



SILVER FERN CHEMICAL INC

CALCIUM FORMATE

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CHEMICAL INC

SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

PRODUCT NAME:	CALCIUM FORMATE	COMPANY:	SILVER FERN CHEMICAL INC 2226 Queen Anne Ave N., Seattle WA 98109 Tel: 206-282-3376 Fax: 206-282-0105 e-mail: info@silverfernchemical.com
US D.O.T. / UN NAME:	NOT REGULATED	24-HOUR EMERGENCY TELEPHONE NO.:	US & CANADA- INFOTRAC: 1-800-535-5053 Outside US & CANADA: +1 352-323-3500
RECOMMENDED USES:	FOR USE AS AN INDUSTRIAL CHEMICAL IN CONCRETE/LEATHER TANNING/OTHER; NOT FOR USE AS AN ANIMAL FEED ADDITIVE/PRESERVATIVE		

SECTION 2 – HAZARD IDENTIFICATION



GHS HAZARD CLASSIFICATION:
SERIOUS EYE DAMAGE / IRRITATION, CATEGORY 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) CATEGORY 3 - RESPIRATORY TRACT

GHS LABEL ELEMENTS:
SIGNAL WORD: **DANGER**
LABEL CODES / PICTOGRAMS: GHS05
HAZARD STATEMENTS: H318 CAUSES SERIOUS EYE DAMAGE
H303 MAY BE HARMFUL IF SWALLOWED

PRECAUTIONARY STATEMENTS :

PREVENTION : P280 WEAR EYE PROTECTION/ FACE PROTECTION
P261 AVOID BREATHING DUST/FUME/GAS/MIST/VAPORS/SPRAY
P271 USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA

RESPONSE : P305+P351+P338: **IF IN EYES:** RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. P310: IMMEDIATELY CALL A POISON CENTER / DOCTOR / PHYSICIAN.
P304+P340: **IF INHALED:** REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. P312: CALL A POISON CENTER / DOCTOR / PHYSICIAN IF YOU FEEL UNWELL.

STORAGE : P403+P233: STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.
P405: STORE LOCKED UP.

DISPOSAL : P501: DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH ALL LOCAL/ REGIONAL/NATIONAL/ INTERNATIONAL REGULATIONS

OTHER HAZARDS / U.S. - HAZARDS NOT OTHERWISE CLASSIFIED

MAY BE HARMFUL IF SWALLOWED. CALL A POISON CENTER/DOCTOR/PHYSICIAN IF YOU FEEL UNWELL.
(UN GHS ACUTE TOXICITY – ORAL, CATEGORY 5)
PLEASE NOTE – THE U.S. ACUTE ORAL TOXICITY CATEGORIES ONLY GO TO CATEGORY 4 WHILE UN GHS OBSERVES A CATEGORY 5 FOR LD₅₀ VALUES BETWEEN 2000-5000 MG/KG

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL COMPOSITION:	COMPONENTS:	CAS NO.	%
	CALCIUM FORMATE	544-17-2	≥98
	WATER / AS MOISTURE	7732-18-5	≤0.5
SYNONYMS:	FORMIC ACID, CALCIUM SALT; CALCIUM DIFORMATE		
CHEMICAL FAMILY:	SATURATED ALIPHATIC CARBOXYLIC SALTS		

www.silverfernchemical.com

N/A = NOT APPLICABLE



SECTION 4 – FIRST AID MEASURES

FIRST AID/ RESPONSE	FIRST AID RESPONDERS SHOULD WEAR PERSONAL PROTECTIVE EQUIPMENT
SKIN :	IF ON SKIN: WASH OFF WITH SOAP & WATER. REMOVE CONTAMINATED CLOTHING. GET MEDICAL ADVICE/ATTENTION IF IRRITATION OCCURS. WASH CONTAMINATED CLOTHING BEFORE REUSE.
EYES :	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/ PHYSICIAN.
INHALATION :	IF INHALED: REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. CALL A POISON CENTER / DOCTOR / PHYSICIAN IF YOU FEEL UNWELL.
INGESTION :	IF SWALLOWED: IF CONSCIOUS, IMMEDIATELY RINSE MOUTH. DRINK PLENTY OF WATER. DO NOT INDUCE VOMITING. CALL A POISON CENTER/DOCTOR/PHYSICIAN IF YOU FEEL UNWELL. NEVER GIVE ANYTHING BY MOUTH IF THE VICTIM IS UNCONSCIOUS.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED

MAY / CAN CAUSE IRRITATION TO EYES AND MUCOUS MEMBRANES. EYE CONTACT PRODUCES IRRITATION, PAIN, WATERING OF EYES, EYELID INFLAMMATION AND CAN CAUSE SERIOUS DAMAGE TO THE EYE. DUST OR PROCESSING MIST INHALATION MAY CAUSE IRRITATION TO THE RESPIRATORY TRACT WITH SNEEZING, COUGHING, AND NOSE IRRITATION. INGESTION MAY CAUSE GASTRIC DISTURBANCES WITH NAUSEA, VOMITING & DIARRHEA. MATERIAL IS POISONOUS BY INTRAVENOUS ROUTE.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY

CALL A POISON CENTER/DOCTOR/PHYSICIAN IF YOU FEEL UNWELL.

