Arch Chemicals, Inc.

SAFETY DATA SHEET

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:	1-800-654-6911 (OUTSIDE USA: 1-423-780-2970)
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:	1-800-424-9300 (OUTSIDE USA: 1-703-527-3887)
FOR ALL SDS QUESTIONS & REQUESTS, CALL:	1-800-511-MSDS (OUTSIDE USA: 1-423-780-2347)

PRODUCT NAME: **HTH® SUPER 70**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004
United States of America (USA)

REVISION DATE:	09/19/2016
SUPERCEDES:	
MSDS Number:	000000033182
SYNONYMS:	
CHEMICAL FAMILY:	Mixture
DESCRIPTION / USE	Water treatment chemical
FORMULA:	None established

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Oxidizing solids	:	Category 2
Acute toxicity (Oral)	:	Category 4
Skin corrosion	:	Category 1B
Serious eye damage	:	Category 1
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)
Acute toxicity (Inhalation)	:	Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements	:	H272 May intensify fire; oxidizer. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H331 Toxic if inhaled. H335 May cause respiratory irritation.
Precautionary statements	:	**Prevention:** P210 Keep away from heat. P220 Keep/Store away from clothing/ combustible materials. P221 Take any precaution to avoid mixing with combustibles. P260 Do not breathe dust or mist. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P271 Use only outdoors or in a well-ventilated area. **Response:** P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. P391 Collect spillage. **Storage:** P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. **Disposal:** P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME	CAS #	% RANGE
Hypochlorous acid, calcium salt (2:1)	7778-54-3	60 - 80
SODIUM CHLORIDE	7647-14-5	10 - 20
CALCIUM CARBONATE	471-34-1	0 - 5
Chloric acid, calcium salt (2:1)	10137-74-3	0 - 5
Calcium chloride	10043-52-4	0 - 5
Calcium hydroxide	1305-62-0	0 - 4

SECTION 4. FIRST AID MEASURES

Inhalation: Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. Give oxygen. First aider needs to protect himself. Call a physician immediately.

Skin Contact: Take off all contaminated clothing immediately. After contact with skin, wash immediately with plenty of soap and water. Call a physician immediately.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Ingestion: Call a physician immediately. Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA): This product is chemically reactive with many substances. Any contamination of the product with other substances by spill or otherwise may result in a chemical reaction and fire., This product is a strong oxidizer which is capable of intensifying a fire once started., Product is not known to be flammable, combustible or pyrophoric.

Flammable Properties

Flash Point: Not applicable

Autoignition Temperature: Not applicable

Fire / Explosion Hazards:	During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Extinguishing Media:	Water only. Do not use dry extinguishers containing ammonium compounds.
Fire Fighting Instructions:	Use water spray to cool unopened containers.
Upper Flammable / Explosive Limit, % in air:	Not applicable
Lower Flammable / Explosive Limit, % in air:	Not applicable

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations:	In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

Spill Mitigation Procedures

Air Release:	Vapors may be suppressed by the use of water fog. All water utilized to assist in fume suppression, decontamination or fire suppression may be contaminated and must be contained before disposal and/or treatment.
Water Release:	This product is heavier than water. This material is soluble in water. Monitor all exit water for available chlorine and pH. Advise local authorities of any contaminated water release.
Land Release:	Contact 1-800-654-6911 immediately. DANGER: All spills of this product should be treated as contaminated. Contaminated product may initiate a chemical reaction that may spontaneously ignite any combustible material present, resulting in a fire of great intensity. In case of a spill, separate all spilled product from packaging, debris and other material. Using a clean broom or shovel, place all spilled product into plastic bags, and place those bags into a clean, dry disposal container, properly marked and labeled. Disposal containers made of plastic or metal are recommended. Do not seal disposal containers tightly. Immediately remove all product in disposal containers to an isolated area outdoors. Place all damaged packaging material in a disposal container of water to assure decontamination (i.e. removal of all product) before disposal. Place all undamaged packaging in a clean, dry container properly marked and labeled. Call for disposal procedures.

SECTION 7. HANDLING AND STORAGE

Handling:	Avoid breathing dust. Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Remove contaminated clothing and wash before reuse.

