



Safety Data Sheet Calcium chloride (all grades)

1. Identification

1.1 Product identifier

Product name Calcium chloride (all grades)
Product code 12556

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

Recommended Use Drilling fluid additive. SDS covers all grades.

Uses advised against Consumer use

1.3 Details of the supplier of the safety data sheet

Supplier
M-I L.L.C.

P.O.Box 42842
Houston, TX 77242
www.miswaco.slb.com
Telephone: 1 281-561-1511

Prepared by
Global Regulatory Compliance - Chemicals (GRC - Chemicals) , Mike McDowell

1.4 Emergency Telephone Number

Emergency telephone (24 Hour) Australia +61 2801 44558, Asia Pacific +65 3158 1074, China +86 10 5100 3039, Europe +44 (0) 1235 239 670, Middle East and Africa +44 (0) 1235 239 671, New Zealand +64 9929 1483, USA 001 281 561 1600

2. Hazards identification

2.1 Classification of the substance or mixture

GHS - Classification

Health hazards

Acute oral toxicity	Category 4
Serious eye damage/eye irritation	Category 2

Environmental hazards Not classified

Physical Hazards Not classified

2.2 Label elements



Signal word

WARNING

Hazard statements

H302 - Harmful if swallowed

H319 - Causes serious eye irritation

Precautionary statements

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P330 - Rinse mouth

P337 + P313 - If eye irritation persists: Get medical advice/attention

P501 - Dispose of contents/ container to an approved waste disposal plant

Unknown acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

3. Composition/information on Ingredients

3.1 Substances

3.2 Mixtures

Component	CAS-No	Weight % - range
Calcium chloride	10043-52-4	60 - 100

Comments

The exact percentage (concentration) of composition has been withheld as a trade secret

4. First aid measures

4.1 First-Aid Measures

Inhalation

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Ingestion

Rinse mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Seek medical attention if irritation occurs.

Skin contact

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention immediately if symptoms occur.

Eye contact Remove contact lenses. Promptly wash eyes with lots of water while lifting eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

4.2 Most important symptoms and effects, both acute and delayed

General advice The severity of the symptoms described will vary dependant of the concentration and the length of exposure. If adverse symptoms develop, the casualty should be transferred to hospital as soon as possible.

Main symptoms

Inhalation Please see Section 11. Toxicological Information for further information.

Ingestion Please see Section 11. Toxicological Information for further information.

Skin contact Please see Section 11. Toxicological Information for further information.

Eye contact Please see Section 11. Toxicological Information for further information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing media appropriate for surrounding material.

Extinguishing media which shall not be used for safety reasons

None known.

5.2 Special hazards arising from the substance or mixture

Unusual fire and explosion hazards

None known.

Hazardous combustion products

Calcium oxide, Metal fumes.

5.3 Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

Special Fire-Fighting Procedures

Containers close to fire should be removed immediately or cooled with water.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate non-essential personnel. Use personal protective equipment. Avoid dust formation. Do not breathe dust.

6.2 Environmental precautions

The product should not be allowed to enter drains, water courses or the soil.

Environmental exposure controls

Avoid release to the environment.

6.3 Methods and materials for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

6.4 Reference to other sections

See section 13 for more information.

7. Handling and storage

7.1 Precautions for safe handling

Handling

Avoid contact with skin and eyes. Avoid dust formation.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions Ensure adequate ventilation. Keep airborne concentrations below exposure limits.

Storage precautions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture
Avoid contact with: Strong oxidizing agents Strong acids.

8. Exposure controls/personal protection

8.1 Control parameters

Exposure limits NUI = Nuisance dust, TWA 4mg/m³ Respirable Dust, 10mg/m³ Total Dust.

Component	ACGIH TLV	OSHA PEL
Calcium chloride	Not Determined	Not Determined

8.2 Exposure controls

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

Engineering measures to reduce exposure

Ensure adequate ventilation.

Personal protective equipment

Eye protection

Tightly fitting safety goggles.

Hand protection

Repeated or prolonged contact: Use protective gloves made of: Nitrile, Neoprene gloves, Rubber gloves.

Respiratory protection	<p>All respiratory protection equipment should be used within a comprehensive respiratory protection program that meets the requirements of 29 CFR 1910.134 (U.S. OSHA Respiratory Protection Standard) or local equivalent.</p> <p>If exposed to airborne mist/aerosol of this product, use at least a NIOSH-approved N95 half-mask disposable or re-usable particulate respirator. In work environments containing oil mist/aerosol, use at least a NIOSH-approved P95 half-mask disposable or re-usable particulate respirator.</p> <p>This product contains nitrogen compounds which may, in some circumstances, form ammonia or amine compounds. If exposed to ammonia or amine compounds from this product use a NIOSH/MSHA-approved respirator with an Ammonia/Methylamine cartridge. Wear suitable protective clothing, Provide eyewash station.</p>
Skin and body protection	<p>Wash hands before eating, drinking or smoking, Remove and wash contaminated clothing before re-use.</p>
Hygiene measures	<p>Wash hands before eating, drinking or smoking, Remove and wash contaminated clothing before re-use.</p>

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Solid
Appearance	Powder Dust
Color	Off-white
Odor	Odorless
Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
pH	Not applicable	
pH @ dilution	7 - 10	5% sol
Melting/freezing point	772 °C	
Boiling point/range	> 1600 °C	
Flash point	No information available	PMCC
Evaporation rate (BuAc =1)	No information available	
Flammability (solid, gas)	Not Applicable	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower flammability limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	No information available	
Bulk density	No information available	
Water solubility	Soluble in water	
Solubility in other solvents	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Log Pow	No information available	
Explosive properties	Not Applicable	
Oxidizing properties	None known.	