SECTION 5 – FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA :	WATER : (X-AS SPRAY/FOG) FOAM : () CO₂: () DRY CHEMICAL: (X) EXTINGUISH WITH LARGE QUANTITIES OF WATER FROM A DISTANCE TO COOL DOWN FLAMES AND SPRAY WATER TO CREATE BLANKET ON THE FIRE EXPOSED AREA. DO NOT ALLOW RUN-OFF TO ENTER SEWERS OR THE ENVIRONMENT. DO NOT EXTINGUISH WITH FOAM, CO₂. FOAM MAY EMIT COMBUSTIBLE GASES ON CONTACT WITH POSSIBLE FLASHBACK.
SPECIFIC HAZARDS IN CASE OF FIRE :	MATERIAL WILL BURN IF IN CONTACT WITH PERISTANT FLAME. TOXIC / IRRITATING VAPORS, SMOKE, FUMES & DECOMPOSITION PRODUCTS ARE PRODUCED IN A FIRE. THERMAL DECOMPOSITION MAY PRODUCE TOXIC / CARINOGENIC FORMALDEHYDE, OXIDES OF CARBON AND CALCIUM CARBONATE. GUARD AGAINST SMOLDERING RE-IGNITION. SEPARATE BAGS/PALLETS FOR COMPLETE COOLING. DUSTY CONDITIONS MAY CREATE A DUST CLOUD EXPLOSION HAZARD. PROPERLY GROUND ALL ELECTRICAL EQUIPMENT.
SPECIAL PROTECTIVE EQUIPMENT & PRECAUTION FOR FIRE FIGHTERS :	TOXIC / POISONOUS GASES ARE PRODUCED IN A FIRE - WEAR A NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS OPERATED IN PRESSURE DEMAND OR POSITIVE PRESSURE MODE AND FULL PROTECTIVE GEAR.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: VENTILATE THE SPILL AREA. ELIMINATE ALL SOURCES OF IGNITION. WEAR FULL PROTECTIVE EQUIPMENT (SEE SECTION 8) & ISOLATE AREA WHERE SPILL OCCURRED. CLEAN SPILL PROMPTLY.

ENVIRONMENTAL PRECAUTIONS: DO NOT RELEASE TO DRAINS, SEWERS AND OTHER BODIES OF WATER.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP: CAREFULLY COLLECT SPILL MATERIAL WITH CLEAN, DRY, NON-SPARKING UTENSILS AND PUT INTO CLEAN, DRY CONTAINER AND SEAL. AVOID GENERATING DUST. WASH / DAMP MOP TRACE RESIDUE WITH LARGE QUANTITY OF WATER.

SECTION 7 – HANDLING & STORAGE

PRECAUTIONS FOR SAFE HANDLING: USE IN WELL VENTILATED AREA TO MEET PERMISSIBLE EXPOSURE / TLV LIMITS (SEE SECTION 8). [P280] WEAR EYE PROTECTION/ FACE PROTECTION (SEE SECTION 8). WEAR FULL PROTECTIVE CLOTHING & RESPIRATORY PROTECTION WHEN HANDLING (SEE SECTION 8). AVOID CONTACT WITH EYE AND SKIN. DO NOT INGEST. AVOID GENERATING DUST. PROPERLY GROUND ALL HANDLING AND PROCESSING EQUIPMENT TO PREVENT POSSIBLE DUST CLOUD EXPLOSIONS.

CONDITIONS FOR SAFE STORAGE, INCLUDING INCOMPATIBILITIES: P403+P233: STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED. P405: STORE LOCKED UP. STORE IN COOL, DRY AREA AWAY FROM ACIDS, OXIDIZING AGENTS, AND SOURCES OF IGNITION.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS:

EXPOSURE LIMITS: U.S. OSHA PEL : NONE ESTABLISHED FOR PRODUCT – TREAT AS NUSANCE PARTICULATE: 15 mg/m³ TWA
TOTAL DUST, 5 mg/m³ TWA RESPIRABLE,
U.S. ACGIH TLV : NONE ESTABLISHED FOR PRODUCT
APPROPRIATE ENGINEERING CONTROLS : USE LOCAL / MECHANICAL EXHAUST TO MAINTAIN AIR CONCENTRATIONS BELOW OCCUPATIONAL EXPOSURE STANDARDS (SEE ABOVE)

