



# Brine

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations  
Revision Date: 05/26/2015 Date of issue: 05/26/2015

Version: 1.0

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Brine

#### 1.2. Intended Use of the Product

**Use of the substance/mixture:** Dust control/ice control on roadways.

#### 1.3. Name, Address, and Telephone of the Responsible Party

##### Customer

Dart Oil & Gas Corporation

135 E. Main Street

P.O. Box 310

Marion, MI 49665

517-676-2900

[www.dartoilandgas.com](http://www.dartoilandgas.com)

#### 1.4. Emergency Telephone Number

**Emergency Number** : 231-825-8282

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

##### Classification (GHS-US)

Not classified

#### 2.2. Label Elements

##### GHS-US Labeling

No labeling applicable

#### 2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

#### 2.4. Unknown Acute Toxicity (GHS-US)

No data available

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product Identifier	%	Classification (GHS-US)
Water	(CAS No) 7732-18-5	73.4	Not classified
Chloride ion	(CAS No) 16887-00-6	10.2	Not classified
Calcium chloride	(CAS No) 10043-52-4	8.57	Eye Irrit. 2A, H319
Sodium chloride	(CAS No) 7647-14-5	6.56	Not classified
Magnesium chloride	(CAS No) 7786-30-3	0.9	Not classified
Potassium chloride	(CAS No) 7447-40-7	0.418	Not classified

Full text of H-phrases: see section 16

### SECTION 4: FIRST AID MEASURES

#### 4.1. Description of First Aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**First-aid Measures After Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**First-aid Measures After Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

**First-aid Measures After Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

**First-aid Measures After Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

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

**Symptoms/Injuries:** Not expected to present a significant hazard under anticipated conditions of normal use.

**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.

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**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.

**Symptoms/Injuries After Eye Contact:** Prolonged exposure may cause eye irritation.

**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.

## 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Water spray, dry chemical, foam, carbon dioxide.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not considered flammable but may burn at high temperatures.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** May be corrosive to metals upon prolonged contact. Exothermic reaction may occur on prolonged contact with water.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray).

#### 6.1.1. For Non-emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Responders

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and Material for Containment and Cleaning Up

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

### 6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** Prolonged contact with water causes an exothermic heat reaction, which may cause temperature rise. May be corrosive to metals upon prolonged contact.

**Precautions for Safe Handling:** Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

**Incompatible Products:** Strong acids, strong bases, strong oxidizers, and (some) metals (upon prolonged contact)

### 7.3. Specific End Use(s)

Dust control/ ice control on roadways.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

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## 8.2. Exposure Controls

**Appropriate Engineering Controls** : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

**Personal Protective Equipment** : Gloves. Protective clothing. Protective goggles.



**Materials for Protective Clothing** : Chemically resistant materials and fabrics.

**Hand Protection** : Wear protective gloves.

**Eye Protection** : Chemical safety goggles.

**Skin and Body Protection** : Wear suitable protective clothing.

**Respiratory Protection** : If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**Other Information** : When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear or dark or reddish
Odor	: From dissolved gases
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: Wide range
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20 °C	: No data available
Relative Density	: No data available
Specific Gravity	: Wide range
Solubility	: No data available
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

**9.2. Other Information** No additional information available

## SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** May be corrosive to metals upon prolonged contact. Exothermic reaction on prolonged contact with water.
- 10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials.
- 10.5. Incompatible Materials:** Strong acids, strong bases, strong oxidizers, and some metals (upon prolonged contact).
- 10.6. Hazardous Decomposition Products:** Hydrogen chloride. Chlorine gas. Sodium oxides. Toxic fumes.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information On Toxicological Effects

**Acute Toxicity:** Not classified

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<b>Calcium chloride (10043-52-4)</b>	
LD50 Oral Rat	2301 (1455 - 2781) mg/kg
LD50 Dermal Rabbit	> 5000 mg/kg
<b>Magnesium chloride (7786-30-3)</b>	
LD50 Oral Rat	2800 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
<b>Potassium chloride (7447-40-7)</b>	
LD50 Oral Rat	2600 mg/kg
<b>Sodium chloride (7647-14-5)</b>	
LD50 Oral Rat	3 g/kg
LC50 Inhalation Rat	> 42 g/m <sup>3</sup> (Exposure time: 1 h)

**Skin Corrosion/Irritation:** Not classified

**Serious Eye Damage/Irritation:** Not classified

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.

