMP - 220 V (without bleed system)



Spare parts

DLX-MA 2-5-8 L/H FEEDER PUMP



No.	Reference	Designation
1	217843	COMPLETE FEEDER BODY 2/15 L (with bleed sys.)
7	217846	2/15L FEEDER FPM SEAL
9	217848	20L FEEDER FPM SEAL
11	217851	1/20L FPM LIP VALVE - SPRING VALVE SEAL (x10)
14	217853	FEEDER FASTENING BOLT - WASHER
16	217855	COMPLETE FEEDER CONNECTOR 2/20L PVDF (x10)
23	217863	2/5/8L PTFE DIAPHRAGM (x10)
25	217865	20L PTFE DIAPHRAGM (x10)
27	217867	DLX-MA/AD 230V 4LED ELECTRONIC CIRCUIT
29	217869	1/20L COMPLETE INLET FILTER (x10)
31	217871	4/6 PE SEMI RIGID TUBING (x100m)
32	217872	4/6 PE FLEXIBLE TUBING (x100m)
33	217876	1/20L AM INJECTION LANCE (x10)

No.	Reference	Designation
34	217877	1/20L NM PVC INJECTION LANCE (x10)
35	217878	4/6mm ADJUSTABLE INJECTION LANCE
38	217881	DLX/MA 2L/h ELECTRO MAGNET
39	217882	DLX/MA 5L/h ELECTRO MAGNET
40	217883	DLX/MA 8L/h ELECTRO MAGNET
41	217884	DLX/MA 20L/h ELECTRO MAGNET
42	217885	2/15L COMPLETE BLEEDING KIT (x5)
43	219089	DLX - DLXB 2L/h MEMBRANE SHIELD (x5)
44	219090	DLX - DLXB 5L/h MEMBRANE SHIELD (x5)
45	219091	MEMBRANE SHIELD DLX - DLXB 8L/h (x5)
46	219092	DLX - DLXB 20L/h MEMBRANE SHIELD (x5)
3	219096	COMPLETE PVC FEEDER BODY 20L



STABILISED CHLORINE

hth® Blue Range

This family includes the syndosone products (trichloroisocyanuric acid) and sodium or potassium dichloroisocyanurate. More economical in the short term for outdoor pools, they reduce your product consumption by protecting it from the destructive action of UV rays from the sun. However, they may lead to over-stabilisation issues, which reduce the disinfection action of chlorine, thus requiring frequent and significant water top ups. It is then recommended to use stabiliser-free chlorine as this makes it possible to control the amount of stabiliser added into the water.

As for calcium hypochlorite products, stabilised chlorine products are approved under their commercial names. Thus, the trichloroisocyanuric acid and sodium dichloroisocyanurate compounds formulated by Innovative Water Care are registered and sold under the **hth**® brand:

Slow-dissolving chlorine (trichloroisocyanuric acid):

- **hth**® MAXITAB® REGULAR
- **hth**® MAXITAB® ACTION 5®

Fast-dissolving chlorine:

- **hth**® GRANUFAST®



hth® MAXITAB® REGULAR - Chlorine tablet

PERMANENT CHLORINATION FOR POOLS AND FOOT BATHS

Effective ■ Destroys bacteria, viruses,
fungi and algae ■ Non-combustible



Reference	Kg	Packing list	Pallet
hth® MAXITAB® 200g REGULAR			
00218493	10	2	36
00218494	25	1	12
hth® MAXITAB® REGULAR special Foot bath chlorine			
00218544	-	1	-

Application

• Permanent chlorination to destroy bacteria, viruses, fungi and algae in swimming pool and foot bath water.

Characteristics

- Formulation classified as non-combustible (transport and storage); CHLWORTH test according to UN 0.1 method
- 200 g, 250 g, or 500 g slow-dissolving tablets, without residue.
- Average level of available chlorine close to 90 %.
- High stabilisation against the destructive action of ultra-violet rays contained in sunlight.
- Compatible with all filtering equipment.
- Suitable for all types of water, even very hard water.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.
- Trichloroisocyanuric acid (the active ingredient in the marketed product) is approved to disinfect public pools by the French Health Ministry; refer to Article 5 of the Order dated 7 April 1981 (Official Journal issued on 10 April 1981), as amended by Article 2 of the Order dated 28 September 1989 (Official Journal issued on 21 October 1989).
- The use of **hth® MAXITAB® REGULAR** in public pools is authorised by the French Health Ministry; approval no. 1281 dated 27 September 2002.

Instructions

Place the tablets in the chlorine feeder station (DCS-ACHLOR). The daily consumption is of around 0.4 kg per volume of 100 m³ water, increasing with the usage, sunshine and agitation (slide, counter-current, etc.). Keep the available chlorine content at least at 2 mg/l and a stabiliser content below 75 mg/l, ideally between 25 and 50 mg/l. Regularly check the pH in order to keep it between 7.0 and 7.4.

Composition

Contains Symclosene (> 980 g/kg).

