

SAFETY DATA SHEET

Revision date 2023-Jan-24

Revision number 2

1. IDENTIFICATION

Product identifier

Product name Calcium Formate

Other means of identification

Product code 3104A
Synonyms Formic acid, calcium salt; Calcium diformate

Recommended use of the chemical and restrictions on use

Recommended use [RU] No information available
Uses advised against None known

Details of the supplier of the safety data sheet

Supplier GEO Specialty Chemicals, Inc.
 2409 N. Cedar Crest Blvd.
 Allentown, PA 18104-9733
 +1-610-433-6330
 Hours: Monday-Friday 9:00-5:00 EST (Eastern Standard Time)

Contact Point safety-data-sheet-fp@geosc.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC: (800) 424-9300
 Outside USA - +1 (703) 527-3887 collect calls accepted

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Serious eye damage/eye irritation	Category 2
Combustible dust	-

EMERGENCY OVERVIEW

Physical state solid	Color off-white	Appearance free-flowing crystals	Odor odorless
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GHS Label elements, including precautionary statements

**WARNING****Hazard statements**

Causes serious eye irritation. May form combustible dust concentrations in air.

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling. Wear eye/face protection.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Other information

- May be harmful if swallowed

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	weight-%	TRADE SECRET
Calcium formate	544-17-2	> 98%	*
Trimethylolethane	77-85-0	< 2%	*

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

*The exact percentage (concentration) of composition has been withheld as a trade secret While some substances are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

4. FIRST AID MEASURES

First Aid Measures**Eye contact**

Remove contact lenses, if worn. Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Get medical attention if irritation develops and persists.

Skin contact

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Ingestion

Do NOT induce vomiting. If vomiting should occur spontaneously, keep airway clear. Never give anything by mouth to an unconscious person. Get medical attention.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

Most important symptoms and effects, both acute and delayed**Acute effects**

Causes serious eye irritation. May be harmful if swallowed.

Chronic effects

None known.

Aggravated Medical Conditions

Existing skin, eye and lung conditions.

Indication of any immediate medical attention and special treatment needed**Note to physicians**

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media**Suitable extinguishing media**

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture**Special Hazard**

Solutions extremely slippery when spilled.

Advice for firefighters**Firefighting measures**

Cool exposed containers with water spray after extinguishing fire.

Special protective equipment for firefighters

Full protective clothing and approved self-contained breathing apparatus required for firefighting personnel.

Explosion data**Sensitivity to Mechanical Impact**

None.

Sensitivity to Static Discharge

None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures**Personal precautions**

Wear suitable protective clothing and gloves.

Environmental precautions**Environmental precautions**

Avoid runoff to waterways and sewers.

Methods and material for containment and cleaning up**Methods for containment**

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Clear spills immediately. Contain large spill and remove using a vacuum truck. Soak up small spills with inert absorbent material and place in a labeled waste container for disposal. Spills of solution are extremely slippery so all residue must be removed promptly. Remove all sources of ignition. Non-sparking tools should be used. Ventilate the area. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Wet the material with water to limit dust emission or explosion risk.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Keep container closed when not in use
Conveying and processing equipment should be spark proof, electrically bonded and grounded.
Avoid contact with eyes, skin and clothing
Wash thoroughly after handling
Avoid breathing dust
Use with adequate ventilation and employ respiratory protection where a dust atmosphere may be generated.
Do not take internally
FOR INDUSTRIAL USE ONLY.

Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Store in a cool, dry place away from ignition sources and open flame.
Calcium Formate is not hygroscopic.

Incompatible products

Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering controls

Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient.

Individual protection measures, such as personal protective equipment

Eye/face Protection

Wear safety glasses or goggles to protect against exposure to dust particles.

Hand Protection

Appropriate chemical resistant gloves should be worn

Skin and body protection

Standard work clothing and work shoes.

Respiratory protection

If exposures exceed the PEL or TLV, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134. If there are no applicable or established exposure limit requirements or guidelines,

general ventilation should be sufficient.