**Symptoms/Injuries After Eye Contact:** Prolonged exposure may cause eye irritation

**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General** : Not classified.

<b>Calcium chloride (10043-52-4)</b>	
LC50 Fish 1	10650 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	2400 mg/l (Exposure time: 48 h - Species: Daphnia magna)
<b>Magnesium chloride (7786-30-3)</b>	
LC50 Fish 1	1970 - 3880 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	140 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
<b>Potassium chloride (7447-40-7)</b>	
LC50 Fish 1	1060 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	825 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	750 - 1020 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
<b>Sodium chloride (7647-14-5)</b>	
LC50 Fish 1	5560 (5560 - 6080) mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
EC50 Daphnia 1	1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	12946 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 2	340.7 (340.7 - 469.2) mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

### 12.2. Persistence and Degradability

<b>Brine</b>	
<b>Persistence and Degradability</b>	Not established.

### 12.3. Bioaccumulative Potential

<b>Brine</b>	
<b>Bioaccumulative Potential</b>	Not established.
<b>Calcium chloride (10043-52-4)</b>	
<b>BCF fish 1</b>	(no bioaccumulation)
<b>Sodium chloride (7647-14-5)</b>	
<b>BCF fish 1</b>	(no bioaccumulation)

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**12.4. Mobility in Soil** No additional information available

**12.5. Other Adverse Effects**

**Other Information** : Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, and international regulations.

**Ecology – Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

**14.1. In Accordance with DOT** Not regulated for transport

**14.2. In Accordance with IMDG** Not regulated for transport

**14.3. In Accordance with IATA** Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

**15.1 US Federal Regulations**

<b>Calcium chloride (10043-52-4)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Magnesium chloride (7786-30-3)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Potassium chloride (7447-40-7)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Sodium chloride (7647-14-5)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Water (7732-18-5)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**15.2 US State Regulations**

<b>Calcium chloride (10043-52-4)</b>
U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term
<b>Magnesium chloride (7786-30-3)</b>
U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term
<b>Potassium chloride (7447-40-7)</b>
U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term
<b>Sodium chloride (7647-14-5)</b>
U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term
<b>Chloride ion (16887-00-6)</b>
U.S. - Colorado - Primary Drinking Water Regulations - Secondary Maximum Contaminant Levels (SMCLs) U.S. - Connecticut - Drinking Water Quality Standards - Groundwater Sources U.S. - Connecticut - Drinking Water Quality Standards - Maximum Contaminant Levels U.S. - Connecticut - Water Quality Standards - Acute Freshwater Aquatic Life Criteria U.S. - Connecticut - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria U.S. - Florida - Drinking Water Standards - Secondary Maximum Contaminant Levels (SMCLs) U.S. - Missouri - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs) U.S. - Nevada - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs) U.S. - New Mexico - Water Quality - Standards for Ground Water of 10,000 mg/L TDS Concentration or Less U.S. - Texas - Drinking Water Standards - Secondary Constituent Levels (SCLs) U.S. - Virginia - Water Quality Standards - Chronic Freshwater Aquatic Life U.S. - Virginia - Water Quality Standards - Public Water Supply Effluent Limits U.S. - Alaska - Water Quality Standards - Acute Aquatic Life Criteria for Fresh Water U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Fresh Water U.S. - Arkansas - Surface Water Quality Standards - Chronic Aquatic Life Criteria

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U.S. - Arkansas - Surface Water Quality Standards - Acute Aquatic Life Criteria

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Revision Date** : 05/26/2015  
**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### GHS Full Text Phrases:

Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
H319	Causes serious eye irritation

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

SDS US (GHS HazCom)