Safety



Xn - Toxic

N - Harmful
for the environment

Caution! This product poses risks for health and the environment; refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.

hth® MAXITAB® ACTION 5® - Multi-Purpose Tablet

MULTI-PURPOSE TABLET

- 1 - Permanent disinfection
- 2 - Combats algae
- 3 - Clarifies the water
- 4 - Improves filtration
- 5 - Stabilises the chlorine

■ Non-combustible



Reference	Kg	Packing list	Pallet
00251339	10	2	36

Application

The actions of the multi-purpose tablet:

- Disinfects and destroys bacteria, viruses and fungi.
- Combats algae.
- Clarifies pool water.
- Improves filtration (floculant).
- Stabilises the chlorine.

Characteristics

- Formulation classified as non-combustible (transport and storage); CHLWORTH test according to UN 0.1 method.
- 200-gram slow-dissolving tablet, without residue.
- Average level of available chlorine close to 86 %.
- High stabilisation against the destructive action of ultra-violet rays contained in sunlight.
- Suitable for all types of water, even very hard water.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.
- Trichloroisocyanuric acid (the active ingredient in the marketed product) is approved to disinfect public pools by the French Health Ministry; refer to Article 5 of the Order dated 7 April 1981 (Official Journal issued on 10 April 1981), as amended by Article 2 of the Order dated 28 September 1989 (Official Journal issued on 21 October 1989).
- The use of **hth® MAXITAB® ACTION 5®** in public pools is authorised by the French Health Ministry; approval no. 1281 dated 27 September 2002.

Instructions

hth® MAXITAB® ACTION 5® is designed to be used as a maintenance treatment. Place 4 **hth® MAXITAB® ACTION 5®** tablets per volume of 100 m³ water in the skimmer or chlorine feeder every 7 to 10 days, provided the latter does not contain any stabilised chlorine. Adjust the tablet top ups over time to maintain a permanent level of available chlorine (DPD no.1 tabs) of at least 2 mg/l.

Due to its composition, **hth® MAXITAB® ACTION 5®**

provides the following simultaneous actions during the whole time it takes for it to dissolve:

- Maintain the required chlorine concentration to ensure the permanent disinfection of the pool water.
 - Prevent and destroy any unwanted development of algae on the pool liner.
 - Flocculate the pool water in order to render it crystal clear again.
 - Clarify the pool water.
- Regularly check the pH in order to keep it between 7.0 and 7.4. Check that the stabiliser content is below 75 mg/l.

Note: The non-classification of this product as a combustible preparation relies on the regulatory tests conducted by INERIS.

• Warning: do not mix products together in their solid form, nor dissolve them together in a same container.

Composition

contains Symclosene (> 940 g/kg), and copper sulphate (10 g/kg).

Safety



Xn - Toxic

N - Harmful
for the environment

Caution: This product poses risks for health and the environment; refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.

GRANULES FOR CONTINUAL AND SHOCK CHLORINATION OF POOL WATER

- Fast-dissolving
- Non-combustible



Reference	Kg	Packing list	Pallet
00218522	25	1	12

Application

- Permanent chlorination to destroy bacteria, viruses, fungi and algae in swimming pool water.

Characteristics

- Fast-dissolving granules with no residue.
- Average level of available chlorine close to 56 %.
- High stabilisation against the destructive action of the ultra-violet rays contained in sunlight.
- Compatible with all filtering equipment.
- Suitable for all types of water, even very hard water.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.
- Sodium dichloroisocyanurate dihydrate (the active ingredient in the marketed product) is approved to disinfect public pools by the French Health Ministry; refer to Article 5 of the Order dated 7 April 1981 (Official Journal issued on 10 April 1981), as amended by Article 2 of the Order dated 28 September 1989 (Official Journal issued on 21 October 1989).
- The use of **hth® GRANUFAST®** in public pools is authorised by the French Health Ministry; approval no. 1281 dated 27 September 2002.

Instructions

Dissolve 3kg of **hth® GRANUFAST®** for 100 litres water in the preparation bin of the feeder pump. The daily consumption is of around 0.4 kg per 100 m³ water, increasing with the usage, sunshine and agitation (slide, counter-current, etc.) Keep an available chlorine content of at least at 2 mg/l and a stabiliser content below 75 mg/l, ideally between 25 and 50 mg/l. Maintain a pH between 7.0 and 7.4.

- **Warning: do not mix products together in their solid form, nor dissolve them together in a same container.**

Composition

Sodium dichloroisocyanurate dihydrate (1,000 g/kg).

Safety

Xn - Toxic

N - Harmful
for the environment

Caution! This product poses risks for health and the environment; refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.





WATER BALANCE

hth® Green range: the Key to Balanced Water

Water balance in pools mainly depends on the 3 factors below:

WATER ACIDITY

pH (or potential Hydrogen) characterises the H^+ ion content of water and determines its acid or alkaline nature; aggressive water ($0 < pH < 7$) corrodes pipes and metal parts, as well as attacks tile grout in swimming pools. Scaling water ($7 > pH > 14$) deposits calcium carbonate in the filter sand and hampers its operation. Deposits inside pipes reduce the water flow and valves become difficult to use. By depositing onto pool walls, calcium carbonate enables micro-organisms to become embedded by adhering more easily to this porous substance. As part of disinfection with a chlorinated product, regulations impose to maintain the pH between 6.9 and 7.7, bearing in mind the pH of pure water at 20°C is of 7.0. In swimming pools, the pH must therefore be permanently adjusted using chemical treatments to correct it:

- **hth® pH PLUS**, either in powder or liquid form, increases the water pH.
- **hth® pH MINUS**, either in micro-balls or liquid form, decreases the water pH.