9.2 Other information

Pour point	No information available
Molecular weight	No information available
VOC content(%)	None
Density	No information available

10. Stability and reactivity

10.1 Reactivity

No specific reactivity hazards associated with this product.

10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

10.3 Possibility of Hazardous Reactions

Hazardous polymerization

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Avoid contact with water and moist air - product is hygroscopic.

10.5 Incompatible materials

Metals. Strong oxidizing agents. Strong acids.

10.6 Hazardous decomposition products

Calcium oxide. Metal fumes.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Inhalation

Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough.

Eye contact

Causes serious eye irritation.

Skin contact

Prolonged contact may cause redness and irritation.

Ingestion

Ingestion may cause stomach discomfort.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium chloride	= 1000 mg/kg (Rat)	= 2630 mg/kg (Rat)	No data available

Component	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA listed carcinogens	NTP
Calcium chloride	No data available	No data available	No data available	No data available

Sensitization

This product does not contain any components suspected to be sensitizing.

Mutagenic effects

This substance has no evidence of mutagenic properties.

Carcinogenicity

This substance has no evidence of carcinogenic properties.

Reproductive toxicity	None known.
Developmental toxicity	Not known to cause birth defects or have a deleterious effect on a developing fetus.
Routes of exposure	Skin contact. Inhalation. Eye contact.
Routes of entry	No route of entry noted.
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified.
Neurological effects	None known.
Target organ effects	Cardiovascular system.
Aspiration hazard	No hazard from product as supplied.

12. Ecological information

12.1 Toxicity

Toxicity to algae

See component information below.

Toxicity to fish

See component information below.

Toxicity to daphnia and other aquatic invertebrates

See component information below.

Component	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Calcium chloride 10043-52-4 (60 - 100)	10650 mg/L LC50 (Lepomis macrochirus) = 96 h	No information available	52 mg/L EC50 (Daphnia magna) = 48 h

12.2 Persistence and degradability

Not Applicable - Inorganic chemical.

12.3 Bioaccumulative potential

Not Applicable - Inorganic chemical.

12.4 Mobility in soil

Soluble in water.

12.5 Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)
This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

12.6 Other adverse effects.

None known.

13. Disposal considerations

13.1 Waste treatment methods

Disposal Method Disposal should be made in accordance with federal, state and local regulations.
Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal.

14. Transport information

14.1 UN Number

UN No. (DOT)	Not regulated
UN No. (TDG)	Not regulated
UN/ID No. (ADR/RID/ADN/ADG)	Not regulated
UN No. (IMDG)	Not regulated
UN No. (ICAO)	Not regulated

14.2 Proper shipping name

Not regulated for transportation by DOT, TDG, IMDG and ICAO/IATA.

14.3 Hazard class(es)

DOT Hazard class	Not regulated
TDG Hazard class	Not regulated
ADR/RID/ADN/ADG Hazard class	Not regulated
IMDG Hazard class	Not regulated
ICAO Hazard class/division	Not regulated

14.4 Packing group

DOT Packing group	Not regulated
TDG Packing group	Not regulated
ADR/RID/ADN/ADG Packing group	Not regulated
IMDG Packing group	Not regulated
ICAO Packing group	Not regulated

14.5 Environmental hazard

Marine pollutant	No
------------------	----

14.6 Special precautions

Not Applicable

15. Regulatory information

International inventories

USA (TSCA)	Complies
Canada (DSL)	Complies
European Union (EINECS and ELINCS)	Complies

Philippines (PICCS)	Complies
Japan (ENCS)	Complies
China (IECSC)	Complies
Australia (AICS)	Complies
Korean (KECL)	Complies
New Zealand (NZIoC)	Complies

U.S. Federal and State Regulations

SARA 311/312 Hazard Categories

Immediate (acute) health hazard.

Component	SARA 302 / TPQs	SARA 313	CERCLA RQ
Calcium chloride	N/A	N/A	N/A

State Comments

Proposition 65: This product is not known to contain chemicals considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer and/or reproductive toxicity at levels that are expected to pose a significant risk under anticipated use conditions.

Canadian Classification

16. Other information

Supersedes date	26/Jul/2013
Revision date	03/Feb/2015
Version	3
The following sections have been revised	All sections. Updated according to GHS/CLP.
HMIS classification	
Health	2
Flammability	0
Physical hazard	0
PPE	E

N/A - Not Applicable, N/D - Not Determined.

Disclaimer

The information contained herein is considered in good faith as reliable of the date issued and is based upon on measurements, tests or data derived from supplier's own study or furnished by others. In providing this SDS information, Supplier makes no express or implied warranties as to the information or product; merchantability or fitness of purpose; any express or implied warranty; or non-infringement of intellectual property rights; and supplier assumes no responsibility for any direct, special or consequential damages, results obtained, or the activities of others. To the maximum extent permitted by law, supplier's warranty obligations and buyer's sole remedies are as stated in separate agreement between the parties.