

A

Acid A chemical which lowers pH value when added to pool water. Highly acidic water (low pH) can cause structural damage to both your pool and your pool equipment.

Acid Demand The amount of acid required to bring high pH and total alkalinity down to their proper levels. Determined by an acid demand test.

Activated Carbon Carbon treated for use as an adsorption filter medium for removing chlorine, ozone and chloramines contamination.

Advanced Oxidation Process (AOP) refers to a chemical treatment that sanitizes and disinfects water by oxidizing organic and inorganic contaminants with ozone.

Air scour Air forced up through a filter bed prior to backwash for the purpose of expanding the filter media and loosen dirt particles.

Algae Simple form of microscopic plant life that contains chlorophyll and thrives on sunlight.

Algicide A chemical that aids in killing, controlling, and preventing algae.

Alkali A chemical which raises pH value of pool water, also called a base.

Alkalinity A measure of the alkaline content of water; generally expressed in mg/l or ppm; a measure of the resistance to change in pH value.

Aluminium sulphate (alum) A coagulant, usually supplied in solid form.

Ammonia A chemical that forms from the breakdown of urea in urine and sweat.

Amoeba Single-celled organism.

Amperometric sensor Pool water analysers that measure hypochlorous acid and calibrated to monitor free chlorine.

Available Chlorine The amount of chlorine in the pool water that is available to sanitize or disinfect the water. Sometimes called residual chlorine.

B

Backwashing Cleaning of the filter by reversing the direction of water flow up through the filter media to waste.

Bacteria If pool water is not properly disinfected, swimmers can contaminate it with bacteria. This can lead to the spread of waterborne diseases and illnesses.

Balance tank A reservoir of water between the pool itself and the rest of the circulation system. It maintains a constant pool water level and supply to the pumps, and holds water displaced by bathers.

Balanced water The interaction and measurement of different pool chemistry factors, such as pH, temperature, hardness, and total alkalinity.

Bather load The capacity of the pool in terms of how many people can use it at once.

BcdmH (Bromo-chloro-dimethyl-hydantoin) A bromine-based disinfectant in tablet form which produces hypobromous acid when dissolved in water.

Boilers Boilers regulate the temperature of the pool water.

Booms Submerged systems which allow a pool to be divided into different sections with an automated raised wall.

Breakpoint chlorination The point at which the combined chlorine level in the pool is brought under control when there is at least twice as much free chlorine as combined chlorine.

Bromamines By-products formed when bromine reacts with swimmer waste (perspiration or urine), nitrogen or fertilizer. Bromamines are active disinfectants and do not have an odour.

Brominator A mechanical or electrical device for dispensing bromine at a controlled rate. Most often a tank, canister or floater filled with tablets of bromine.

Buffer A substance or compound that stabilizes the pH value of a solution. It is also the water's resistance to change in pH.

C

Calcium chloride Chemical used to increase calcium hardness.

Calcium hardness A measure of the calcium salts dissolved in pool water.

Calorifier A heat exchanger used to heat pool water indirectly.

Carbon dioxide An acidic gas used to lower pH.

Chelated Copper Copper algaecides that contain a special ingredient to prevent the copper from staining the pool walls and bottom or producing coloured water.

Chloramine Produced when free available chlorine combines with ammonia and other nitrogenous wastes.

Chlorinator A mechanical or electrical device for dispensing chlorine at a controlled rate. Most often a tank, canister or floater filled with tablets of chlorine.

Chlorine Demand The amount of chlorine necessary to oxidize all organic matter (bacteria, algae, chloramines, ammonia, and nitrogen compounds) in the pool or spa water.

Chlorine Residual The amount of chlorine left in the pool or spa water after the chlorine demand has been satisfied.

Chlorine One of the most common pool disinfectants, and plays an important role in keeping the water sanitary and the pH levels balanced. Too much chlorine can irritate the skin, eyes, and sinuses, while too little can lead to a risk of waterborne disease.

Chloroform A product of the reaction between chlorine and organic nitrogen compounds; one of the Trihalomethanes.

Clarifier See coagulant or flocculant.

Coagulant A material which causes tiny particles to join up with other tiny particles to produce larger particles which can be removed in the filter coagulation The action of a coagulant.

Coliforms Bacteria of the intestine, of which E. coli is a common example

Collectors (laterals, filter nozzles) Interior bottom part of the filter that collects the filtered return water.

Colloids Very fine suspended matter in water that contributes to turbidity (cloudiness).

Combined bromine A measure of the bromamines in pool water.

Combined chlorine A measure of the chloramines in pool water.

Conditioner Also called stabilizer or cyanuric acid. It is a chemical that slows down the degradation of chlorine in the water by sunlight.



Copper Algaecide Copper sulphate was one of the original copper algaecides.

Counter current units A counter current unit allows bathers to use the pool for exercise by providing a strong current to swim against. Particularly suited to smaller pools.

Covers Pool covers not only protect pools from debris, but they can also be used to help retain heat in the pool, cut down on energy costs, and reduce cleaning time and expenses.