WATER HARDNESS

The **T.H.** or Total Hardness determines the hardness of the water. This varies according to the concentration in the water of calcium (Ca^{2+}) and magnesium (Mg^{2+}) ions, and is measured in French degrees (°f). Soft water has a T.H. between 0 and 10°f, whereas hard water has a T.H. > 25°f, the "ideal" value being between 15 and 25°f. When water reaches a T.H. of 25°f, it becomes scaling, and it is then advised to use a product to prevent dissolved minerals from becoming encrusted, especially lime scale and metallic deposits.

WATER ALKALINITY

The **T.A.C.** or Total Alkalinity Titre determines water alkalinity.

This varies according to the concentration in carbonate (CO_3^{2-}) and bicarbonate (HCO_3^-) ions and is measured in French degrees (°f). The "ideal" T.A.C. value must be between 8 and 14°f to ensure a sufficient "buffer" effect of the pool water to stabilise the pH. **hth® ALKANAL** increases the T.A.C. of the water.

To find out the values required for water balance, we use the so-called Taylor table which defines the "ideal" combination between pH, T.A.C. and T.H.

*for information 1°f = 10 mg/l or ppm



hth® pH MINUS Micro-balls

LOWERS THE pH OF POOL WATER

- Fast-dissolving
- No residue
- Non-foaming



Reference	Kg	Packing list	Pallet
00219044	5	4	84
00219051	25	1	12

Application

Lowers the pH and alkalinity of pool water.

Characteristics

- Fast-dissolving powder with no residue.
- High level of active ingredients.
- Little corrosive compared to hydrochloric acid as does not generate any chloride ions.
- Compatible with all filtering equipment.
- When dissolved, compatible with disinfectants and auxiliary treatments used in pools.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.

Instructions

In pools, the "ideal" balanced pH depends on the alkalinity (T.A.C.) and hardness (T.H.) values. It generally sits between 7.0 and 7.4, which is the recommended range. The ideal situation is reached when the actual pool water pH is close to this theoretical pH. If the latter is too high, it needs to be brought down.

Dissolve 20kg of **hth® pH MINUS Micro-Balls** for 100 litres of water in the preparation bin of the feeder pump.

Note: the maximum solubility of the product is approximately 250 g/l at 25°C.

Composition

Sodium hydrogen sulphate

Safety



XI - Irritant

Caution: This product poses risks for health; refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.

hth® pH PLUS Powder

INCREASES THE PH AND ALKALINITY OF POOL WATER

- Fast-dissolving
- No residue



Reference	Kg	Packing list	Pallet
00219059	5	4	84

Application

Increases the pH.

Characteristics

- Fast-dissolving powder.
- High level of active ingredients.
- Compatible with all filtering equipment.
- When dissolved, compatible with disinfectants and auxiliary treatments used in pools.
- Very low insoluble content.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.

Instructions

In pools, the "ideal" balanced pH depends on the alkalinity (T.A.C.) and hardness (T.H.) values. It generally sits between 7.0 and 7.4, which is the recommended range. The ideal situation is reached when the actual pool water pH is close to this theoretical pH. If the latter is too low, it needs to be brought up.

Dissolve 10kg of **hth® pH PLUS Powder** for 100 litres of water in the preparation bin of the feeder pump.

Note: **hth® pH PLUS Powder** does not dissolve easily in cold water. Use warm water between 30 and 40°C. The maximum solubility is at 35°C with a value close to 250 g/l.

Composition

Sodium carbonate

Safety



XI - Irritant

Caution: This product poses risks for health; refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.

hth® ALKANAL Powder

INCREASES WATER ALKALINITY

- Fast-dissolving
- No residue
- High level of active ingredients



Reference	Kg	Packing list	Pallet
00219064	5	1	34

Application

Increases the alkalinity (T.A.C.) of pool water.

Characteristics

- Fast-dissolving powder with no residue.
- High level of active ingredients.
- Compatible with all filtering equipment.
- When dissolved, compatible with disinfectants and auxiliary treatments used in pools.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.

Instructions

In pools, the "ideal" balanced pH depends on the alkalinity (T.A.C.) and hardness (TH) values. It generally sits between 7.0 and 7.4, which is the recommended range. If the water T.A.C. is too low, i.e. below 80 mg/l, the products used to treat the water are likely to cause significant variations in the pool pH. The pH is stabilised by buffering the pool water by adding **hth® ALKANAL**. In cases where the T.A.C. needs to be reduced (scaling water), use **hth® pH MINUS Micro-Balls** or **hth® pH MINUS Liquid**.

hth® ALKANAL is directly added into the buffer tank

(preferably after diluting it in hot water). To increase the water T.A.C. By 10 mg/l, use approx. 170 g of **hth® ALKANAL** per volume of 10 m³ water.

Note: the maximum solubility of the product is around 100 g/l at 25°C and 150 g/l at 50°C. It should therefore be dissolved in hot water, whenever possible. During its dissolution, **hth® ALKANAL** causes the solution to cool down.