Other personal protection data

Eyewash fountains and safety showers must be easily accessible.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	solid
Color	off-white
Appearance	free-flowing crystals
Odor	odorless
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks / Method</u>
pH	7.5	aqueous solution (10%)
Melting / freezing point	Decomposes before melting	No information available
Boiling point / boiling range	No information available	No information available
Flash point	No information available	No information available
Evaporation rate	No information available	No information available
Flammability (solid, gas)	Not applicable	No information available
Flammability Limit in Air		
Upper flammability limit	No information available	No information available
Lower flammability limit	No information available	No information available
Vapor pressure	No information available	No information available
Vapor density	4.5	No information available
Specific gravity	No information available	No information available
Solubility (water)	Soluble	No information available
Solubility in other solvents	No information available	No information available
Partition coefficient: n-octanol/water	No information available	No information available
Autoignition temperature	Not Determined (Solid)	No information available
Decomposition temperature	No information available	No information available
Kinematic viscosity	No information available	No information available
Dynamic viscosity	No information available	No information available

Other information

Density	72.6 lb/ft ³
Bulk Density	No information available

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	130.12
Volatile Organic Compound (VOC) content, wt.%	No information available
Percent Volatile, wt.%	No information available

10. STABILITY AND REACTIVITY

Reactivity

Reactivity

No data available.

Chemical stability

Chemical stability

Stable under normal conditions of handling, use and transportation.

Possibility of hazardous reactions

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization

Not anticipated under normal or recommended handling and storage conditions.

Conditions to avoid

Conditions to avoid

None known.

Incompatible materials

Materials to avoid

Oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products

May produce formaldehyde, oxides of carbon and calcium carbonate when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact

Causes eye irritation.

Skin contact

Prolonged skin contact may cause skin irritation.

Ingestion

May be harmful if swallowed. May cause pain, nausea, vomiting and diarrhea.

Inhalation

Exposure to dust particles generated from this material may cause irritation of the respiratory tract.

Acute toxicity - Product Information

Oral LD50	2650 mg/kg - calcium formate (rat) 1920 mg/kg - calcium formate (mice)
Dermal LD50	No information available
Inhalation LC50	No information available

Acute toxicity - Component Information

Component	weight-%	Oral LD50	Dermal LD50	Inhalation LC50
Calcium formate 544-17-2	> 98%	= 2650 mg/kg (Rat)	--	--

Information on toxicological effects**Symptoms**

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Mild skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation

Sensitization

No information available

Germ cell mutagenicity

No information available

Carcinogenicity

This product does not contain any components in concentrations greater than or equal to 0.1% that are listed as known or suspected carcinogens by NTP, IARC, ACGIH, or OSHA.

Reproductive toxicity

No information available

Specific target organ toxicity - Single exposure

No information available.

Specific target organ toxicity - Repeated exposure

No information available

Aspiration hazard

No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 2704 mg/kg

Other information

In a study in rats, Calcium Formate added to drinking water at 0.2% for 3 years or 0.4% for 2 years did not affect growth, fertility or function in up to 5 generations.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Acute aquatic toxicity - Product Information

Fish	No information available
Crustacea	No information available
Algae/aquatic plants	No information available

Acute aquatic toxicity - Component Information

Component	weight-%	Algae/aquatic plants	Fish	Toxicity to daphnia and other aquatic invertebrates
Calcium formate 544-17-2	> 98%	--	LC50 (96 h static) \geq 1000 mg/L (Brachydanio rerio)	--

Persistence and degradability

Persistence and degradability
No information available

Bioaccumulative potential

Bioaccumulative potential
No information available

Mobility

Mobility
No information available

Results of PBT and vPvB assessment

PBT and vPvB assessment
No information available

Other adverse effects

Other information
No other ecological studies have been carried out on this product.

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Disposal of wastes**

Do not put solutions containing this product into sewer systems. Dispose of product in an approved chemical waste landfill or incinerate in accordance with applicable Federal, state and local regulations.

Contaminated packaging

Since empty containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

DOT Not regulated

ICAO/IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

United States (TSCA)

All ingredients are on the inventory or exempt from listing

Australia (AICS)

All ingredients are on the inventory or exempt from listing

Canada (DSL)

All ingredients are on the inventory or exempt from listing

Canada (NDSL)

None of the ingredients are on the inventory.

China (IECSC)

All ingredients are on the inventory or exempt from listing

European Union (EINECS)

All ingredients are on the inventory or exempt from listing

European Union (ELINCS)

None of the ingredients are on the inventory.

Japan (ENCS)

All ingredients are on the inventory or exempt from listing

South Korea (KECL)

All ingredients are on the inventory or exempt from listing

Philippines (PICCS)

All ingredients are on the inventory or exempt from listing

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

AICS - Australian Inventory of Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

IECSC - China Inventory of Existing Chemical Substances

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

U.S. Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

16. OTHER INFORMATION

NFPA Rating	Health - 1	Flammability - 1	Instability - 0	Special Hazard -
HMIS Rating	Health - 1	Flammability - 1	Physical hazards - 0	Personal protection - B
Product code	3104A			
Revision date	2023-Jan-24			
Revision number	2			

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet