

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** Calcium Hypochlorite

**Other means of identification**

**Product No.:** 1378

**Recommended use and restriction on use**

**Recommended use:** Not available.

**Restrictions on use:** Not known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Company Name:** Avantor Performance Materials, Inc.  
**Address:** 3477 Corporate Parkway, Suite 200  
Center Valley, PA 18034

**Telephone:** Customer Service: 855-282-6867

**Fax:**  
**Contact Person:** Environmental Health & Safety  
**e-mail:** info@avantormaterials.com

**Emergency telephone number:**

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

## 2. Hazard(s) identification

**Hazard classification**

**Physical hazards**

Oxidizing solids Category 2

**Health hazards**

Acute toxicity (Oral) Category 3  
Skin corrosion/irritation Category 1B  
Serious eye damage/eye irritation Category 1

**Environmental hazards**

Acute hazards to the aquatic environment Category 1

**Label elements**

**Hazard symbol:**



**Signal word:** Danger

**Hazard statement:** May intensify fire; oxidizer.  
Toxic if swallowed.  
Causes severe skin burns and eye damage.  
Very toxic to aquatic life.

**Precautionary statement**

- Prevention:** Keep away from heat/open flames/hot surfaces. - No smoking. Keep/Store away from clothing/combustible materials. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid release to the environment.
- Response:** IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Collect spillage.
- Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None.

**3. Composition/information on ingredients**

**Substances**

Chemical identity	Common name and synonyms	CAS number	Content in percent (%)*
CALCIUM HYPOCHLORITE		7778-54-3	100%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First-aid measures**

- General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance. Ensure that emergency personnel are aware of the material involved, and take precautions to protect themselves.
- Ingestion:** Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. Never give liquid to an unconscious person.
- Inhalation:** Move to fresh air. Get medical attention immediately. If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary.
- Skin contact:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse.
- Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

**Most important symptoms/effects, acute and delayed**

**Symptoms:** Irritating to eyes, respiratory system and skin.

**Indication of immediate medical attention and special treatment needed**

**Treatment:** Symptoms may be delayed. Treat symptomatically.

**5. Fire-fighting measures**

**General fire hazards:** Oxidizing material. In case of fire and/or explosion do not breathe fumes. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Do not use water as an extinguisher. Foam. Water fog.

**Unsuitable extinguishing media:** Dry chemical. Straight Streams of Water

**Specific hazards arising from the chemical:** Strong oxidizer. May intensify fire; oxidizer.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Keep unauthorized personnel away. Ventilate closed spaces before entering them. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment.

**Methods and material for containment and cleaning up:** Remove sources of ignition. Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Use only non-sparking tools.

**Notification Procedures:** Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

**Environmental precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

## 7. Handling and storage

<b>Precautions for safe handling:</b>	Do not taste or swallow. Wash hands thoroughly after handling. Avoid contact with eyes. Keep away from food, drink and animal feeding stuffs. Keep away from combustible material. Do not eat, drink or smoke when using the product. Do not smoke, use open fire or other sources of ignition. Use personal protective equipment as required. See Section 8 of the MSDS for Personal Protective Equipment. Observe good industrial hygiene practices. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Take any precaution to avoid mixing with combustibles. Wear fire/flame resistant/retardant clothing. Avoid contact with skin.
<b>Conditions for safe storage, including any incompatibilities:</b>	Keep container tightly closed in a cool, well-ventilated place. Keep container dry. Store away from incompatible materials. Eliminate sources of ignition. Store locked up.

## 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

None of the components have assigned exposure limits.

#### Appropriate engineering controls

No data available.

### Individual protection measures, such as personal protective equipment

<b>General information:</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.
<b>Eye/face protection:</b>	Wear safety glasses with side shields (or goggles) and a face shield.
<b>Skin protection</b>	
<b>Hand protection:</b>	Chemical resistant gloves
<b>Other:</b>	Wear suitable protective clothing.
<b>Respiratory protection:</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
<b>Hygiene measures:</b>	Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Avoid contact with eyes, skin, and clothing.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Solid
<b>Form:</b>	Crystals or powder
<b>Color:</b>	White

<b>Odor:</b>	Strong chlorine odor
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/freezing point:</b>	100 °C
<b>Initial boiling point and boiling range:</b>	No data available.
<b>Flash Point:</b>	No data available.
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	6.9 AIR=1
<b>Relative density:</b>	2.35 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	No data available.
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Other information</b>	
<b>Molecular weight:</b>	142.98 g/mol (Ca.2ClHO)

## 10. Stability and reactivity

<b>Reactivity:</b>	Reacts with water. Contact with acid liberates toxic gas.
<b>Chemical stability:</b>	Thermally unstable.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Heat, sparks, flames. Moisture. Contact with incompatible materials.
<b>Incompatible materials:</b>	Reducing agents. Flammable/combustible material. Organic compounds. Water. Amines. Ammonia. Nitrogen Oxides
<b>Hazardous decomposition products:</b>	Oxygen. Chlorine. Chlorinated compounds. By heating and fire, toxic vapors/gases may be formed.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion:</b>	Toxic if swallowed.
<b>Inhalation:</b>	May be harmful if inhaled. May cause irritation to the respiratory system.
<b>Skin contact:</b>	Causes severe skin burns.
<b>Eye contact:</b>	Causes serious eye damage.

