Arch Chemicals, Inc.

# SAFETY DATA SHEET

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|---|---|
| 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 Max 70 Granular Chlorinator**

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

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

| | |
|---|---|
| REVISION DATE: | 06/01/2017 |
| 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 |
|---|---|---|
| Calcium hypochlorite | 7778-54-3 | >= 70 - < 90 |

| | | |
|---|---|---|
| Calcium chloride | 10043-52-4 | >= 5 - < 10 |
| Calcium carbonate | 471-34-1 | >= 5 - < 10 |
| Calcium hydroxide | 1305-62-0 | >= 3 - < 5 |

## SECTION 4. FIRST AID MEASURES

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|---|---|
| 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

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|---|---|
| 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 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

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|---|---|
| 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 parameters | Basis (Update) |
|---|---|---|---|
| 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<br>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:

| | | | |
|---|---|---|---|
| Calcium hypochlorite | LD50 | 850 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:

| | | | |
|---|---|---|---|
| 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: | LC50 4 h > 0.51 mg/l Rat |
| 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: Calcium hypochlorite

| | | |
|---|---|---|
| Lepomis macrochirus (Bluegill sunfish) | - | 96 h LC50 0.057 mg/l |
| Daphnia magna (Water flea) | - | 48 h EC50 0.067 mg/l |
| Colinus virginianus (Bobwhite quail) | - | Dietary LC50 > 5,000 ppm |
| Colinus virginianus (Bobwhite quail) | - | Oral LD50 3,474 mg/kg |
| Mallard ducklings | - | Dietary LC50 > 5,000 ppm |

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 |
| 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 |
| Class | : | 5.1 |
| Packing group | : | II |
| Labels | : | 5.1 |

**IATA**

| | | |
|---|---|---|
| UN number | : | 2880 |
| Description of the goods | : | Calcium hypochlorite, hydrated mixture |
| 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 |
| 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 hypochlorite | 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 311/312 Hazards**

See above: SECTION 2. Hazard Identification-GHS Classification

**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 hypochlorite | 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 hypochlorite | 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 hypochlorite | 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 hypochlorite | 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 hypochlorite | 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 hypochlorite | 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

| | |
|---|---|
| SECTIONS REVISED: | Arch is a wholly-owned subsidiary of Lonza and continues to operate as Arch Chemicals, Inc. |
| 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. .