Composition

Sodium hydrogen carbonate

Safety

Caution: Refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the safety indications on the packaging.

hth® STABILIZER Granules - Special for "outdoor pools"

PROTECTS CHLORINE FROM THE DESTRUCTIVE EFFECTS OF UV RAYS

- Slow-dissolving
- No residue
- High level of active ingredients



Reference	Kg	Packing list	Pallet
00219314	3	6	108

Application

Stabilises chlorine against the destructive action of ultra-violet rays contained in sunlight:

- When filling pools up, especially outdoor ones.
- As a complement, in the context of an inorganic chloride treatment: chlorine gas, bleach or calcium hypochlorite.

Characteristics

- Slow-dissolving granules.
- Average level of active substance close to 99%.
- Savings of 40 to 60% in the event of a treatment with non-stabilised chlorine (chlorine gas, bleach or calcium hypochlorite).
- Compatible with all filtering equipment.
- Suitable for all types of water, even very hard water.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.
- Isocyanuric acid (the active ingredient in the marketed product) is approved to treat public pools by the French Health Ministry; refer to Article 5 of the Order dated 7 April 1981 (Official Journal issued on 10 April 1981), as amended by Article 2 of the Order dated 28 September 1989 (Official Journal issued on 21 October 1989).
- The use of **hth® STABILIZER Granules** in public pools

is authorised by the French Health Ministry; approval no. 551 dated 22 April 2002.

Instructions

FILLING UP THE POOL: To obtain 10 mg/l of stabiliser: 100 g of **hth® STABILIZER Granules** per volume of 10 m³ placed in the buffer tank.

MAINTENANCE TREATMENT: Adjust the dose of **hth® STABILIZER Granules** to the use and according to the filter washes and partial water changes, so as to maintain an isocyanuric acid concentration below 75 mg/l at all times, the "ideal" level being between 25 and 50 mg/l. The isocyanuric acid content can be determined with a photometer.

Caution! If the isocyanuric acid level is too high, this leads to water turbidity and inhibits the action of chlorine; the water may then become cloudy or green.

Note 1: in the event of regular treatment with stabilised chlorine, there is no need to use **hth® STABILIZER Granules**, and this is even not recommended.

Note 2: the maximum solubility of the product is approximately 3 g/l at 25°C and 26 g/l at 90°C, and it also increased with the pH.

Composition

Cyanuric acid

Safety



XI - Irritant

Caution! This product poses risks for health; refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.

hth® NEUTRALISATOR Powder

NEUTRALISES EXCESS CHLORINE OR BROMINE IN POOL WATER

- Effective and fast action
- High level of active ingredients



Reference	Kg	Packing list	Pallet
00251382	2.5	4	84

Application

Neutralises excess chlorine or bromine in pool water.

Characteristics

- Fast-dissolving crystals with no residue.
- High level of active ingredients.
- Compatible with all filtering equipment.
- When dissolved, compatible with disinfectants and auxiliary treatments used in pools.
- High speed action.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.

Instructions

In public pools, the disinfectant content imposed by the legislation varies according to the product used:

- **Non-stabilised chlorines:** between 0.4 and 1.4 mg/l of active free chlorine.
- **Stabilised chlorines:** at least 2 mg/l of available chlorine.

PROCEDURE: Analyse the chlorine content with the analysis systems intended for that purpose. Based on the results obtained and knowing the volume of the pool concerned, it is possible to neutralise the chlorine contained in the water.

CHLORINE TREATMENT: Use 7 grams of **hth® NEUTRALISATOR powder** per mg/l of chlorine to be neutralised and per m³ water. Apply the following calculation: (Level of chlorine to be neutralised in mg/l) x (Pool volume in m³) x 7 = Quantity of **hth® NEUTRALISATOR powder** in grams.

In all cases, the product must be directly poured into the pool, with the filter running, and always in the absence of any bathers. However, **hth® NEUTRALISATOR powder** should preferably be implemented by first dissolving the crystals in a bucket full of warm water

and pouring the solution obtained directly into the pool, with the filtration running, and always in the absence of any bathers.

This product must never be poured into an area containing concentrated chlorine (such as skimmer, chlorine feeder, preparation bin, etc.).

Note 1: if the pool is to be emptied, the neutralisation must be total instead of partial.

Note 2: **hth® NEUTRALISATOR powder** must never be used to neutralise solid chlorine or in a concentrated solution, as this may lead to explosion risks.

TIP: In order to be able to intervene should the chlorine products start to decompose, it is advised to keep available between 50 and 100 litres of a solution containing 50 % **hth® NEUTRALISATOR powder**.

Composition

Sodium thiosulfate

Safety

Caution: This product poses risks for health; refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.





PREVENTION / SOLUTIONS

Purple Range **hth**[®]: to Prevent and Solve issues

Even if the pool water is disinfected and disinfected, and even if it is balanced, it is also altered by external factors (air quality, how many people bathe in it, etc.). These are factors that disrupt the water clarity, which may cloud and turn green. **hth**[®] offers a full range of products to solve water treatment issues, as well as to prevent their recurrence.

FLOCCULATION



Swimming pool regulations focus on the clarity of the water, which must make it possible to "perfectly see the bottom of each pool, the swimming lines and a 30 by 30 dark marker located at the deepest point of the pool". However, it is common for fine particles suspended in the water make the water cloudy. These particles are so fine that they cannot be retained in the sand filter. They most often carry negative electrical charges, and therefore repel each other, preventing their removal. Only a coagulant/flocculant can bind these particles which will then be retained by the filter.

