SAFETY DATA SHEET

Occidental Chemical Corporation
A subsidiary of Occidental Petroleum Corporation

BRINE SOLUTION

SDS No.: M12377  SDS Revision Date: 25-Mar-2015

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Identification: Occidental Chemical Corporation
5005 LBJ Freeway
P.O. Box 809050
Dallas, TX 75380-9050
1-800-752-5151

24 Hour Emergency Telephone Number: 1-800-733-3665 or 1-972-404-3228 (USA); CHEMTREC (within USA and Canada): 1-800-424-9300; CHEMTREC (outside USA and Canada): +1 703-527-3887; CHEMTREC Contract No: CCN16186

To Request an SDS: MSDS@oxy.com or 1-972-404-3245

Customer Service: 1-800-752-5151 or 1-972-404-3700

Product Identifier: BRINE SOLUTION

Synonyms: Sodium Chloride Solution

Product Use: Chemical Intermediate

Uses Advised Against: None identified.

2. HAZARDS IDENTIFICATION

OSHA REGULATORY STATUS: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
BRINE SOLUTION

SDS No.: M12377
SDS Revision Date: 25-Mar-2015

EMERGENCY OVERVIEW:

Color: Colorless
Physical state: Liquid
Appearance: Clear to opaque
Odor: Salty

Signal Word: NONE

MAJOR HEALTH HAZARDS: MAY BE IRRITATING TO RESPIRATORY TRACT, SKIN AND EYES.

PRECAUTIONARY STATEMENTS: Always use good hygiene measures. Avoid breathing mist. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.

ADDITIONAL HAZARD INFORMATION: Even though this material is not classified as hazardous according to US OSHA's 2012 Hazard Communication Standard, good hygiene and safety practices should be followed. Good hygiene practices include but are not limited to: wearing suitable gloves and/or eye protection; washing hands and affected skin immediately after handling, before breaks, and at the end of the workday; regularly cleaning work area and clothing; etc.

GHS CLASSIFICATION:

Note: This material is not classified as hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS: CARCINOGENICITY: Not classified as a carcinogen per GHS criteria. This product is not classified as a carcinogen by NTP, IARC, or OSHA.

GHS SYMBOL: None

GHS SIGNAL WORD: NONE

GHS HAZARD STATEMENTS:

GHS - Physical Hazard Statement(s)
Not classified as a hazardous substance or mixture

GHS - Health Hazard Statement(s)
Not classified as a hazardous substance or mixture

GHS - Precautionary Statement(s) - Prevention
There are no Precautionary Statement(s)-Prevention phrases assigned
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GHS - Precautionary Statement(s) - Response
There are no Precautionary Statement(s)-Response phrases assigned

GHS - Precautionary Statement(s) - Storage
There are no Precautionary Statement(s) - Storage phrases assigned

GHS - Precautionary Statement(s) - Disposal
There are no Precautionary Statement(s) - Disposal phrases assigned.

Hazards Not Otherwise Classified (HNOC)
None Known

See Section 11: TOXICOLOGICAL INFORMATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Sodium Chloride Solution

<table>
<thead>
<tr>
<th>Component</th>
<th>Percent [%]</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>73 - 75</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>Sodium Chloride</td>
<td>25 - 27</td>
<td>7647-14-5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

INHALATION: No effects expected. If inhalation of this material occurs and you feel unwell, move to fresh air.

SKIN CONTACT: Irrigate with water. If irritation occurs, protect skin from further contact.

EYE CONTACT: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If mechanical irritation occurs, get medical attention.

INGESTION: No effect expected. Provide fluids if thirsty. If large amounts are ingested, get medical advice/attention.

Most Important Symptoms/Effects (Acute and Delayed):

Acute Symptoms/Effects: Listed below.
Inhalation (Breathing): Inhaling mist, spray, vapor, aerosol of this material may cause mild respiratory irritation.
Skin: Prolonged exposure to skin may cause mild irritation, redness, and dry skin.
Eye: Exposure to eye may cause slight irritation and redness to conjunctiva.
Ingestion (Swallowing): Ingesting this material may cause increased thirst. Ingesting massive amounts can cause electrolyte imbalance.

Delayed Symptoms/Effects:
- No delayed / chronic effects have been identified

Print date: 25-Mar-2015
Interaction with Other Chemicals Which Enhance Toxicity: None known.

Medical Conditions Aggravated by Exposure: May aggravate preexisting conditions, such as: eye disorders that decrease tear production or have reduced integrity of the eye; skin disorders that compromise the integrity of the skin.

Protection of First-Aiders: Avoid prolonged contact with skin and eyes. If prolonged contact is expected, use personal protective equipment. Refer to section 8 for specific personal protective equipment recommendations.

Notes to Physician: This is a concentrated salt solution of sodium chloride. This material is recognized as non-toxic. Correct any fluid/electrolyte imbalance for large ingestions.

