

7100; 1-1901



**Arch
Chemicals,
Inc.**

**MATERIAL SAFETY
DATA SHEET**

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:

FOR ALL MSDS QUESTIONS & REQUESTS, CALL:

1-800-654-6911 (OUTSIDE
USA: 1-423-780-2970)

1-800-424-9300 (OUTSIDE
USA: 1-703-527-3887)

1-800-511-MSDS (OUTSIDE
USA: 1-423-780-2347)

PRODUCT NAME: Calcium Hypochlorite Granular

EPA Registration Number: 1258-940

1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc.
501 Merritt 7 PO Box 5204
Norwalk, CT 06856-5204

REVISION DATE: 11/06/2009
SUPERCEDES: 08/28/2008

MSDS Number: 000000005446
SYNONYMS: None
CHEMICAL FAMILY: Hypochlorite
DESCRIPTION / USE: Sanitizer and Oxidizer
FORMULA: None established

2. HAZARDS IDENTIFICATION

OSHA Hazard
Classification:

Toxic by inhalation., Corrosive to eyes and skin, Lung toxin, Oxidizer

Routes of Entry:

Inhalation, skin, eyes, ingestion

Chemical Interactions:

No known or reported interactions.

Medical Conditions Aggravated:

Asthma, respiratory and cardiovascular disease

Human Threshold Response Data

Odor Threshold: Approximately 1.4 mg/m³ (based on odor threshold of chlorine)

Irritation Threshold: Approximately 13-22 mg/m³ (based on irritation threshold of chlorine)

Hazardous Materials Identification System / National Fire Protection Association Classifications

<u>Hazard Ratings :</u>	<u>Health</u>	<u>Flammability</u>	<u>Physical / Instability</u>	<u>PPI / Special hazard.</u>
HMIS	3	0	1	
NFPA	3	0	1	OX



3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
CALCIUM HYPOCHLORITE	7778-54-3	60 - 80
SODIUM CHLORIDE	7647-14-5	10 - 20
CALCIUM CHLORATE	10137-74-3	0 - 5
CALCIUM CHLORIDE	10043-52-4	0 - 5
CALCIUM HYDROXIDE	1305-62-0	0 - 4
CALCIUM CARBONATE	471-34-1	0 - 5
Water	7732-18-5	5.5 - 10

4. FIRST AID MEASURES

General Advice:	Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Inhalation:	IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Skin Contact:	IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Eye Contact:	IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.



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.

Additional Spill Information :

Hazardous concentrations in air may be found in local spill area and immediately downwind. Remove all sources of ignition. Stop source of spill as soon as possible and notify appropriate personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration. This material may be neutralized for disposal; you are requested to contact Arch Chemicals at 1-800-654-6911 before beginning any such procedure. FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC: 1-800-424-9300 REPORTABLE QUANTITY: 10 lbs. (as calcium hypochlorite) per 40 CFR 302.4.

7. HANDLING AND STORAGE

Handling:

Avoid inhalation of dust and fumes. 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.



CALCIUM HYDROXIDE	1305-62-0	ZUS_OSHAP1	5 mg/m3 TWA respirable fraction
CALCIUM CARBONATE	471-34-1	ZUS_OSHAP1	15 mg/m3 TWA Total dust
CALCIUM CARBONATE	471-34-1	ZUS_OSHAP1	5 mg/m3 TWA respirable dust fraction

*ARCH-ROEG: Arch Recommended Occupational Exposure Guideline.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	Free flowing, powder
Color:	white
Odor:	Chlorine-like
Molecular Weight:	(Active ingredient)143.00
Specific Gravity :	Not applicable
pH :	10.4 - 10.8 (1% solution in neutral, distilled water) (@ 25 Deg. C)
Boiling Point:	Not applicable
Freezing Point:	Not applicable
Melting Point:	Not applicable
Density:	0.8g/cc
Vapor Pressure:	(@ 25 Deg. C) Not applicable
Vapor Density:	Not applicable
Viscosity:	Not applicable
Fat Solubility:	No data
Solubility in Water:	18 % (@ 25 Deg. C) Product also contains calcium hydroxide and calcium carbonate which will leave a residue.
Partition coefficient n-octanol/water:	No data
Evaporation Rate:	Not applicable
Oxidizing:	Oxidizer
Volatiles, % by vol.:	Not applicable
VOC Content	Not applicable
HAP Content	Not applicable

10. STABILITY AND REACTIVITY



CALCIUM HYPOCHLORITE	Inhalation LC50 4 h (65% calcium hypochlorite), (Nose Only) = 0.51 MG/L Rat
SODIUM CHLORIDE	Inhalation LC50 1 h > 42 MG/L Rat
CALCIUM CHLORIDE	No data
CALCIUM HYDROXIDE	No data

Product Animal Toxicity

<u>Oral LD50 value:</u>	LD50 Approximately 800 mg/kg Rat
<u>Dermal LD50 value:</u>	LD50 > 2,000 mg/kg Rabbit
<u>Inhalation LC50 value:</u>	Inhalation LC50 1.00 h (Nose Only) > 2.04 MG/L Rat Inhalation LC50 4 h (Nose Only) > 0.51 MG/L Rat
<u>Skin Irritation:</u>	DRY MATERIAL CAUSES MODERATE SKIN IRRITATION., WET MATERIAL CAUSES SKIN BURNS.
<u>Eye Irritation:</u>	Corrosive to eyes.
<u>Skin Sensitization:</u>	This material is not known or reported to be a skin or respiratory sensitizer.

CALCIUM HYPOCHLORITE

<u>Acute Toxicity:</u>	This product is corrosive to all tissues contacted and upon inhalation, may cause irritation to mucous membranes and respiratory tract. The dry material is irritating to the skin. However when wet, it will produce burns to the skin.
<u>Subchronic / Chronic Toxicity:</u>	There are no known or reported effects from repeated exposure except those secondary to burns.
<u>Reproductive and Developmental Toxicity:</u>	Calcium hypochlorite has been tested for teratogenicity in laboratory animals. Results of this study have shown that calcium hypochlorite is not a teratogen.

CALCIUM CHLORIDE

Not known or reported to cause reproductive or developmental toxicity.

<u>Mutagenicity:</u>	Calcium hypochlorite has been tested in the Dominant lethal assay in male mice, and it did not induce a dominant lethal response. Calcium hypochlorite has been reported to produce mutagenic activity in two in vitro assays. It has, however, been shown to lack the capability to produce mutations in animals based on results from the micronucleus assay. In vitro assays frequently are inappropriate to judge the mutagenic potential of bactericidal chemicals due to a high degree of cellular toxicity. The concentration which produces mutations in these in vitro assays is significantly greater than the concentrations used for disinfection. Based on high cellular toxicity in in vitro assays and the lack of mutagenicity in animals, the risk of genetic damage to humans is judged not significant.
----------------------	--

CALCIUM CHLORIDE

This product was determined to be non-mutagenic in the Ames assay. It was also shown to be non-clastogenic in the chromosomal aberration test.

<u>Carcinogenicity:</u>	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA. One hundred mice were exposed dermally 3 times a week for 18 months to a solution of calcium hypochlorite. Histopathological examination failed to show an increased
-------------------------	---



**Arch
Chemicals,
Inc.**

MATERIAL SAFETY DATA SHEET

Disposal restrictions under 40 CFR 268 and must be managed accordingly.

Disposal Methods : As a hazardous solid waste it should be disposed of in accordance with local, state and federal regulations.

Potential US EPA Waste Codes : D001

14. TRANSPORT INFORMATION

Land (US DOT): UN2880 CALCIUM HYPOCHLORITE, HYDRATED MIXTURE 5.1 II
Water (IMDG): UN2880 CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, 5.1 II
MARINE POLLUTANT

Flash Point: Not applicable
Air (IATA): UN2880 CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, 5.1 II
Emergency Response Guide Number: ERG # 140

Transportation Notes: Material is not regulated as a marine pollutant for ground transportation within the US if shipped in non-bulk packages.
REPORTABLE QUANTITY: 10 lbs. (Per 49 CFR 172.101, Appendix)

EMS: F-H, S-Q

15. REGULATORY INFORMATION

UNITED STATES:

Toxic Substances Control Act (TSCA): This is an EPA registered pesticide.
EPA Pesticide Registration Number: 1258-940

FIFRA Listing of Pesticide Chemicals (40 CFR 180): This product is regulated under the Federal Insecticide, Fungicide and Rodenticide Act. It must be used for purposes consistent with its labeling.

Superfund Amendments and Reauthorization Act (SARA) Title III:

Hazard Categories Sections 311 / 312 (40 CFR 370.2):
Health Immediate (Acute) Health Hazard
Physical Fire Hazard

Emergency Planning & Community Right to Know (40 CFR 355, App. A):

Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:

ZUS_SAR302 TPQ (threshold planning quantity) None established

Reportable Quantity (49 CFR 172.101, Appendix):

ZUS_CERCLA Reportable quantity Calcium hypochlorite
Value: 10lbs



**Arch
Chemicals,
Inc.**

**MATERIAL SAFETY
DATA SHEET**

CAS #	COMPONENT NAME
10137-74-3	CALCIUM CHLORATE
1305-62-0	CALCIUM HYDROXIDE
7778-54-3	CALCIUM HYPOCHLORITE

ZUSNJ_RTK

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01

CALCIUM CHLORATE CHLORIC ACID, CALCIUM SALT

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01

CALCIUM HYDROXIDE CALCIUM HYDROXIDE (Ca(OH)₂) HYDRATED LIME

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01

CALCIUM HYPOCHLORITE HYPOCHLOROUS ACID, CALCIUM SALT BLEACHING
POWDER

Massachusetts:

CAS #	COMPONENT NAME
10137-74-3	CALCIUM CHLORATE
1305-62-0	CALCIUM HYDROXIDE
7778-54-3	CALCIUM HYPOCHLORITE

ZUSMA_RTK

Massachusetts Right to Know List of Chemicals and Hazard Classifications

1993-04-24

CALCIUM CHLORATE

Massachusetts Right to Know List of Chemicals and Hazard Classifications

1993-04-24

CALCIUM HYDROXIDE

Massachusetts Right to Know List of Chemicals and Hazard Classifications

1993-04-24

CALCIUM HYPOCHLORITE

California Proposition 65:

CAS #	COMPONENT NAME
-------	----------------

ZUSCA_P65

None established