WASH AND DE-SCALE FILTERS



Pool regulations impose that each filter must include a clogging control system. In the case of non-automatic de-clogging, an alarm must alert the maintenance staff that the load loss limit has been reached.

The flow rate of the clogged filter must be at least equal to 70% that of a clean filter.

After each filter wash or de-clogging, the filtered water is either recycled directly over the filter or discarded for a few minutes.

Filters are equipped with a system making it possible to drain them completely. During these flushes is when filters should be cleaned and de-scaled using a product with a very high content of active ingredients such as **hth**[®] FILTERWASH.

COMBAT ALGAE

In theory, algae should not develop in a properly chlorinated pool with a well-distributed water circulation system. However, in practice, the development of these single- or multi-cell plants is often observed both in outdoor and indoor pools.

Algae is unsightly in swimming pools, yet it is harmless for the bathers. However, if they are not quickly treated, they can form a focal point that encourages the growth of bacteria and fungi in the water.

It is indeed difficult to maintain a constant chlorine level that is uniform across the pool. Some algae found in pools, such as chlorella, are very resistant, even to chlorine (up to 5 mg/l).

The use of an algacide, such as **hth**[®] KLERAL[®], in synergy with chlorine prevent the development of algae at a low concentration of 1 to 2 mg/l of product. Beyond, the action of **hth**[®] KLERAL[®] can also be used to destroy algae already present.



hth® KLERAL® Anti-algae

DESTROYS ALGAE AND PREVENTS ITS REAPPEARANCE

- Non-foaming
- Clarifies the water
- Perfect for treating agitated pool water
- Copper sulphate-free
- Does not alter the pH of the water
- Phosphate-free

NON-FOAMING



Controlled container
= More accurate dosing

Reference	L	Packing list	Pallet
00219972	20	1	28

Application

Non-foaming, **hth® KLERAL®** is especially recommended to treat even agitated pool water: slides, counter-current swimming, jets, etc.

- Protects pools against the proliferation of algae.
- Curative effect to correct greening water.

Characteristics

- Copper sulphate-free
- Non-foaming at the recommended pool dosages.
- Very pronounced clarifying effect.
- Compatible with all filtering equipment.
- When dissolved, compatible with disinfectants and auxiliary treatments used in pools.
- Recommended in combination with oxidisers (synergy).
- Effective whatever the pH of the water being treated.
- Does not alter the pH of the water.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.

Instructions

MAINTENANCE & PREVENTIVE TREATMENT

In the buffer tank with the filtration running:

- On opening the pool: use 200 ml for 10 m³ water.
- Maintenance treatment - Each week: use 100 ml for 10 m³ water.
- Green water correction: use 400 ml for 10 m³ of water.

Note 1: In the case of scaling water (T.H. > 30°), multiply the dose by 1.5.

Note 2: In the event of a strong affluence of bathers, high temperatures or heavy rainfalls, increase the dose.

GREENING WATER / CURATIVE TREATMENT

Use 1 litre per volume of 25 m³. If the algae outbreak is

significant, apply at the same time a shock chlorination treatment with a fast-dissolving chlorine product compatible with your regular treatment:

- Blue range, trichloroisocyanuric acid or sodium dichloroisocyanurate dihydrate.
- **hth® GRANUFAST®**, **hth® MINITAB® SHOCK®** 20 g Red range, calcium hypochlorite.
- **hth® GRANULAR**, **hth® SHOCK®** All this after correcting the pH to between 7.0 and 7.4.

Caution: never mix the products together in their solid form.

EMPTY POOL / PREVENTIVE TREATMENT

After cleaning the pool, water down the walls with the product diluted to 1/10. Insist on connecting parts such as skimmers, channels, hydro-plugs, discharge nozzles, liner joints and tile grouts. Let rest for around one hour before filling the pool up.

Composition

Contains polymerised quaternary ammonium chloride (>100 g/l)

Safety



Xi - Irritant
H - Harmful for the environment

Caution: This product poses risks for health and the environment; refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.

hth® REGULARFLOC® Regular flocculant

IMPROVES EVERYDAY FINE FILTERING

- Prevents cloudy water
- For sand filters
- 10 cartridges of 125 g

Individually Packed, Easy to use
= Safe for skin contact



Reference	Kg	Packing list	Pallet
00219970	1.250	12	504

Application

Micro-organisms, organic materials (decomposition compounds, etc.) and mineral materials (silts, clay, metallic particles, etc.) either suspended in the water or in colloidal state are too fine to be retained by the sand filter alone.

Flocculation agglomerates these particles into flocs that can be retained by the filter.

Characteristics

- 125 gram cartridges with controlled dissolution.
- The packaging means that there is no direct contact with the product.
- Compatible with all sand filtering equipment.
- When dissolved, compatible with disinfectants and auxiliary treatments used in pools.
- High average alumina-equivalent level close to 16.1%.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.

Instructions

Caution! Flocculant cartridges must never be used with diatomaceous earth and cartridge filtration systems.

The regular use of flocculant cartridges significantly improves the filtration quality, and therefore, helps maintain excellent water quality.