5. FIRE-FIGHTING MEASURES

Fire Hazard: Negligible fire hazard.

Extinguishing Media: Use extinguishing agents appropriate for surrounding fire.

Fire Fighting: Wear complete fire service protective equipment, including full-face MSHA/NIOSH approved self-contained breathing apparatus. Use water to cool fire-exposed container/structure/protect personnel.

Sensitivity to Mechanical Impact: Not sensitive.

Sensitivity to Static Discharge: Not sensitive.

Lower Flammability Level (air): Not flammable

Upper Flammability Level (air): Not flammable

Flash point: Not flammable

Auto-ignition Temperature: Not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Handle in accordance with good industrial hygiene and safety practice. As a precaution, avoid contact with skin and eyes. Wear appropriate personal protective equipment recommended in Section 8, Exposure Controls / Personal Protection, of the SDS.

Methods and Materials for Containment and Cleaning Up: Stop leak if possible without personal risk. Mop up or absorb in any available absorbent. Liquid material may be removed with a properly rated vacuum truck. Collect spilled material in appropriate container for disposal. Flush spill area with water, if appropriate.
Environmental Precautions:
Keep out of water supplies and sewers. Releases should be reported, if required, to appropriate regulatory agencies.

7. HANDLING AND STORAGE

Precautions for Safe Handling:
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Wash thoroughly after handling. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the SDS.

Safe Storage Conditions:
Store and handle in accordance with all current regulations and standards. Protect from physical damage. Keep in properly labeled containers. Maintain good housekeeping.

Incompatibilities/ Materials to Avoid:
None known

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Regulatory Exposure Limit(s): This product does not contain any components that have regulatory occupational exposure limits (OEL’s) established.

OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration; PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit

NON-REGULATORY EXPOSURE LIMIT(S): This product does not contain any components that have advisory (non-regulatory) occupational exposure limits (OEL’s).
- The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits, if shown, are the Vacated 1989 PEL’s (vacated by 58 FR 35338, June 30, 1993).
- The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.

Additional Advice: Even though this material is not classified as hazardous according to US OSHA's 2012 Hazard Communication Standard, good hygiene and safety practices should be followed. Good hygiene practices include but are not limited to: wearing suitable gloves and/or eye protection; washing hands and affected skin immediately after handling, before breaks, and at the end of the workday; regularly cleaning work area and clothing; etc.

PERSONAL PROTECTIVE EQUIPMENT:
Eye Protection: Use good hygiene practices when handling this material. Wear safety glasses with side-shields.

Skin and Body Protection: As a good hygiene practice, wear protective clothing to minimize skin contact such as standard industrial work clothes, coveralls, safety footwear.

Hand Protection: As a good hygiene practice, wear appropriate chemical resistant gloves.

Protective Material Types: Butyl rubber, Natural rubber, Neoprene, Vinyl

Respiratory Protection: A NIOSH approved respirator with N95 cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance:</td>
<td>Clear to opaque</td>
</tr>
<tr>
<td>Color:</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor:</td>
<td>Salty</td>
</tr>
<tr>
<td>Odor Threshold [ppm]:</td>
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</tr>
<tr>
<td>Boiling Point/Range:</td>
<td>215 °C (419 °F) approximate</td>
</tr>
<tr>
<td>Freezing Point/Range:</td>
<td>-21°C - 0°C (-6°F - -32°F).</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
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</tr>
<tr>
<td>Vapor Density (air=1):</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative Density/Specific Gravity</td>
<td>1.19 - 1.21</td>
</tr>
<tr>
<td>(water=1):</td>
<td></td>
</tr>
<tr>
<td>Water Solubility:</td>
<td>100%</td>
</tr>
<tr>
<td>pH:</td>
<td>6-7 (100 g/L solution)</td>
</tr>
<tr>
<td>Volatility:</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation Rate (ether=1):</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower Flammability Level (air):</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Upper Flammability Level (air):</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Auto-ignition Temperature:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>No data available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity: Not reactive under normal temperatures and pressures.
BRINE SOLUTION

Chemical Stability: Stable at normal temperatures and pressures.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: None known.

Incompatibilities/Materials to Avoid: None known.

Hazardous Decomposition Products: None known.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA:

PRODUCT TOXICITY DATA: BRINE SOLUTION
Note: The test material for the toxicological studies was sodium chloride.

COMPONENT TOXICITY DATA:
Note: The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given.