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION : USE NIOSH APPROVED RESPIRATOR SUITABLE TO MEET PERMISSIBLE EXPOSURE LIMIT. SEE U.S. OSHA RESPIRATORY STANDARD (20 CFR 1910.134).
HAND PROTECTION : USE CHEMICAL RESISTANT GLOVES (RUBBER, PVC)
EYE PROTECTION : SAFETY GOGGLES OR GLASSES WITH SIDE SHIELDS OR FULL FACE SHIELD; HAVE ACCESS TO AN EYEWASH FOUNTAIN
OTHER PROTECTIVE EQUIPMENT : LABCOAT; COVERALLS TO PROTECT SKIN

SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE :	OFF-WHITE CRYSTALS OR CRYSTALLINE POWDER	FLAMMABLE LIMITS :	LEL:& UEL (NO DATA)
ODOR :	SLIGHT ODOR	VAPOR PRESSURE (mm Hg) :	NEGLIGIBLE
ODOR THRESHOLD :	N/A	VAPOR DENSITY (AIR=1) :	N/A
pH (% IN WATER) :	NOT KNOWN	SPECIFIC GRAVITY :	APPROX. 2
MELTING POINT / FREEZING POINT (°C) :	>300 (572°F)	SOLUBILITY IN WATER (@200°C) :	SOLUBLE(160g/L@25°C)
BOILING POINT (°C) :	N/A	PARTITION COEFFICIENT_(n-OCTANOL/WATER) :	NOT KNOWN
FLASH POINT (°F) :	N/A	AUTO IGNITION TEMP. (° F) :	NOT KNOWN
EVAPORATION RATE :	N/A	DECOMPOSITION TEMP. :	>400°C (752°F)
FLAMMABILITY :	NO DATA		

SECTION 10 – STABILITY AND REACTIVITY

CHEMICAL STABILITY : STABLE WHEN STORED SEALED IN ORIGINAL PACKAGING UNDER RECOMMENDED STORAGE CONDITIONS.
POSSIBILITY OF HAZARDOUS REACTIONS : CAN REACT WITH STRONG OXIDIZING AGENTS OR STRONG ACIDS CAUSING DECOMPOSITION AND RELEASE OF FORMIC ACID FUMES
CONDITIONS TO AVOID : CONTACT WITH INCOMPATIBLES; GENERATION OF DUST; HEAT, SPARKS, STATIC CHARGE, AND SOURCES OF IGNITION.
INCOMPATIBLE MATERIALS : OXIDIZING AGENTS, STRONG ACIDS
HAZARDOUS DECOMPOSITION PRODUCTS : THERMAL DECOMPOSITION MAY PRODUCE TOXIC FORMALDEHYDE, OXIDES OF CARBON, AND CALCIUM CARBONATE

SECTION 11 – TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS:

ROUTES OF EXPOSURE : EYES, INHALATION, INGESTION
SKIN : NON-IRRITANT
EYES : CONTACT MAY CAUSE EYE IRRITATION AND/OR POSSIBLE BURNS.
INHALATION : HARMFUL IF INHALED. INHALATION OF DUST CAN IRRITATE NOSE, THROAT, AND RESPIRATORY TRACT. THE ABSORPTION OF THIS PRODUCT INTO THE BODY MAY LEAD TO THE FORMATION OF METHEMOGLOBIN THAT, IN SUFFICIENT CONCENTRATION, CAN CAUSE CYANOSIS (INTERFERING WITH THE ABILITY OF THE BLOOD TO CARRY OXYGEN). SYMPTOMS INCLUDE HEADACHE, WEAKNESS, DIZZINESS, BLUE SKIN COLOR.
INGESTION : HARMFUL IF INGESTED. INGESTION CAN IRRITATE THE GASTROINTESTINAL TRACT AND THE KIDNEYS.
CHRONIC: REPEATED EXPOSURES MAY HAVE EFFECTS ON THE KIDNEYS (RENAL FAILURE).
ACUTE TOXICITY : ORAL LD₅₀: 2650 mg/kg (RAT)– DATA FROM LITERATURE
SKIN CORROSION / IRRITATION : NON-IRRITANT
SERIOUS EYE DAMAGE / IRRITATION : 100 mg/24H – MODERATE IRRITANT-DATA FROM LITERATURE
RESPIRATORY OR SKIN SENSITIZATION : TEST DATA IS NOT AVAILABLE
GERM CELL MUTAGENICITY : DATA IS NOT AVAILABLE
CARCINOGENICITY : U.S. LISTED CARCINOGEN: NONE (X*) OSHA () NTP () IARC () OTHER ()
*NOTE- THERMAL DECOMPOSITION/FIRE MAY RELEASE CARCINOGENIC FORMALDEHYDE
REPRODUCTIVE TOXICITY : NO DATA AVAILABLE
SPECIFIC TARGET ORGAN TOXICITY : SINGLE EXPOSURE – MAY CAUSE RESPIRATORY TRACT IRRITATION
ASPIRATION HAZARD : DATA IS NOT AVAILABLE
INTERACTIVE EFFECTS: NO DATA AVAILBLE

