APROVADO
Dep. Qualidade

CALCIUM HYPOCHLORITE TABLETS

68% AVAILABLE CHLORINE

PRODUCT DATA BULLETIN

Arch Chemicals Calcium Hypochlorite tablets range from the 7 gram pillow-shaped briquettes to the 300 gram capsule, with or without its protective sleeve. You will also find a 20 gram tablet. All are made from calcium hypochlorite, $Ca(OCl)_2$, and typically contain 68% available chlorine in a conveniently handled, slow-release form.

Properties

Arch Chemicals tableted products are manufactured to exacting specifications. Product quality is assured by rigorous attention to chemical and physical properties throughout chemical manufacturing and tableting. This attention assures that you will be able to depend on Arch Chemicals Calcium Hypochlorite tablets to provide consistent performance in your process time after time. Specifications and typical properties are shown in the tables below.

Chemical Specifications of Arch Chemicals Calcium Hypochlorite Tablets

	Specification
Available Chlorine (% by weight)	65%, min
Water (% by weight)	4.0 - 8.5%
Iron (% by weight as Fe)	0.05%, max

Chemical Properties of Arch Chemicals Calcium Hypochlorite

	Typical Analysis
Solubility in Water, g/L	180
Solution pH	
200 ppm avail. chlorine	10
500 ppm avail. chlorine	10.3
1000 ppm avail. chlorine	10.7
1% avail. chlorine	11.1
Specific Gravity of solutions	
1%	1.01
2%	1.03
5%	1.06
10%	1.11

Arch Chemicals Calcium Hypochlorite Tablets

Weight, gm	7	20	300	300
Shape	briquette	disk	capsule	capsule
Special Features	--	--	--	sleeve
Height. mm	13	14	102	102
Length x width or diameter, mm	19 x 32	32	46	46
Bulk density, gm/mL, loose	1.24	--	--	--
Approximate dissolving rate*	2 hours	3 hours	8 hours	52 hours

**Approximate time to 95% dissolution, 30° C, flowing tank. Dissolving rates vary with temperature, flow-rate and pH of water.*

Analytical

Concentrations of calcium hypochlorite solutions may be determined by titration. See methods for Chlorine (residual) in the latest edition of Standard Methods for the Examination of Water and Wastewater, prepared and published jointly by the American Public Health Association, the American Water Works Association, and the Water Pollution Control Federation.

Applications

Arch Chemicals Calcium Hypochlorite tablets are a ready and convenient source of available chlorine, suitable for use in applications where the disinfecting and oxidizing power of chlorine are needed. They are easily measured and handled, and do not require operators to handle gas cylinders or large volumes of liquids. The tablets have been registered and listed with the appropriate authorities for many applications. Some of these are listed in the table below. Arch Chemicals has available further information on many of these uses as well as others, and new literature is continually being prepared. Ask your Arch Chemicals representative for information on your application.

Properties of HTH© Dry Chlorinator	**Registered*, listed***
Aquaculture	√
Beverage Bottling	√
Brewing	√
Canneries	√
Clinical Pools	√
Cooling Water	√
Dairy Plants	√
Fish and Shellfish Processing	√
Hard Surface Cleaning	√
Industrial Wastewater	√
Laundries	√
Meat Processing	√
Mold and Mildew Removal	√
Municipal Water Treatment	√
Orchards	√
Poultry Plants	√
Private water supplies	√
Pulp and Paper Plants	√
Restaurant Utensils	√
Sewage effluent	√
Swimming Pools, Spas and Hot Tubs	√
Tanneries	√
Vegetable Production and Processing	√
Vineyards, wineries	√
Other applications	√

**See Regulatory Information, below, for partial description. Always check with local authorities to assure compliance with all applicable regulations.*

Dosage and Preparation of Solutions

In general, solution preparation is accomplished more readily with granular than with tableted products. However, the tablets' low dust and pre-measured sizes offer some handling advantages for preparation of solutions. Various types of feeders are also available to accomplish the addition of the proper dosages for your application. Consult your Arch Chemicals Sales Office for more information on tablet feeders for our calcium hypochlorite tablets.

While it is possible to prepare solutions of calcium hypochlorite containing 180 g/L (18%) of product, practical working solutions for most applications range from 200 ppm up to 5% available chlorine. Once you have determined the concentration appropriate for your application, consult the instructions below for its preparation.

NOTE: Stock solutions should be freshly prepared and kept in properly labeled containers to protect against contamination.

Determination of Amount of Cal Hypo Needed:

To prepare the proper strength solution, first calculate the volume of the holding tank, and then use the tablets below to determine the required amount that must be added to the water to obtain the desired solution strength.

*Weight of **HTH©** **Dry Chlorinator** Required to Prepare Various Strength Solutions*

Concentration Available Chlorine Desired	Volume of Water in Liters			
	100	200	500	1000
	Weight of HTH© Dry Chlorinator Required (in kg unless otherwise noted)			
200 ppm	30.8g	61.5g	0.154	0.308
0.1%	0.15	0.31	0.77	1.54
1.0%	1.54	3.08	7.69	15.39
1.5%	2.31	4.62	11.54	23.08
2.0%	3.08	6.15	15.39	30.77
2.5%	3.85	7.69	19.23	38.46
3.0%	4.62	9.23	23.08	46.16
4.0%	6.15	12.31	30.77	61.54
5.0%	7.69	15.39	38.46	76.93

PREPARING THE SOLUTION:

Solutions should be made up in clean polyethylene containers. ***Add the required volume of water first.*** Then add the required amount of Arch Chemicals calcium hypochlorite tablets to the water. Stir with a clean wooden or metal stirrer, making sure to keep it away from clothing, skin and eyes. Some carbonates in the water will precipitate to the bottom of the container, as will the small amount of insolubles present in the tablets. The total amount of precipitate will always exceed the insoluble present in our calcium hypochlorite tablets.

NOTE: Always add calcium hypochlorite to water. Do not reverse this procedure since a rapid evolution of heat may occur, possibly resulting in splattering or even explosion if the container is closed.

The resulting solution can be poured into another container, or can be fed from the same container, providing the mouth of the line to the chemical feed pump is kept above the precipitate level.

Safety and Handling

A brief synopsis of safety information for Arch Chemicals calcium hypochlorite tablets is provided below. ***Always read and follow label instructions and precautions.*** For complete, up-to-date information on safety, obtain the current Material Safety Data Sheet (MSDS) by contacting your Arch Chemicals Sales Office.

STORAGE

Arch Chemicals calcium hypochlorite tablets should always be stored in tightly sealed containers, and in a cool, dry, well-ventilated area. Keep the product away from open flame, combustible materials and other chemicals. Since it is a strong oxidizing agent, it should not be stored near organic materials, acids, corrosive liquids, other oxidizers, or any reactive material.

HANDLING

Arch Chemicals calcium hypochlorite is a strong oxidizing agent. Use only clean, dry utensils for measuring and transferring the tablets. ***Mix only into cold water by adding Arch Chemicals calcium hypochlorite tablets.*** Do not reverse this procedure since a rapid evolution of heat may occur, possibly resulting in spattering, or explosion if in a confined area.

Contact with household products, acids, oils, paint products, chemicals (including other pool chemicals), or other foreign materials may cause intense fires, explosion, or hazardous gases. Prevent burning material such as a lighted cigarette from contacting Arch Chemicals calcium hypochlorite tablets.

PERSONNEL PROTECTION

Personnel handling Arch Chemicals calcium hypochlorite tablets should avoid getting it into eyes, on skin or on clothing, and should not breathe the dust. Always use with adequate ventilation, and when handling in volume, wear goggles, coveralls, neoprene gloves and boots, and a full face-piece respirator with chlorine cartridges and dust/mist filter. Remove contaminated clothing and wash before reuse.

FIRST AID

Skin or eyes: Immediately flush with large amounts of cold water for at least 15 minutes. Call a physician.
Ingestion: Immediately drink large quantities of water. Do not induce vomiting. Call a physician.
Inhalation: Immediately remove victim to fresh air. Call a physician.

IN THE EVENT OF FIRE

Contact emergency personnel immediately. If Arch Chemicals calcium hypochlorite tablets are threatened by fire, cool exposed containers with large volumes of water. **Do not use dry chemical extinguishers.** If the product is involved in a fire, use large volumes of water to extinguish. Firefighters should use air-independent respiratory equipment.

SPILL AND LEAK PROCEDURES

Remove all sources of ignition. Wear a dust and chlorine respirator (see Personnel protection above). Wear goggles, coveralls, and rubber, neoprene or PVC gloves and boots. Clean up in a manner to minimize contamination with organic material. Do not return spilled material to original container. Place in a fresh container and isolate outside or in a well-ventilated area. Do not seal the container. Call Arch Chemicals for disposal instructions. Flush any residual material with large quantities of water. Wash all contaminated clothing before reuse. In the event of a large spill, call **1-423-780-2970** in the USA.

DISPOSAL

Care must be taken to prevent environmental contamination from the use of this material. The user of this material has the responsibility to dispose of unused material, residues, and mixtures which contain this material, as well as containers in which the material is mixed or stored, in compliance with all relevant laws and regulations regarding shipment, treatment, storage, and disposal for hazardous and nonhazardous wastes.

REGULATORY INFORMATION

For Arch Chemicals calcium hypochlorite tablets, the DOT description from the Hazardous Materials Table 49 CFR 172 is: Calcium Hypochlorite, mixtures, Dry, Oxidizer 5.1, UN 1748, PG II.

Arch Chemicals calcium hypochlorite meets the American Water Works Association Standard for Hypochlorites (AWWA B300-92) for use in treatment of municipal and industrial water supplies. It also meets AWWA standards for use in disinfecting water mains, water storage facilities, water treatment plants and wells (AWWA C651-92, C652-92, C653-95, and C654-95).

Arch Chemicals calcium hypochlorite tablets have been registered with the US Environmental Protection Agency (EPA) for a wide range of uses. There are USDA and FDA listing as well as international registrations. For additional information on regulatory status of your use for calcium hypochlorite, contact your distributor or write or fax Arch Chemicals at the address below, fax number in USA 1-770-970-4096. Refer to AD number 6159-0800 in your inquiry.

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