Cryptosporidium A diarrheal disease caused by microscopic parasites that can live in the intestine of humans and animals and is passed in the stool of an infected person or animal

Cyanuric acid A stabiliser that can be added to pool water to reduce chlorine loss due to sunlight.

D

De-humidifier A device for removing moisture from the air.

De-ozonation Removing ozone disinfectant from water before it returns to the pool.

Design and build Comprehensive design and construction of a swimming pool to an agreed specification, working with a pool specialist.

Diatomaceous earth A powder consisting of fossilised skeletal remains of microscopic marine plant life that is capable of filtering extremely small particles. Hypochlorite based disinfectants (hypo) Sodium hypochlorite (liquid pool chlorine); calcium hypochlorite (granular pool chlorine).

Dichlor (proprietary name for dichloroisocyanuric acid) A type of stabilised pool chlorine disinfection in granular form (now known as Triclosan sodium dihydrate).

Dry Acid Chemically, sodium bisulphate. A dry white crystal that produces acid when added to water. It is used for lowering pH and total alkalinity. Safer to handle than muriatic acid.

E

E. coli A bacterium in faeces – one of the coliform organisms routinely monitored for signs of pollution.

Effluent The water that flows out of a pump, filter, or heater, usually on its way back to the pool or spa.

Electric heaters Either in the form of electric resistance heaters or solar heaters, electric pool heaters heat the pool water. They are usually better suited to smaller home pools.

Electrical design The design and blueprint for all the electrics that operate the pool, produced by the pool designer.

Erosion feeder A simple device that allows a steady flow of water to erode a stick or tablet of disinfectant, liberating the active ingredient. Adjusting the flow rate through the feeder can control the erosion rate.

F

Filter Aid A chemical compound added to the water or to the filter that allows the existing filter to become more efficient. Examples are alum, water clarifiers and D.E. powder.

Filtration velocity Speed of water travelling through filtration bed.

Flocculant a chemical used to bind together smaller particles to make it easier for the filtration system to clear them from the pool.

Flocculation The combination, agglomeration, aggregation, or coagulation of suspended particles in such a way that they form small clumps (called a FLOC).

Flooded suction Describes the process of introduction of supply water to the pump where the level of the supply water is above the level of the pump inlet.

Flow meter A device used to measure the flow rate or quantity of a gas or liquid moving through a pipe

Fluidisation (of sand filter media) Suspension of the sand by backwashing and sometimes air scouring.

Folliculitis An infection of the hair follicle caused by bacteria.

Free chlorine A measure of the chlorine (the sum of hypochlorous acid and hypochlorite ion) that is available for disinfection.

G

Gas chlorinator A device that controls the release of chlorine gas from a chlorine gas cylinder.

Ground source heat pumps Also known as geothermal heat pumps; these utilise the heat of the earth to warm pool water.

H

Halogen The chemical family that includes chlorine and bromine (and iodine).

Hardness A measure of all the calcium and magnesium salts in pool water (total hardness). See also calcium, permanent and temporary hardness.

Heat pump A refrigerant-based heat recovery system.

Hot tubs Often built adjacent to a larger pool, hot tubs are small pools filled with hot, bubbling water. Hot tubs are used for relaxation or physical therapy.

Humic acid A constituent of water that reacts with halogen disinfectants to form trihalomethanes.

Hydrochloric acid An acid used (with care) to lower pool water pH value.

Hydrotherapy Hydrotherapy involves low-intensity exercise in a pool to relieve the symptoms of a range of conditions, including arthritis.

Hypobromous acid The main active component in all bromine based disinfectants.

Hypochlorite The name given to a family of chlorine containing compounds, including calcium hypochlorite, sodium hypochlorite and lithium hypochlorite, that are used as disinfectants and sanitizers in pool and spa water.

I

Infinity Pool Infinity pools are strategically built to appear as if they blend with a natural landscape – particularly lakes or oceans.

Injector Fitting enabling a chemical liquid or gas to be injected into the water circulation loop.

Ions Electrically charged chemical particles.

ISPE The Institute of Swimming Pool Engineers is an organisation that represents individual pool engineers.

J

Jets Water jets feature in many pools, but particularly in hydrotherapy pools and spas. The powerful jets are used to relieve muscle tension and for relaxation.

L

Langelier Index One measure of balanced water.

Level deck pools This refers to pools where the level of the water is exactly level with that of the pool surround.

Liners Pool liners hold the water and form a smooth, safe surface. They prevent the interior of a pool from eroding from wear and tear.

Loss of head Describes the loss of operating pressure (at the filter or pump outlet).

M

Maintenance Pool maintenance is vital to keeping a pool clean and pleasant to use for a long time. It includes cleaning and managing the chemical balance of the pool water, among other things.

Make-up water Fresh water used to fill or top up pools, particularly after backwashing.

Moving floors Moving floors are built into swimming pools to enable the owners to adjust the depth of the pool water, for example, shallower for young swimmers.

N

Natural pools These pools use no chemicals, with all filtration and sterilisation being done by organic filters and plants rooted in the pool system.

Nitrogen trichloride A gas, and the most irritant of the chloramines.

