



Shandong Jufu Chemical Technology Co., Ltd.

Material Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name	Calcium formate feed grade		
Chemical Name	CAS No	EC No	REACH registration reference number
Calcium diformate	544-17-2	208-863-7	01-2119486476-24-0015
Pure substance/mixture	Substance		

1.2. Relevant identified uses of the substance or mixture and uses advised against

Industrial	Manufacture of substances. Formulations. Distribution and storage. Use as an intermediate, as a processing aid, as pH-regulator, in fillers, in putties, in mortar, in adhesives, in sealants, in glass, in ceramics, Leather tanning, dye, finishing, impregnation and care products and Printing and reproduction of recorded media.
Professional	Use in fillers, in putties, in mortar, in fertilizers, in adhesives, in sealants, in laboratories, in washing and cleaning products, public domain and in washing and cleaning products, health services.
Consumer	Use in fillers, in putties, in fertilizers, in mortar, in adhesives, in sealants, in glass and in ceramics.
Uses advised against	Not identified.

1.3. Details of the supplier of the safety datasheet

Manufacturer
Shandong Jufu Chemical Technology Co., Ltd
Address: Bld.4-1001, No.2177, Tianchen Rd., Jinan, Shandong, China

E-mail address info@jfchemtech.com

1.4. Emergency telephone number

China Tel/Fax: +86 0531 88987705

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Serious eye damage/eye irritation

Category 1 - (H318)

2.2. Label elements

Symbols/Pictograms



Signal word
Danger

Hazard statements

H318 - Causes serious eye damage

Precautionary Statements

P280 - Wear protective gloves and eye/face protection

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 or doctor

Contains: Calcium diformate

2.3. Other hazards

May be harmful if swallowed.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical Name	EC No	CAS No	REACH registration number	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Calcium formate	208-863-7	544-17-2	01-2119486476-24-0006	100	Eye Dam. 1 (H318)

Full text of H- and EUH-phrases: see section 16

Additional information

No information available

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Immediate medical attention is required. Emergency eyewash facilities must be located in the vicinity of where the product is handled.
Inhalation	Remove to fresh air. If irritation persists get medical advice/attention.
Skin contact	First aid measures not required, but wash exposed skin with soap and water for hygienic reasons.
Eye contact	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Use lukewarm water if possible. Keep eye wide open while rinsing. Do not rub affected area.
Ingestion	Clean mouth with water and drink afterwards plenty of water. If a large quantity has been ingested or you feel unwell, get medical advice/attention.
Self-protection of the first aider	Not required.

4.2. Most important symptoms and effects, both acute and delayed

Eye contact: Causes severe irritation with flood of tears and pain and strong redness and swelling of the eye. Risk of permanent eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

Water with full jet as this can form a dust cloud.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapours.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂), Calcium oxide (CaO).

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear tightly sealed goggles, protective gloves and if dusty conditions dust filter mask (P2). Ensure adequate ventilation.

6.2. Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. Prevent further leakage or spillage if safe to do so. See Section 12 for additional ecological information.

6.3. Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Small spill	Vacuum or sweep material and place in a disposal container.
Large spill	Cover powder spill with plastic sheet or tarp to minimise spreading. Vacuum or sweep material and place in a disposal container.

Methods for cleaning up

Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

6.4. Reference to other sections

See Section 7,8,13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ensure adequate ventilation. Wear tightly sealed goggles and protective gloves (chloroprene rubber, nitrile rubber). Avoid generation of dust.

General Hygiene Considerations

Wash hands thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry and cool place.

7.3. Specific end use(s)

For details, see the separate exposure scenario(s).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Keep personal exposure levels below Derived No Effect Level (DNEL) and national exposure limit values (if existing).

