

hth[®] Calcium Hypochlorite - an average comparison with alternative pool sanitisers

Available chlorine - A measure of the oxidising power of a compound.

Stability - Tendency to resist change or decomposition due to internal reaction, or due to the action of air, heat, light or pressure.

Stabiliser - (Cyanuric Acid) protects the active chlorine against loss by ultra violet radiation from the sun but can increase the risk of 'chlorine lock'

Calcium - Water has a natural hunger for calcium, leaching it from grout around the tiles, so extra calcium is needed to keep the water balanced and prevent corrosion

Insolubles/ Salt - Too much insoluble material and salt residues from various pool chemicals lead to corrosion in the pool and plant and costly water dilution

pH - A measurement of the relative acidity or basicity (alkalinity). In pools the accepted pH range is ideally 7.2 - 7.6

Safety - The Health and Safety Executive (HSE) calls for a product to be used in its safest possible form. It states liquids are safer than gases, granules are safer than liquids and briquettes are safer than granules.

	hth CALCIUM HYPOCHLORITE	CHLORINE GAS	SODIUM HYPOCHLORITE	SALT GENERATION	STABILISED CHLORINE (ISO's)	ASIAN DRY CHLORINE Imports
AVAILABLE CHLORINE	68% typical (over 70% at manufacture)*	100%	Around 12- 14 % at manufacture	Around 1% at production	55 - 90% depending on type used	Varying claims up to 70%
STABILITY	Stable product - consistent quality production from the best available raw materials	Chlorine gas is a strong oxidizer, which may react with flammable materials	Unstable Liquid	Variable consistency from the raw material, producing different HOCl levels	Generally stable depending on product	Dependant upon raw material grade and plant process
	Retains full strength for over one year (assumes correct storage conditions)	Retains full strength	Loses large degree of Available Chlorine % within 14 days	Strength variable	Varying depending on product	Varying strengths
	No Stabiliser	No Stabiliser	No stabiliser	No Stabiliser	Stabilised against sunlight. Stabiliser levels increase every time product is dosed	No Stabiliser
FORMAT	Dry product - granular or briquette	Gas	Liquid	Dry product, requires high levels of water and electricity to produce chlorine solution	Dry product - granular or tablet	Dry product - granular or tablet
	Has added calcium	Chloride flake required	Chloride flake required	Chloride flake required	Chloride flake required	Will add differing levels of calcium
	Low level of insoluble material content	No insolubles	High level of salt	Very high level of salt	Varying depending on product	Insoluble levels of up to 12.5% have been recorded
SALT CONTENT	Low salt content	No salt content	High salt content	Utilises large bags of salt (25kgs)	No salt content	Varying levels of salts
PROPERTIES	Mildly basic (Alkali)	High acid	Medium basic (Alkali)	Medium basic	Varying depending on product	Medium basic
	Requires low level of pH correction	Requires high level of alkali ph correction	Requires medium level of acid pH correction	Requires medium level of acid pH correction	Requires varying levels of alkali ph correction	Requires medium level of acid pH correction
WATER CONTENT	Hydrated product (5-8% water added)	No water content	High water content	High water content	Dihydrate	Differing levels of water content Up to >12% water added
SAFETY	Produced in the safest formats of chemical product (Granular and Briquette)	Gas can be high risk sanitiser if used incorrectly	Medium risk - liquid spillages can be hazardous and PPE must be worn	Hydrogen is produced in generator within the plant room	Produced in the safest formats - Granular and Briquette	Poor grade granular products can contain high levels of dust (increased risk of inhalation)
APPLICATION	Easily applied (automatic if required) via a dedicated chlorine feeder - small footprint	Dedicated plant room with specialised safety equipment and high level of staff training required	Day tank and pump system required with bunds	Large generator with hydrogen ventilation, day tank and bunds required. Large footprint	Varying depending on product	Applied via chlorine feeder
	Convenient pack sizes available to suit any plant room 10 - 45 kg	Large gas bottles heavy to handle and hard to manoeuvre.	Usually supplied in 20 litre containers, large deliveries and storage area required	Requires large storage area for bags of salt	Usually small packs - predominantly used in the residential market	Various pack sizes
	Easy to hand dose in emergencies	Impossible to hand dose	Difficult and hazardous to hand dose	Dosed from within the generation unit - Impossible to hand dose	Easy to hand dose in emergencies	Can be dusty to hand dose in emergencies

The statements and figures listed here, referring to comparative products, are approximate and in nature are generally accepted. To the best of our knowledge these statements were correct at time of publication - May 2014

*Test data taken from retained samples at our Charleston factory.