Non-chlorine shock A term given to a class of chemical compounds that are used to oxidize or shock the water (destroy ammonia, nitrogen, and swimmer waste). They contain no chlorine or bromine and do not kill living organisms. Swimmers may re-enter the pool in only 15 minutes after adding a non-chlorine shock.

O

Organic Waste Also called swimmer or bather waste. All of the soap, deodorant, suntan lotion, lipstick, makeup, cologne, body oils, sweat, spit, urine, etc., brought into the water.

Oxidation To rid the water of ammonia, nitrogen compounds and swimmer waste (organic compounds).

Oxidation The process by which disinfectants destroy pollution.

Oxidation-reduction potential (ORP) A measure of the oxidative powers of the water which is measured in millivolts.

Oxidiser A shocking or sanitizing compound that removes or destroys built-up contaminants and chloramines in pool water.

Ozone (O₃), ozonation A gas generated on-site and used to purify pool water by oxidation.

P

PAC (poly aluminium chloride) A commonly used liquid coagulant.

pH A measure of the acidity, alkaline content, or neutrality of water on a logarithmic scale of 0–14. A pH below 7.0 is acidic and above 7.0 is alkaline.

Plantroom The central hub of the pool's operations, where the machinery used to run the pool is located.

Pool Hall A term used to describe the area where the pool is located, be it a public or private pool.

Pool Water Treatment Advisory Group: PWTAG provides guidance on swimming pools and spas in the UK.

PPE Abbreviation for 'personal protective equipment' which may include breathing respirator, safety goggles, hearing protection, gloves, and coveralls.

ppm Abbreviation for 'parts per million'. A measurement that indicates the amount of chemical by weight in milligrams per litre of water (mg/l).

Pumps These form the main feature of a pool's water circulation and filtration process.

Purification systems Used as an alternative to chemical treatments to sanitise the pool.

R

Redox (orp) sensors Pool water analysers that measure only the oxidative power of the water. See Oxidation-Reduction Potential.

Residual Bromine/Chlorine The amount of measurable bromine/chlorine remaining after treating the water. The amount of bromine/chlorine left in the pool or spa water after the bromine/chlorine demand has been satisfied.

S

Sodium bisulphate (dry acid) Used to lower pH.

Sodium carbonate (soda ash) Used to raise pH.

Sodium chloride Salt added to pools with salt chlorinators to produce sodium hypochlorite.

Sodium thiosulphate Used for dechlorination (e.g., where free chlorine levels are excessive) and in the microbiological testing of pool water.

Spa (also known as hot tub): A 'tub' of water used for relaxation or invigoration, usually including hydrotherapy jets. They can be installed stand-alone or as part of a pool installation, indoors or outdoors.

SPATA Swimming Pool & Allied Trades Association, the governing body for the UK pool and spa industry.

Stabilised Chlorine A family of chlorine pool sanitizers that contain conditioner (cyanuric acid) to protect the chlorine from the degrading UV rays in sunlight.

Super Chlorination The practice of adding an extra-large dose of chlorine to the water to destroy ammonia, nitrogen, and swimmer waste, which can build up in the water.

T

TDS Total dissolved solids A measure of all the solids dissolved in the pool water measured in mg/l

Temporary hardness That part of the total hardness which precipitates from the water on heating; it consists of calcium and magnesium carbonates and bicarbonates.

Test kit Pool test kits are used to test pH levels and water quality in the pool.

Thermal wheel (rotary heat exchanger) A heat recovery device that recovers heat from the extract system from the pool hall and returns heat to the incoming air supply. In the process it also dehumidifies the pool hall air.

Total alkalinity Measure of alkalinity used to determine pH buffering capacity of pool water.

Total chlorine The sum of free chlorine and combined chlorine.

Trichlor A slow-dissolving tablet or granular, stabilized organic chlorine compound providing 90% available chlorine. Used for regular chlorination but must be dispensed using a floating feeder or an in-line feeder (chlorinator).

Trihalomethanes Compounds formed by reaction between chlorine or bromine and humic acid and other forms of human waste.

Troclosene sodium dihydrate A chlorinated isocyanurate formerly known as sodium dichloroisocyanurate dihydrate "dichlor".

Turbidity Cloudiness, murkiness, or lack of clarity in water caused by colloidal or particulate matter in suspension.

Turnover period The time taken for a volume of water equivalent to the entire pool contents, to pass through the filtration and circulation system once.

U

UV A supplementary form of water treatment that utilises ultraviolet light radiation to kill bacteria, viruses, and spores. Also known as a secondary disinfection system or a non-residual and used in conjunction with a residual chlorine-based disinfection system.

V

Vacuums Pool vacuums are used to clear the water of dirt and debris - automatic and manual models are available.

W

Water evaporation All pools lose a little water through evaporation caused by factors such as climate and humidity. If the water loss seems excessive, do the bucket test to see if there is a bigger issue (e.g., a leak).

Water features Pool features that, while not necessary to the functioning of the pool, add a touch of glamour and personalisation.

Water level This refers to how much water fills the volume of the pool shell.