

Safety Data Sheet

Material Name: CALCIUM CHLORIDE

SDS ID: 00231267

*** Section 1 - PRODUCT AND COMPANY IDENTIFICATION ***

Material Name: CALCIUM CHLORIDE

Manufacturer Information

CMC Cometals
CONTACT:
2050 Center Avenue, Suite 250
Ft. Lee, NJ 07024
Mfg Contact: CMC Cometals

EMERGENCY

Chemical Family

inorganic, salt

Synonyms

CALCIUM DICHLORIDE; CALCIUM CHLORIDE (CaCl₂); CALCIUM(2+) CHLORIDE; CaCl₂; RTECS:
EV9800000

*** Section 2 - HAZARDS IDENTIFICATION ***

EMERGENCY OVERVIEW

Color: white to gray

Change in Color: hygroscopic

Physical Form: crystals powder

Odor: odorless

Health Hazards: respiratory tract irritation, skin irritation, eye irritation

POTENTIAL HEALTH EFFECTS

Inhalation

Short Term: irritation, cough, difficulty breathing

Long Term: irritation, nosebleed

Skin

Short Term: irritation (possibly severe), blisters

Long Term: irritation (possibly severe)

Eye

Short Term: irritation (possibly severe), tearing

Long Term: irritation

Ingestion

Short Term: gastrointestinal irritation, nausea, vomiting, stomach pain, heart disorders

Long Term: no information on significant adverse effects

*** Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS ***

CAS	Component	Percent	Symbol(s)	Risk Phrase(s)
10043-52-4	CALCIUM CHLORIDE	100	Xi	R:36
	233-140-8			

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*** Section 4 - FIRST AID MEASURES ***

Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

Skin

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eyes

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion

If a large amount is swallowed, get medical attention.

*** Section 5 - FIRE FIGHTING MEASURES ***

See Section 9 for Flammability Properties

NFPA Ratings: Health: 2 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Flammable Properties

Negligible fire hazard.

Extinguishing Media

Use extinguishing agents appropriate for surrounding fire.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

*** Section 6 - ACCIDENTAL RELEASE MEASURES ***

Occupational spill/release

Collect spilled material in appropriate container for disposal.

*** Section 7 - HANDLING AND STORAGE ***

Handling Procedures

Use methods to minimize dust.

Storage Procedures

Store and handle in accordance with all current regulations and standards. Store in a cool, dry place. Keep container tightly closed and in a well-ventilated place. Protect from physical damage. Empty containers may contain product residue. Follow MSDS and warning labels even when containers are empty. Keep dry. Store with bases. Keep separated from incompatible substances.

*** Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION ***

Component Exposure Limits

ACGIH, NIOSH, EU, OSHA (US) and Mexico have not developed exposure limits for any of this product's components.

Ventilation

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

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PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Protective Clothing

Wear appropriate chemical resistant clothing.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Respiratory Protection

Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum.

Consider warning properties before use.

Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100 or P100.

Any air-purifying full-facepiece respirator equipped with an N95, R95, or P95 filter. The following filters may also be used: N99, R99, P99, N100, R100 or P100.

Any powered, air-purifying respirator with a high-efficiency particulate filter.

Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter.

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

*** Section 9 - PHYSICAL AND CHEMICAL PROPERTIES ***

Physical State:	Solid	Appearance:	Not available
Change in color:	hygroscopic	Color:	white to gray
Physical Form:	crystals powder	Odor:	odorless
Odor Threshold:	Not available	pH:	8 - 9
pH (solution):	10 %	Melting Point:	772 - 782 °C
Boiling Point:	>1600 °C	Vapor Pressure:	Not applicable
Vapor Density (air = 1):	Not applicable	Density:	2.15 g/cc
Specific Gravity (water = 1):	Not available	Water Solubility:	740 g/L @ 20 °C (reacts)
Coeff. Water/Oil Dist:	Not available	Volatility:	0 % by volume @ 21 °C
Molecular Weight:	110.99	Molecular Formula:	Ca-Cl ₂

Solvent Solubility

Soluble: alcohol, acetic acid, acetone

*** Section 10 - STABILITY AND REACTIVITY ***

Chemical Stability

Stable at normal temperatures and pressure.

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Conditions to Avoid

None reported.

Materials to Avoid

halogens, acids, metals, combustible materials

CALCIUM CHLORIDE:

BORIC OXIDE + CALCIUM OXIDE: Possible violent incandescent reaction.

BROMINE TRIFLUORIDE: Possible violent reaction.

FURAN-2-PEROXYCARBOXYLIC ACID: Explodes.

METALS: Corrosive in the presence of moisture.

METHYL VINYL ETHER: May initiate exothermic polymerization.

ZINC: Corrodes, releasing flammable hydrogen gas.

Decomposition Products

chlorine, hydrogen chloride, oxides of calcium

Thermal decomposition products: chlorine.

