1. Identification of the substance/preparation and of the Company/undertaking

1.1 Product identifier

Product name: CALCIUM CHLORIDE BRINE
Product code: MI10030
Norway Pr. no.: 120037
Denmark Pr. no.: 988603

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

Recommended use: Completion brine Drilling fluid additive
Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet

Supplier identification:
M-I Drilling Fluids UK Limited
C/O Schlumberger
Enterprise Drive
Westhill Industrial Estate
Westhill, AB32 6TQ
Scotland UK
+47 51577424
MISDS@slb.com

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

Netherlands: National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway: Poison information centre: +47 22 59 13 00

2. Hazards Identification

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Health hazards:
- Serious eye damage/eye irritation: Category 2

Environmental hazards: Not classified
Physical Hazards: Not classified

2.2 Label Elements
**Signal word**

**WARNING**

**Hazard statements**

H319 - Causes serious eye irritation

**Precautionary Statements - EU (28, 1272/2008)**

- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P280 - Wear protective gloves/ protective clothing/ eye protection/ 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
- P337 + P313 - If eye irritation persists: Get medical advice/ attention

The substance/preparation is classified as dangerous in accordance with Directive(s) 67/548/EEC with amendments and/or 1999/45/EC with amendments

**Indication of danger**

Xi - Irritant

**R-code(s)**

R36

**Contains**

Calcium chloride

*For the full text of the H-Statements mentioned in this Section, see Section 16.*

**2.3 Other data**

Not classified as PBT/vPvB by current EU criteria

---

**3. Composition/information on Ingredients**

**3.1 Substances**

**3.2 Mixtures**
4. First aid measures

4.1 Description of 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

Precautions against fire and explosion
None known.

Hazardous combustion products
Fire or high temperatures create: Chlorine, chlorine oxides, hydrogen chloride.

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
Use personal protective equipment. See also section 8.

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. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up
Absorb with earth, sand or other non-combustable material and transfer to containers for later 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. Do not breathe vapors or spray mist. Avoid spills and splashing during use.
Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. When using do not smoke, eat or drink. Wash hands and face before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Storage  Keep containers tightly closed in a dry, cool and well-ventilated place.
Storage class  Chemical storage.
Packaging material  Use specially constructed containers only
Packaging materials to be avoided  Metal

7.3 Specific end uses
See also Section 1.2.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Exposure limits

<table>
<thead>
<tr>
<th>Component</th>
<th>EU OEL - Third List</th>
<th>Austria</th>
<th>Australia</th>
<th>Denmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Finland</th>
<th>France</th>
<th>Germany</th>
<th>Hungary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Ireland</th>
<th>Italy</th>
<th>Netherlands</th>
<th>Norway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Poland</th>
<th>Portugal</th>
<th>Romania</th>
<th>Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
<td>2 mg/m³ MAC (aerosol)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Spain</th>
<th>Switzerland</th>
<th>Turkey</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

Derived No Effect Level (DNEL)

Short term exposure local effects
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
It is good practice to wear goggles when handling any chemical. Tightly fitting safety goggles.

Hand protection
Use protective gloves made of: Neoprene, Nitrile, PVC disposable gloves, Be aware that liquid may penetrate the gloves. Frequent change is advisable.

Respiratory protection
No personal respiratory protective equipment normally required, In case of insufficient ventilation wear suitable respiratory equipment, Chemical respirator with inorganic vapour cartridge (Grey B).

Skin and body protection
Wear suitable protective clothing, Provide eyewash station.

Hygiene measures
Wash hands before eating, drinking or smoking, Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>clear</td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.5 - 7.5</td>
<td></td>
</tr>
<tr>
<td>pH @ dilution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>-14 °C / 7 °F</td>
<td></td>
</tr>
<tr>
<td>Boiling point/range</td>
<td>&gt; 100 °C / &gt;212 °F</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No information available</td>
</tr>
</tbody>
</table>
Evaporation rate: not applicable
Flammability (solid, gas): Not Applicable

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 polymerisation does not occur.