The flocculant cartridges are used based on one cartridge per volume of 25 m³ water, placed either in the pump

pre-filter or in the skimmer, and in the following cases:

- Just after a filter backwash
 - In the event of abnormally high turbidity
 - In association with a shock oxidation treatment
- In order for the cartridges to be effective, maintain the pH between 7.0 and 7.4.

If the turbidity is very high, or in the presence of very poor water quality, use **hth® RAPIDFLOC® Liquid** to flocculate-precipitate particles.

Composition

Contains hydrated aluminium sulphate

Safety



Xi - Irritant

Caution: This product poses risks for health and the environment; refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.

hth® METALSTOP Liquid

PREVENTS THE INCRUSTATION OF DISSOLVED METALS

- Also prevents lime scale deposits
- Phosphate-free



Reference	L	Packing list	Pallet
00228637	3	4	160

Application

- Prevents the incrustation of dissolved metals, in particular iron, copper and manganese deposits

Characteristics

- Compatible with all filtering equipment.
- When dissolved, compatible with disinfectants and auxiliary treatments used in pools.
- Phosphate-free.
- Also prevents lime scale deposits.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.

Instructions

Make sure the filtration is running.
Pour the product into the buffer tank.

Use 400 ml for 10 m³ of water when filling the pool up. Afterwards, regularly add the product whenever the pool is topped up with new water, for example every week, while observing the same proportion of 400 ml for 10 m³.

Note 1: It is advised to double the dose if the metal content is above 1.5 mg/l.

Note 2: This product may disrupt chlorine or

bromine content analyses in the few days following its application.

Composition

Tetrasodium ethylenediaminetetraacetic acid

Safety



Xn-Toxic

Caution: This product poses risks for health and the environment; refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.

hth® FILTERWASH Liquid

CLEANS AND DESCALES SAND, CARTRIDGE AND DIATOMACEOUS EARTH FILTERS

- Very high content of active ingredients
- Coloured liquid



Reference	L	Packing list	Pallet
00218942	3	4	160
00218943	20	1	29

Application

To clean filters during technical shutdowns for public authorities.

- Sand filter: eliminates scale and rust deposits, and more generally, any mineral deposits present in the filtering medium.
- Diatomaceous earth and cartridge filters: cleans screens and supports.

Characteristics

- Technical cleaner designed in close partnership with filter and equipment manufacturers.
- Very high content of active ingredients.
- Very effective against scale deposits.
- Excellent detergent action.
- Easy to use due to its purple colour.
- Compatible with all typical filtration systems, excluding active carbon filters (fish keeping, drinking water purification, etc.)
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.

Instructions

SAND FILTERS

- 1 to 2 litres for filters with a diameter of less than 50 cm.
- 2 to 5 litres for filters with a diameter between 50 cm and 1 m.
- 5 to 20 litres for filters with a diameter between 1 m and 1.5 m.
- 40 litres for filters with a diameter between 1.5 m and 2 m, or more.
- Backwash the filter then rinse it.
- Introduce the product upstream of the filter (skimmer, channel or pre-filter) and activate the filtration in the rinse/drain position for a few second

to disperse the product inside the filter.

Warning! Although less convenient, the best method is to pour the product directly into the open filter, onto the sand, after taking the precaution of bringing the water level down to the sand level.

- Allow the product to act for at least 1/2 day – overnight for example.
- Backwash and rinse the filter abundantly until the water runs clear in the control panel (whenever possible).

DIATOMACEOUS EARTH AND CARTRIDGE FILTERS

- Dilute 1 litre of **hth® FILTERWASH liquid** for 10 litres of water in a container large enough to submerge the screens and supports, or the cartridges.
- Allow to act for at least 2 hours then brush and rinse the elements with tap water.

Composition

Contains hydrochloric acid (10-25%), orthophosphoric acid (10-25%), and formic acid (< 5%)

Safety



C-Corrosive

Caution! This product poses risks for health and the environment, refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.

PREVENTS THE BUILD-UP OF CALCIUM DEPOSITS AND COMBATS ALGAE AND PARASITIC FUNGI

- Non-foaming
- Very high content of active ingredients
- Copper sulphate-free
- Phosphate-free

NON-FOAMING

Reference	L	Packing list	Palet
00218906	3	4	160

Application

Protects wintered pools against:

- The proliferation of common algae and parasitic fungi.
- The encrustation of scale and dissolved mineral deposits.

Characteristics

- Copper sulphate-free
- Non-foaming.
- High level of active ingredients.
- Facilitates the pool reopening in the spring.
- Phosphate-free.
- Compatible with all filtering equipment.
- When dissolved, compatible with disinfectants and auxiliary treatments used in pools.
- Effective whatever the pH of the water being treated.
- Does not alter the pH of the water.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.

Instructions**PREPARATION FOR WINTERISING**

A few days before winterising, when the water temperature is between 12 and 15°C, and after adjusting the pH to between 7.0 and 7.4 (by using **hth® pH MINUS Micro-Balls** or **hth® pH PLUS Powder**, as applicable), it is advised to implement a shock chlorination treatment - in accordance with the regular treatment, and use:

- **hth® SHOCK®**: 130 grams per volume of 10 m³.
- **hth® GRANULAR**: 150 grams per volume of 10 m³.

Note: For pools treated with PH.M.B., never conduct this preliminary step, instead apply a shock peroxide treatment (**hth® GREEN TO BLUE®**).