Storage:	Keep product tightly sealed in original containers. Store product in a cool, dry, well-ventilated area. Store away from combustible or flammable products. Keep product packaging clean and free of all contamination, including, e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc.
Shelf Life Limitations:	Do not store product where the average daily temperature exceeds 95° F. Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products. Shelf life (that is, the period of time before the product goes below stated label strength) is determined by storage time and temperatures. Store in a cool, dry and well ventilated area. Prolonged storage at elevated temperatures will significantly shorten the shelf life. Storage in a climate controlled storage area or building is recommended in those areas where extremes of high temperature occur., Average daily temperature of 35° C / 95° F. Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products.
Incompatible Materials for Storage:	Do not allow product to come in contact with other materials, including e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc. A chemical reaction with such substances can cause a fire of great intensity.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation:	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Protective Equipment for Routine Use of Product

Respiratory Protection :	A NIOSH approved full-face air purifying respirator equipped with combination chlorine/P100 cartridges. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit., Wear a NIOSH approved respirator if levels above the exposure limits are possible.
Skin Protection :	Wear impervious gloves to avoid skin contact. A full impervious suit is recommended if exposure is possible to a large portion of the body. A safety shower should be provided in the immediate work area.
Eye Protection:	Use chemical goggles. An eye wash and safety shower should be provided in the immediate work area.
Protective Clothing Type:	Neoprene, Nitrile, Natural rubber (This includes: gloves, boots, apron, protective suit)

Components with workplace control parameters

Components (CAS-No.)	Value	Control	Basis (Update)

		parameters	
Calcium hydroxide (1305-62-0)	TWA	5 mg/m3	ACGIH (02 2014)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	free flowing, granular
Color:	white
Odor:	Chlorine-like
Molecular Weight:	143 g/mol
pH :	10.4 - 10.8 77 °F (25 °C) (1% solution in neutral, distilled water)
Boiling Point:	Not applicable
Density	0.8 g/cm3at 77 °F (25 °C)
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Viscosity:	no data available
Solubility in Water:	Approximately 18%, Product also contains calcium hydroxide and calcium carbonate which will leave a residue.
Partition coefficient n-octanol/water:	
Evaporation Rate:	Not applicable
Oxidizing:	The substance or mixture is classified as oxidizing with the category 2.
Volatiles, % by vol.:	Not applicable
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489). This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.
HAP Content	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Product is not sensitive to mechanical shock or impact. Product is not sensitive to electrical static discharge. Product will not undergo hazardous polymerization. Product is an NFPA Class 3 oxidizer which can cause a severe increase in fire intensity. Not pyrophoric. Not an organic peroxide. If subjected to excessive temperatures, the product may undergo rapid decomposition, evolution of chlorine gas, and heat sufficient to ignite combustible substances. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter. Use copious amounts of water for fires involving this product.
Conditions to Avoid:	Do not store next to heat source, in direct sunlight, or elevated storage temperature. Do not store where the daily average temperature exceeds 95 °F. Prevent ingress of humidity and moisture into container or package. Always close the lid.

Chemical Incompatibility:	This product is chemically reactive with many substances, including, e.g., other pool treatment products, acids, organics, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, corrosive ,flammable or combustible materials. Do not allow product to contact any foreign matter, including other water treatment products. Contamination or improper use may cause a fire of great intensity, explosion or the release of toxic gases.
Hazardous Decomposition Products:	No decomposition if stored normally.
Decomposition Temperature:	170 - 180 °C

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology
Oral LD50 value:

Hypochlorous acid, calcium salt (2:1)	LD50	850 mg/kg	Rat
SODIUM CHLORIDE	LD50	3,000 mg/kg	Rat
	LD50	3,550 mg/kg	Rat
Calcium chloride	LD50	2,301 mg/kg	Rat
	LD50	1,000 mg/kg	Rat
Calcium hydroxide	LD50	7,340 mg/kg	Rat

Component Animal Toxicology
Dermal LD50 value:

SODIUM CHLORIDE	LD50	> 10,000 mg/kg	Rabbit
Calcium chloride	LD50	> 5,000 mg/kg	Rabbit
	LD50	2,630 mg/kg	Rat

Component Animal Toxicology
Inhalation LC50 value:

Product Animal Toxicity

Oral LD50 value:	Acute toxicity estimate 945.32 mg/kg
Dermal LD50 value:	LD50 > 2,000 mg/kg Rabbit
Inhalation LC50 value:	No data.
Skin Irritation:	DRY MATERIAL CAUSES MODERATE SKIN IRRITATION., WET MATERIAL CAUSES SKIN BURNS.
Eye Irritation:	Corrosive to eyes.
Skin Sensitization:	This material is not known or reported to be a skin or respiratory sensitizer.