SECTION 12 – ECOLOGICAL INFORMATION

ECOTOXICITY : NO DATA AVAILABLE. DO NOT RELEASE TO THE ENVIRONMENT OR WATERWAYS.
TOXICITY - AQUATIC : NO DATA AVAILABLE
TOXICITY - TERRESTIAL : NOT EXPECTED TO BE A PBT (PERSISTENT, BIOACCUMULATION, TOXIC)
PERSISTANCE & DEGRADABILITY: EXPECTED TO BE READILY BIODEGRADABLE
BIOACCUMULATIVE POTENTIAL : NOT EXPECTED TO BE A vPvB (VERY PERSISTENT NOR VERY BIOACCUMULATING)
MOBILITY IN SOIL : NO TEST DATA AVAILABLE
OTHER ADVERSE EFFECTS : NO DATA AVAILABLE

SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL METHODS:

[P501]: DISPOSE OF CONTENTS / CONTAINER IN ACCORDANCE WITH LOCAL, REGIONAL, NATIONAL, INTERNATIONAL REGULATIONS. DO NOT RELEASE TO THE ENVIRONMENT. DISPOSE OF IN SEALED CONTAINERS, USING A LICENSED CHEMICAL WASTE HAULER.

FOLLOW ALL LOCAL, STATE AND FEDERAL INFORMATION AND REGULATIONS

SECTION 14 – TRANSPORT INFORMATION

BY ROAD OR RAIL - U.S. D.O.T. REGULATED: YES () NO (X) RQ: (N/A)
HAZARD CLASS: () HAZARD CLASS: ()

UN IDENTIFICATION NO.: () PACKING GROUP: () LABEL REQUIRED: ()
U.S. MARINE POLLUTANT: YES () NO (X) SEVERE U.S. MARINE POLLUTANT: YES () NO (X)
EMERGENCY RESPONSE GUIDE NO.: ()
INLAND B/L:

BY SEA - IMDG REGULATED: YES () NO (X) STOWAGE CATEGORY: NOT APPLICABLE
BY AIR - IATA REGULATED: YES () NO (X) PKG INSTRUCTION NO.: NOT APPLICABLE
SPECIAL PRECAUTIONS: READ SDS BEFORE HANDLING

SECTION 15 – REGULATORY INFORMATION

U.S. TSCA: WE CERTIFY THAT ALL COMPONENTS OF THIS PRODUCT ARE REGISTERED UNDER THE REGULATIONS OF THE TOXIC SUBSTANCES CONTROL ACT.

U.S. SARA TITLE III, SECT. 313 : LISTED () NOT LISTED (X)

U.S. RCRA HAZARDOUS WASTE : NO (X) YES () RCRA # : ()

U.S. CERCLA : NO (X) YES () RQ (N/A)

U.S. DEPARTMENT OF HOMELAND SECURITY APPENDIX "A" : LISTED () NOT LISTED (X)

U.S. CALIFORNIA PROPOSITION 65 LISTED : YES () NO (X)

SECTION 16 – OTHER INFORMATION

REVISION DATE: OCTOBER 18, 2016 **PREPARED BY:** SILVER FERN CHEMICAL INC.

ABBREVIATIONS / ACRONYMS: N/A=NOT APPLICABLE; LEL=LOWER EXPLOSION LIMIT; UEL=UPPER EXPLOSION LIMIT; PEL=PERMISSIBLE EXPOSURE LIMIT; TLV=THRESHOLD LIMIT VALUE; TWA=TIME WEIGHTED AVERAGE OVER 8 HOUR WORKDAY; LD₅₀ OR LC₅₀=LETHAL DOSE OR LETHAL CONCENTRATION THAT KILLS 50% OF DOSED GROUP; g=GRAM; kg=KILOGRAM; PPM=PARTS PER MILLION

IN ACCORDANCE WITH GOOD PRACTICES OF PERSONAL HYGIENE, HANDLE WITH DUE CARE AND AVOID ANY UNNECESSARY CONTACT WITH THIS PRODUCT. USE RECOMMENDED PERSONAL PROTECTION WHEN HANDLING (SEE SECTION 8).

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