WINTERISING

Pour **hth® SUPER WINTERPROTECT** around the edge of the pool at a rate of 300 ml for 10 m³ water, filtration running through the bottom drain, after closing the valve(s) for the skimmer(s).

Let the filtration run for around 2 hours.

Protect the pool and pipes from frost with winter buoys and Gizmo bottles.

Note 1: multiply the dose by 2 in the event of scaling water (TH > 30°).

Note 2: A winter cover greatly enhances the protection of the pool.

Composition

Contains polymerised quaternary ammonium chloride (>250 g/l)

Safety

Xn - Irritant
N - Harmful
for the environment

Caution! This product poses risks for health and the environment; refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.



CLEANING PRODUCTS

hth® Pink Range: to Meet Stringent Hygiene Standards

The decree issued on 7 April 1981, as amended, sets the hygiene and safety standards applicable to public pools and bathing facilities. This decree sets out technical provisions to be taken into account when operating and designing the establishments, however it does not describe precisely the cleaning principles and phases. Pool hygiene and cleanliness are general notions that need to be considered for the whole establishment.

The cleanliness and hygiene of public establishments, including aquatic spaces, have now become major challenges as part of a "quality" approach. In order to offer an overall solution, we have developed a range of **hth**® cleaning products. The chemical aspect of cleaning can be broken down into several actions:

DETERGENCY

This makes it possible to eliminate visible dirt from various origins adhering to a surface, such as by degreasing the surfaces cleaned through the emulsification of greases and oils. This is the first "chemical" and indispensable step of cleaning. Before, make sure you act "mechanically" by pre-cleaning in order to remove most of the dirt (sweep the floor, Hoover, or power wash if very dirty).

DE-SCALING

This makes it possible to eliminate mineral contamination, such as lime scale adhering to a surface. Due to their acidic nature, these products must generally be used according to the thickness of the deposits to be remove. A monthly use is recommended.

DISINFECTION

This eliminates micro-organisms and bacteria on the surfaces treated. The disinfectant action must at least comply with the bactericide standard NF EN 1040. Disinfection eliminates micro-organisms and bacteria on the surfaces treated. However, in most cases, all these chemical actions must be accompanied by mechanical actions (such as brushing) in order to increase their effectiveness. It is important to respect the dilution and "contact" times of the products for an optimal action of the disinfectant, such as: **never rinse a disinfected area!**

The detergent (waterline), de-scaling (filter and pool) and of course disinfection are the same for the pool.



hth® BANISOL® EXTRA - Descaler

POOL DESCALER

HIGHLY CONCENTRATED

- Eliminates scale deposits and rust
- Very high content of active ingredients



Reference	L	Packing list	Palet
0021903B	20	1	26

Application

Eliminates both lime scale and rust deposits, and more generally, any mineral deposits in the context of intensive or regular cleaning of the pool edges, the pool itself, the toilets, etc.

Characteristics

- Technical cleaner designed in close partnership with waterproof pool liner manufacturers: tiles, liners, polyester, etc.
- Very high content of active ingredients.
- Excellent detergent action.
- Store in a dry and well ventilated area, at an average daily temperature not exceeding 35°C.

Instructions

- Empty out the pool and foot bath before use.
- If possible, water down the surfaces to be cleaned beforehand.
- Apply **hth® BANISOL® EXTRA** either pure or diluted up to 1 litre in 10 litres of water, depending on the resistance of the deposit to be eliminated.

APPLICATION WITH A MACHINE: 10 %, i.e. 1 litre for 10 litres of water.

- Let sit for 5 to 10 minutes.
- Brush the surfaces to be cleaned if required.
- Rinse abundantly with water.
- Repeat the operation for stubborn deposits.

Note 1: when diluting, always pour the product in water, never the reverse.

Note 2: avoid using brushes with synthetic bristles for the brushing operation.

Note 3: always apply diluted product onto liners and reinforced PVC.

Composition

Contains hydrochloric acid (10-25%), orthophosphoric acid (10-25%), and formic acid (< 5%)

Safety



C - Corrosive

Caution: This product poses risks for health; refer to the Safety Data Sheet (for the different agents of the distribution network) and the recommendations for use, along with the risk and hazard indications on the packaging.

DID YOU KNOW?

The **hth® BANISOL® EXTRA** solution as well as the **hth® NEUTRALISATOR** solution are essential products for our simplified maintenance procedure to remove scale residues and formations in the **hth® esalilo®** feeders.

See this procedure on page 16.





SAFETY

GENERAL RECOMMENDATIONS

- Always have all the emergency procedure numbers at hand (fire service, ambulance service, poison control centre, etc.).
- Practice and learn about the emergency procedures (product spillage, fire, etc.).
- Always report anything that may lead to a critical or dangerous situation.
- Read the labels and learn about the risks posed by each product used and stored. To do so, refer to the safety data sheet (SDS) for each product. The safety data sheets for the **hth**® range are available on the website:

<https://www.solenis.com/en/resources/safety-data-sheets>

PRODUCT STORAGE

- **NEVER SMOKE IN THE STORAGE ROOM OR WHILE HANDLING THE PRODUCTS**
- Keep at hand clean and transparent plastic bags as well as suitable clean and dry containers in the event of a spillage
- Remove any damaged containers
- Any containers used for water treatment must always be strictly reserved for that purpose alone, and must always be kept clean and dry
- Store products off the ground (on pallets or shelves), in a cool, dry and well ventilated location
- **NEVER STORE LIQUIDS ABOVE SOLID PRODUCTS**
- Always use the oldest products first (FIFO management)
- Maintain a distance of at least 2 metres between incompatible products (water treatment products as well as flammable substances, oils, greases, petrol, etc.)
- To avoid any treatment products from entering in contact with petrol or oil, use electrical handling equipment whenever possible.