Subchronic / Chronic Toxicity:

Reproductive and Developmental Toxicity:

Mutagenicity:

Carcinogenicity:

SECTION 12. ECOLOGICAL INFORMATION

Overview: no data available

Ecological Toxicity Values - Product:

Fish - Acute toxicity LC50 no data available

Bioaccumulative potential: no data available

Mobility: no data available

Ecological Toxicity Values for: Hypochlorous acid, calcium salt (2:1)

Daphnia magna (Water flea)	-	48 h EC50 0.067 mg/l
Bobwhite quail	-	Dietary LC50 > 5,000 ppm
Bobwhite quail	-	Oral LD50 3,474 mg/kg
Mallard ducklings	-	Dietary LC50 > 5,000 ppm

Ecological Toxicity Values for: SODIUM CHLORIDE

Carassius auratus (goldfish)	-	Acute toxicity 10 d LC50 > 10,000 mg/l
Daphnia magna (Water flea)	-	Immobilization 48 h EC50> 100 mg/l

Ecological Toxicity Values for: Calcium chloride

Lepomis macrochirus (Bluegill sunfish)	-	Acute toxicity 96 h LC50 10,650 mg/l
Daphnia magna (Water flea)	-	48 h EC50 2,400 mg/l
Daphnia magna (Water flea)	-	48 h EC50 144 mg/l
Chlorella vulgaris (Fresh water algae)	-	Cell multiplication inhibition test 120 h EC10 140 mg/l

Ecological Toxicity Values for: Calcium hydroxide

Gambusia affinis (Mosquito fish)	-	Acute toxicity 96 h LC50 160 mg/l

SECTION 13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary : Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number	:	2880
Description of the goods	:	Calcium hypochlorite, hydrated mixtures
	:	(Calcium hypochlorite)
Class	:	5.1
Packing group	:	II
Labels	:	5.1
Emergency Response Guidebook Number	:	140

TDG

UN number	:	2880
Description of the goods	:	CALCIUM HYPOCHLORITE, HYDRATED MIXTURE (Calcium hypochlorite)
Class	:	5.1
Packing group	:	II
Labels	:	5.1

IATA

UN number	:	2880
Description of the goods	:	Calcium hypochlorite, hydrated mixture (Calcium hypochlorite)
Class	:	5.1
Packing group	:	II
Labels	:	5.1
Packing instruction (cargo aircraft)	:	562
Packing instruction (passenger aircraft)	:	558
Packing instruction (passenger aircraft)	:	Y544

IMDG-CODE

UN number	:	2880

Description of the goods	:	CALCIUM HYPOCHLORITE, HYDRATED MIXTURE (Calcium hypochlorite)
Class	:	5.1
Packing group	:	II
Labels	:	5.1
EmS Number 1	:	F-H
EmS Number 2	:	S-Q
Marine pollutant	:	yes

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Calcium dihypochlorite	7778-54-3	10	13

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Components	CAS-No.	Component RQ (lbs)
Calcium dihypochlorite	7778-54-3	10

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Components	CAS-No.	Concentration
Calcium dihypochlorite	7778-54-3	70 - 90 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

Components	CAS-No.
Calcium dihypochlorite	7778-54-3
Calcium chlorate	10137-74-3
Calcium carbonate	471-34-1
Calcium dihydroxide	1305-62-0

Pennsylvania Right To Know

Components	CAS-No.
Calcium dihypochlorite	7778-54-3
Sodium chloride	7647-14-5
Water	7732-18-5
Calcium chloride	10043-52-4
Calcium chlorate	10137-74-3
Calcium carbonate	471-34-1
Calcium dihydroxide	1305-62-0

Pennsylvania Right To Know

Components	CAS-No.
Calcium dihypochlorite	7778-54-3
Sodium chloride	7647-14-5
Water	7732-18-5
Calcium chloride	10043-52-4
Calcium chlorate	10137-74-3

New Jersey Right To Know

Components	CAS-No.
Calcium dihypochlorite	7778-54-3
Sodium chloride	7647-14-5
Water	7732-18-5
Calcium chloride	10043-52-4
Calcium chlorate	10137-74-3

Calcium carbonate	471-34-1
Calcium dihydroxide	1305-62-0

New York City Hazardous Substances

No components listed on the New York City Hazardous Substances List

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16. OTHER INFORMATION

Major References : Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT. .