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral:</th>
<th>LD50 Dermal:</th>
<th>LC50 Inhalation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Chloride</td>
<td>3 g/kg (Rat)</td>
<td>10 g/kg (Rabbit)</td>
<td>42 g/m³ (1 hr-Rat)</td>
</tr>
<tr>
<td>7647-14-5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

POTENTIAL HEALTH EFFECTS:

Eye contact: May cause mild eye irritation.
Skin contact: Prolonged and repeated skin contact may cause redness and dry skin.
Inhalation: No specific disorder or effects are identified. Inhalation of vapor, mist, spray, aerosol may cause slight respiratory tract irritation.
Ingestion: Ingestion of this material may cause increased thirst. Massive ingestion may cause fluid/electrolyte imbalance.
Chronic Effects: None known.

SIGNS AND SYMPTOMS OF EXPOSURE:
Inhalation (Breathing): Inhaling mist, spray, vapor, aerosol of this material may cause mild respiratory irritation.

Skin: Prolonged exposure to skin may cause mild irritation, redness, and dry skin.

Eye: Exposure to eye may cause slight irritation and redness to conjunctiva.

Ingestion (Swallowing): Ingesting this material may cause increased thirst. Ingesting massive amounts can cause electrolyte imbalance.

**TOXICITY:**
This is a concentrated salt solution of sodium chloride. It is a normal constituent of the body. This solution acts osmotically to remove water from the local tissue. Dried residue may be gritty and cause mechanical irritation.

**Interaction with Other Chemicals Which Enhance Toxicity:** None known.

**GHS HEALTH HAZARDS:**
This material is not classified as hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). There is not a GHS classification associated with this non-hazardous material.

**GHS: CARCINOGENICITY:**
Not classified as a carcinogen per GHS criteria. This product is not classified as a carcinogen by NTP, IARC, or OSHA.

**12. ECOLOGICAL INFORMATION**

**ECOTOXICITY DATA:**

**Aquatic Toxicity:**
This material is a concentrated salt solution. Entry into fresh water environments may be hazardous to aquatic life.

**FATE AND TRANSPORT:**

**BIODEGRADATION:** This material is inorganic and not subject to biodegradation.

**PERSISTENCE:** This material is believed to exist in the disassociated state in the environment.

**BIOCONCENTRATION:** This material has not been tested, but based on the components it is believed not to bioconcentrate.

**13. DISPOSAL CONSIDERATIONS**

Waste from material:
Reuse or reprocess, if possible. Dispose in accordance with all applicable regulations.
Container Management:
Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container rinsate must be disposed of in compliance with applicable regulations.

14. TRANSPORT INFORMATION

LAND TRANSPORT

U.S. DOT 49 CFR 172.101:
Status: Not regulated

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:
Status: Not regulated.

MARITIME TRANSPORT (IMO / IMDG):
Status - IMO / IMDG: Not Regulated

15. REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:
This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
Not regulated.

SARA EHS Chemical (40 CFR 355.30)
Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):
None
BRINE SOLUTION

EPCRA SECTION 313 (40 CFR 372.65):
Not regulated.

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):
Not regulated

NATIONAL INVENTORY STATUS

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA): All components are listed or exempt.

TSCA 12(b): This product is not subject to export notification.

Canadian Chemical Inventory: All components of this product are listed on either the DSL or the NDSL.

STATE REGULATIONS

There are no applicable state regulations for this product or its components.

CANADIAN REGULATIONS

• This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations

WHMIS - Classifications of Substances:
• D2B - Poisonous and Infectious Material; Materials causing other toxic effects - Toxic material

16. OTHER INFORMATION

Prepared by: OxyChem Corporate HESS - Product Stewardship

Rev. Date: 25-Mar-2015

HMIS: (SCALE 0-4) (Rated using National Paint & Coatings Association HMIS: Rating Instructions, 2nd Edition)

Health Rating: 0 Flammability Rating: 0 Reactivity Rating: 0

NFPA 704 - Hazard Identification Ratings (SCALE 0-4)

Health Rating: 0 Flammability: 0 Reactivity Rating: 0
**BRINE SOLUTION**

**SDS No.: M12377**

**SDS Revision Date:** 25-Mar-2015

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**Reason for Revision:**
- Three year review
- Changed the SDS format to meet the GHS requirements of the revised 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
- Updated the (M)SDS header
- Product Identifier has been added or updated: SEE SECTION 1
- Updated Uses Advised Against information: SEE SECTION 1
- Added OSHA Status: SEE SECTION 2
- Added GHS Information: SEE SECTION 2
- Updated First Aid Measures: SEE SECTION 4
- Revised Accidental Release Measures: SEE SECTION 6
- Revised Handling and Storage Recommendations: SEE SECTION 7
- Revised Exposure Controls/Personal Protection information: SEE SECTION 8
- Updated Physical and Chemical Properties. SEE SECTION 9
- Stability and Reactivity recommendations: SEE SECTION 10
- Toxicological Information has been revised: SEE SECTION 11
- Updated Disposal Considerations. SEE SECTION 13
- Added "End of Safety Data Sheet" phrase

**IMPORTANT:**
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OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees.

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**End of Safety Data Sheet**