SAFETY INSIDE UTILITY ROOMS OF PUBLIC POOLS

A free **hth**® document containing the risks and advice on the storage and use of pool products. Ask your sales representative for a copy now! Code: 999103



CAUTION

NEVER MIX CHEMICAL PRODUCTS TOGETHER:
DANGEROUS GASES (CHLORINE) MAY BE RELEASED.
NEVER MIX A PRODUCT CONTAINING
CALCIUM HYPOCHLORITE
(INORGANIC CHLORIDES) WITH A PRODUCT CONTAINING
SODIUM DICHLOROISOCYANURATE
OR **SYMCLOSENE (TRICHLOROISOCYANURIC ACID)**
(ORGANIC CHLORIDES)
EXPLOSION AND POISONING RISKS



PRECAUTIONS FOR USE

- Always place the product in the water, not the reverse
- Never transfer a product into another unlabelled container or bearing a different label
- Never put a spilled product back into its original packaging
- Whenever a product gets wet inside its packaging, dispose of the contaminated part
- Never allow the product packaging to come into contact with water
- Make sure to close the containers properly after each use
- Never dispose of chemical products in a waste disposal container or tip.

PROCEDURE TO IMPLEMENT IN THE EVENT OF A FIRE

- 1 - Evacuate all persons from the area concerned
 - 2 - Call the fire service (18 or 112*)
- In the event of a small fire, limited to a packaging unit (example: a bucket or container), caused by chemical treatment products and water: drown the product with water. Never spray small quantities of water on it as this generates a chemical reaction.

NEVER USE A POWDER FIRE EXTINGUISHER

- If the fire is too big, leave the premises quickly and let the competent authorities deal with it



FIRE



WATER JET



POWDER
FIRE EXTINGUISHER

PERSONAL PROTECTION AND FIRST AID

- Wear gloves, hermetic goggles, boots and breathing apparatus when using highly concentrated products
- If in contact with the skin, rinse with warm water (15 minutes minimum)
- If in contact with the eyes, rinse abundantly with water (15 minutes minimum), while holding eyelids open for several minutes, and consult a doctor immediately (call 15 or 112*)
- In case of unconsciousness, lay the person down, transport them in a stable lateral position, and consult a doctor immediately (call 15 or 112*)
- In the case of any issue, show the product packaging concerned to the doctor consulted

INDISPENSABLE PROTECTIONS



Goggles + face mask



Apron



Boots + gloves



FIRE SERVICE no.: **999 112** (112: European emergency number)

AMBULANCE SERVICE no.: **999**

CHEMICAL EMERGENCY NO.: **+44 123 523 96 70** (emergency only)

CHEMICAL EMERGENCY NO.: **+44 123 523 96 71** (MEA emergency only)

INCE no.: **+33 (0)2 47 23 43 00**

POISON CONTROL CENTRE:

OTHER:



OUR DISTRIBUTORS ACROSS THE UK AND IRELAND

We supply the range of **hth** products through our trusted network of distributors - with depots across the UK and Ireland.

CHEMICAL DISTRIBUTORS

Complete Leisure Supplies (Southern Ireland)

Headquarters: Hillcroft House,
Monatrea Industrial Estate,
Celbridge, Co. Kildare, Ireland
Phone number: +353 (01) 627 9070
E-mail: info@completeleisure.ie
Depots in: Co. KILDARE

Univar (General Sales Enquiries)

Headquarters: 6 Mid Point, Thornbury,
Bradford, BD9 7AY, United Kingdom
Phone number: +44 (0) 1274 267300
E-mail: northern.sales@univar.com
Depots in: WIDNESS, NUNEATON, CUMBERNAUD,
MIDDLESBOROUGH

Brenntag UK & Ireland

Headquarters: Alpha House,
Lawnswood Business Park,
Redvers Close, Leeds, LS16 6QY
United Kingdom
Phone number: +44(0)113 3879200
Depots in: BELFAST, BRADFORD, BRISTOL,
GLASGOW, LONDON, LUTTERWORTH,
MANCHESTER, NEWCASTLE, SWANSEA



EQUIPMENT & CHEMICAL DISTRIBUTOR

Complete Pool Controls (CPC)

Headquarters: Unit 2 The Park, Stoke Orchard,
Bishops Cleeve, Gloucestershire, GL52 7RS
United Kingdom
Phone number: +44 (0)1242 662700
E-mail: sales@cpc-chemicals.co.uk
Depots in: CHELTENHAM



Info

Find all our distributors across EMEA:

<https://www.hth-pro.com/where-to-buy.html>

Expert since 1928

hth

**ALSO EXPERTS FOR PRIVATE
POOLS AND SPAS**

Consult the catalogue
for residential Pools and
Spas



hth-pool.com

47

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