Derived No Effect Level (DNEL) - worker

Calcium diformate (544-17-2)			
Type	Exposure route	DNEL	Remarks
Acute effects, systemic	Inhalation	337	mg/m ³
Chronic effects, systemic	Inhalation	337	mg/m ³
Acute effects, local	Dermal	16.7	mg/cm ²
Acute effects, systemic	Dermal	4780	mg/kg bw/d
Chronic effects, local	Dermal	16.7	mg/cm ²

Chronic effects, systemic	Dermal	4780	mg/kg bw/d
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Derived No Effect Level (DNEL) - Consumer

Calcium diformate (544-17-2)			
Type	Exposure route	DNEL	Remarks
Chronic effects, systemic	Oral	23.9	mg/kg bw/d
Acute effects, local	Dermal	8.3	mg/cm ²
Acute effects, systemic	Dermal	2390	mg/kg bw/d
Chronic effects, local	Dermal	8.3	mg/cm ²
Chronic effects, systemic	Dermal	2390	mg/kg bw/d
Acute effects, systemic	Inhalation	83.2	mg/m ³
Chronic effects, systemic	Inhalation	83.2	mg/m ³

Predicted No Effect Concentration (PNEC)

Calcium diformate (544-17-2)		
Environmental compartment	Predicted No Effect Concentration (PNEC)	Remarks
Freshwater	2	mg/l
Intermittent	10	mg/l
Freshwater sediment	13.4	mg/kg dry weight
Marine water	0.2	mg/l
Marine sediment	1.34	mg/kg dry weight

8.2. Exposure controls

Appropriate engineering controls

Eyewash stations. Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection	Tight sealing safety goggles.
Hand Protection	Wear protective gloves. PPE - Glove material: Chloroprene rubber, CR, Nitrile rubber, NBR. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.
Skin and body protection	Body protection must be chosen depending on activity and possible exposure, e.g. apron, chemical resistant boots, chemical-protection suit.
Respiratory protection	Provide suction extractors if dust is formed or use dust filter mask(P2).

Environmental exposure controls

Not relevant since not classified as dangerous for the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

powder
crystalline
white

Odour

Odourless

Odour threshold

Not applicable

Property

Value

Remarks • Method

pH

Not applicable

Melting point / freezing point

> 300 °C / 572 °F

OECD Test No. 102: Melting Point/ Melting Range

Boiling point / boiling range

Not applicable

Flash point

Not applicable

Evaporation rate

Not applicable

Flammability (solid, gas)

Not flammable

Explosive limits

Upper explosive limits

Not applicable

Lower explosive limits

Not applicable

Vapour pressure

0.00000022 kPa

@ 20 °C Calculation method

Vapour density

Not applicable

Relative density

Not applicable

Water solubility

172 g/L

@ 20 °C OECD Test No. 105: Water Solubility

Solubility(ies)

No information available

Partition coefficient	-2.6	log POW (@20°C; OECD 107) Partition Coefficient (n-octanol/water)
Autoignition temperature	292 °C / 558 °F	
Decomposition temperature	408 °C	(OECD 102)
Kinematic viscosity		Not applicable
Dynamic viscosity		Not applicable
Explosive properties	Not explosive.	
Oxidising properties	Not oxidising.	
Density	2.0 g/cm ³	20°C (ISO 1183-1)
Bulk density	1200 kg/m ³	@ 20 °C

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

There exists no specific test data for this product. For further information, see the subsequent subsections of this chapter.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Dermal. Inhalation.

Symptoms related to the physical, chemical and toxicological characteristics

See Section 4 for more information.

Numerical measures of toxicity

Acute toxicity

May be harmful if swallowed.

Calcium diformate (544-17-2)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 401: Acute Oral Toxicity	Rat	Oral	3050	LD50 (lethal dose) mg/kg
OECD Test No. 402: Acute Dermal Toxicity	Rat	Dermal	>2000	LD0 mg/kg read-across from supporting substance (structural analogue)
EPA OTS 798.1150	Rat	Inhalation	>0.67	LC0 mg/l read-across from supporting substance (structural analogue)

Skin corrosion/irritation

Non-irritating to the skin.