## Information on toxicological effects

### Acute toxicity (list all possible routes of exposure)

#### Oral

**Product:** LD 50 (Rat): 850 mg/kg

#### Dermal

**Product:** No data available.

#### Inhalation

**Product:** No data available.

#### Repeated dose toxicity

**Product:** No data available.

#### Skin corrosion/irritation

**Product:** Causes severe skin burns.

#### Serious eye damage/eye irritation

**Product:** Causes serious eye damage.

#### Respiratory or skin sensitization

**Product:** Not a skin sensitizer.

#### Carcinogenicity

**Product:** This substance has no evidence of carcinogenic properties.

#### IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

#### US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

#### Germ cell mutagenicity

##### In vitro

**Product:** No mutagenic components identified

##### In vivo

**Product:** No mutagenic components identified

#### Reproductive toxicity

**Product:** No components toxic to reproduction

#### Specific target organ toxicity - single exposure

**Product:** No data available.

#### Specific target organ toxicity - repeated exposure

**Product:** No data available.

#### Aspiration hazard

**Product:** Not classified

#### Other effects:

None known.

## 12. Ecological information

### Ecotoxicity:

#### Acute hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Specified substance(s):

CALCIUM LC 50 (Northern pipefish (*Syngnathus fuscus*), 96 h): 0.27 mg/l Mortality  
 HYPOCHLORITE LC 50 (Golden shiner (*Notemigonus crysoleucas*), 96 h): 0.27 mg/l Mortality  
 LC 50 (Striped bass (*Morone saxatilis*), 96 h): 0.5 mg/l Mortality  
 LC 50 (Carp (*Cyprinus carpio*), 96 h): 0.399 - 0.983 mg/l Mortality  
 LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 0.641 - 1.101 mg/l Mortality

##### Aquatic invertebrates

**Product:** No data available.

##### Specified substance(s):

CALCIUM EC 50 (Rotifer (*Philodina acuticornis*), 24 h): 0.08 mg/l Intoxication  
 HYPOCHLORITE EC 50 (Rotifer (*Philodina acuticornis*), 48 h): 0.07 mg/l Intoxication  
 EC 50 (Blue crab (*Callinectes sapidus*), 48 h): 0.97 mg/l Intoxication  
 EC 50 (Blue crab (*Callinectes sapidus*), 48 h): 1.4 mg/l Intoxication  
 EC 50 (Rotifer (*Philodina acuticornis*), 96 h): 0.07 mg/l Intoxication

#### Chronic hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Aquatic invertebrates

**Product:** No data available.

##### Toxicity to Aquatic Plants

**Product:** No data available.

#### Persistence and degradability

##### Biodegradation

**Product:** There are no data on the degradability of this product.

##### BOD/COD ratio

**Product:** No data available.

#### Bioaccumulative potential

##### Bioconcentration factor (BCF)

**Product:** No data available on bioaccumulation.

##### Partition coefficient n-octanol / water (log Kow)

**Product:** No data available.

**Mobility in soil:** The product is water soluble and may spread in water systems.

**Other adverse effects:** Very toxic to aquatic life.

## 13. Disposal considerations

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Contaminated packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### DOT

UN number:	UN 1748
UN proper shipping name:	Calcium hypochlorite mixtures dry
Transport hazard class(es)	
Class(es):	5.1
Label(s):	5.1
Packing group:	II
Marine Pollutant:	No

### IMDG

UN number:	UN 1748
UN proper shipping name:	CALCIUM HYPOCHLORITE MIXTURE, DRY
Transport hazard class(es)	
Class(es):	5.1
Label(s):	5.1
EmS No.:	F-H, S-Q
Packing group:	II
Marine Pollutant:	No

### IATA

UN number:	UN 1748
Proper Shipping Name:	Calcium hypochlorite mixture, dry
Transport hazard class(es):	
Class(es):	5.1
Label(s):	5.1
Marine Pollutant:	No
Packing group:	II

## 15. Regulatory information

### US federal regulations

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

##### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

##### CERCLA Hazardous Substance List (40 CFR 302.4):

CALCIUM HYPOCHLORITE Reportable quantity: 10 lbs.

### Superfund amendments and reauthorization act of 1986 (SARA)

#### Hazard categories

Acute (Immediate)  Chronic (Delayed)  Fire  Reactive  Pressure Generating

#### SARA 302 Extremely hazardous substance

None present or none present in regulated quantities.

**SARA 304 Emergency release notification**

<b>Chemical identity</b>	<b>RQ</b>
CALCIUM HYPOCHLORITE	10 lbs.

**SARA 311/312 Hazardous chemical**

<b>Chemical identity</b>	<b>Threshold Planning Quantity</b>
CALCIUM HYPOCHLORITE	500 lbs

**SARA 313 (TRI reporting)**

None present or none present in regulated quantities.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

CALCIUM HYPOCHLORITE Reportable quantity: 10 lbs.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**US state regulations**

**US. California Proposition 65**

No ingredient regulated by CA Prop 65 present.

**US. New Jersey Worker and Community Right-to-Know Act**

CALCIUM HYPOCHLORITE Listed

**US. Massachusetts RTK - Substance List**

CALCIUM HYPOCHLORITE Listed

**US. Pennsylvania RTK - Hazardous Substances**

CALCIUM HYPOCHLORITE Listed

**US. Rhode Island RTK**

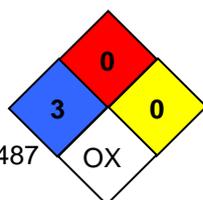
CALCIUM HYPOCHLORITE Listed

**Inventory Status:**

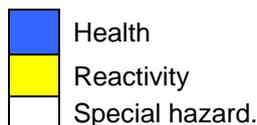
Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

**16. Other information, including date of preparation or last revision**

**NFPA Hazard ID**



 Flammability



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe  
OX: Oxidizing agent

**Issue date:** 08-29-2014

**Revision date:** No data available.

**Version #:** 1.0

**Further information:** No data available.

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