Possibility of Hazardous Reactions

Will not polymerize.

* * * Section 11 - TOXICOLOGICAL INFORMATION * * *

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

CALCIUM CHLORIDE (10043-52-4)

Oral LD50 Rat: 1000 mg/kg; Dermal LD50 Rat: 2630 mg/kg

RTECS Acute Toxicity (selected)

The components of this material have been reviewed, and RTECS publishes the following endpoints:

CALCIUM CHLORIDE (10043-52-4)

Oral: 1 gm/kg oral rat LD50

Acute Toxicity Level

CALCIUM CHLORIDE (10043-52-4)

Moderately Toxic: ingestion.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA.

RTECS Irritation

The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

Local Effects

CALCIUM CHLORIDE (10043-52-4)

Irritant: inhalation, skin, eye.

RTECS Tumorigenic

The components of this material have been reviewed, and RTECS publishes the following endpoints:

CALCIUM CHLORIDE (10043-52-4)

112 gm/kg oral rat TDLo (20 week(s))

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RTECS Mutagenic

The components of this material have been reviewed, and RTECS publishes the following endpoints:

CALCIUM CHLORIDE (10043-52-4)

cytogenetic analysis rat Ascites tumor 3500 mg/kg; unscheduled DNA synthesis rat intraperitoneal 2500 umol/kg; sex chromosome loss and non disjunction Saccharomyces cerevisiae 200 mmol/L

HEALTH EFFECTS

Inhalation - Acute Exposure

CALCIUM CHLORIDE: Dust may cause irritation of the mucous membranes of the respiratory tract with coughing and shortness of breath.

Inhalation - Chronic Exposure

CALCIUM CHLORIDE: Workers packing dry calcium chloride reported a burning sensation, pain in the nasal cavities, occasional nosebleed, and tickling in the throat. Perforation of the nasal septum has been reported after repeated exposure.

Skin Contact - Acute Exposure

CALCIUM CHLORIDE: May cause irritation, possibly severe, with redness and itching. Irritation is more pronounced when in contact with moist skin.

Skin Contact - Chronic Exposure

CALCIUM CHLORIDE: Repeated or prolonged contact with irritants may cause dermatitis. Irritation is more pronounced when in contact with moist skin.

Eye Contact - Acute Exposure

CALCIUM CHLORIDE: Dust may cause superficial injury with redness, pain, and irritation, possibly severe. Lacrimation and eye discharge may also occur. Irritation is more pronounced in a moist environment such as the eye.

Eye Contact - Chronic Exposure

CALCIUM CHLORIDE: Repeated or prolonged exposure to irritants may cause conjunctivitis. Irritation is more pronounced in a moist environment such as the eye.

Ingestion - Acute Exposure

CALCIUM CHLORIDE: Ingestion of large amounts may cause gastrointestinal irritation. May also cause abdominal pain, nausea, vomiting, drowsiness, or convulsions. May cause irregular heart rhythms.

Ingestion - Chronic Exposure

CALCIUM CHLORIDE: No long-term adverse effects have been reported from small amounts used as a food additive.

*** Section 12 - ECOLOGICAL INFORMATION ***

Component Analysis - Aquatic Toxicity

CALCIUM CHLORIDE (10043-52-4)

Fish: 96 Hr LC50 Lepomis macrochirus: 10650 mg/L [static]

Invertebrate: 48 Hr EC50 Daphnia magna: 52 mg/L

*** Section 13 - DISPOSAL CONSIDERATIONS ***

Disposal Methods

Dispose in accordance with all applicable regulations.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

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*** Section 14 - TRANSPORT INFORMATION ***

US DOT Information

No Classification assigned.

TDG Information

No Classification assigned.

ADR Information

No Classification assigned.

RID Information

No Classification assigned.

IATA Information

No Classification assigned.

ICAO Information

No Classification assigned.

IMDG Information

No Classification assigned.

*** Section 15 - REGULATORY INFORMATION ***

U.S. Federal Regulations

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes Chronic Health: No Fire: No Pressure: No Reactive: No

U.S. State Regulations

None of this product's components are listed on the state lists from CA, MA, MN, NJ, PA, or RI.

Not regulated under California Proposition 65

Canada

Germany Water Classification

CALCIUM CHLORIDE (10043-52-4)

Number 220, hazard class 1 - low hazard to waters

EU Marking and Labelling

EC-No. 233-140-8

Symbols

Xi Irritant

Risk Phrases

R36 Irritating to eyes.

Safety Phrases

S2 Keep out of the reach of children. S22 Do not breathe dust. S24 Avoid contact with skin.

Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
CALCIUM CHLORIDE	10043-52-4	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

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*** Section 16 - OTHER INFORMATION ***

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Full text of R phrases in Section 3

R36 Irritating to eyes.

Other Information

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