10.4 Conditions to avoid
None known.

10.5 Incompatible materials
Metals.

10.6 Hazardous decomposition products
See also section 5.2.
11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Inhalation                Inhalation of vapours in high concentration may cause irritation of respiratory system.
Eye contact              Causes serious eye irritation.
Skin contact              Prolonged contact may cause redness and irritation.
Ingestion                Ingestion may cause stomach discomfort.
Acute toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LD50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>1000 mg/kg (Rat)</td>
<td>2630 mg/kg (Rat)</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Sensitisation       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.
Routes of exposure  Eye contact.
Routes of entry     Eye contact.
Specific target organ toxicity (single exposure) Not classified
Specific target organ toxicity (repeated exposure) Not classified.
Aspiration hazard   No hazard from product as supplied.

12. Ecological Information

12.1 Toxicity

Ecotoxicity effects
Listed on PLONOR list of OSPAR. The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Toxicity to algae
Not determined. See component information below.
Toxicity to fish
This product is not considered toxic to fish. See component information below.

Toxicity to daphnia and other aquatic invertebrates
This product is not considered toxic to invertebrates. See component information below.

<table>
<thead>
<tr>
<th>Component</th>
<th>Toxicity to fish</th>
<th>Toxicity to algae</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>10650 mg/L LC50 (Lepomis macrochirus) = 96 h</td>
<td>No information available</td>
<td>2,400 mg/L EC50 (Daphnia magna) = 48 h</td>
</tr>
<tr>
<td>10043-52-4 (30-60%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability
Not Applicable - Inorganic chemical.

12.3 Bioaccumulative potential
Does not bioaccumulate.

12.4 Mobility in soil

Mobility
The product is water soluble, and may spread in water systems.

12.5 Results of PBT and vPvB assessment
Not classified as PBT/vPvB by current EU criteria.

12.6 Other adverse effects
None known.

13. Disposal Considerations

13.1 Waste treatment methods

Waste from residues / unused products
Dispose of in accordance with local regulations.

Contaminated packaging
Empty containers should be transported/delivered using a registered waste carrier for local recycling or waste disposal.

EWC waste disposal No.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: EWC waste disposal No: 06 03 14 - solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13 Waste Code: 7097 - Inorganic solutions and liquids.

14. Transport Information
The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA,ADR/RID/ADG).

14.1 UN number
Not regulated

14.2 Proper shipping name
Not regulated

14.3. Hazard class(es)
Hazard class Not regulated
IMDG Page Not regulated
ICAO = International Civil Aviation Organization Not regulated

14.4 Packing group
Packing group Not regulated
Packing group Not regulated
ICAO Packing group Not regulated

14.5 Environmental hazard
No

14.6 Special precautions

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
The product has been assessed and contained in Chapters 17 and 18 of the IBC Code and the latest MEPC.2/Circular and is permitted to be carried under Annex II of MARPOL and resolution A.673 (16) Offshore Supply Vessel Code. Ship Type: 3. Pollution Category: Z. Proper Shipping Name: Drilling brines, including: calcium bromide solution, calcium chloride solution and sodium chloride solution.

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Germany, Water Endangering Classes (VwVwS) Water endangering class = 1


This safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008.

Dutch Mining Regulations: In accordance with Mining Regulations 9.2 and Chapter 4 of the Working Conditions Decree.

International inventories
USA, Toxic Substances Control Act inventory (TSCA)  Complies
European Union - EINECS and ELINCS  Complies
Canada, Domestic Substance List (DSL)  Complies
Philippines (PICCS)  Complies
Inventory - Japan - Existing and New Chemicals list  Complies
China (IECSC)  Complies
Australia (AICS)  Complies
Korea (KECL)  Complies
Inventory - New Zealand - Inventory of Chemicals (NZIoC)  Complies

Contact REACH@miswaco.slb.com for REACH information.

U.S. Federal and State Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>SARA 302 / TPQs</th>
<th>SARA 313</th>
<th>CERCLA RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

15.2 Chemical Safety Report

No information available

16. Other Information

Prepared by  Global Chemical Regulatory Compliance (GCRC)
Supercedes date  01/Feb/2011
Revision date  21/Apr/2014
Version  7

The following sections have been revised  This SDS have been made in a new database and therefore a new layout. No changes with regard to classification have been made, Updated according to CLP.

Text of R phrases mentioned in Section 3
R36 - Irritating to eyes

Full text of H-Statements referred to under sections 2 and 3
H319 - Causes serious eye irritation
Disclaimer
The information provided in this Material 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 guide 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.