

# SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

## Potassium Chloride, Sodium Chloride, Sodium Bromide Brine

Revision Date: 17-Jan-2011

Revision Number: 1

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product Identifier****Product Name** Potassium Chloride, Sodium Chloride, Sodium Bromide Brine**Relevant identified uses of the substance or mixture and uses advised against****Recommended Use** Brine  
**Uses Advised Against** No information available**Details of the supplier of the safety data sheet**Halliburton Energy Services  
Halliburton House, Howemoss Place  
Kirkhill Industrial Estate  
Dyce  
Aberdeen, AB21 0GN  
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+44 1224 795277 or +1 281 575 5000

| <b>Emergency telephone §45 - (EC)1272/2008</b> |   |
|--|---|
| <b>Europe</b>                                  | <b>112</b>  |
| <b>Denmark</b>                                 | Poison Control Hotline (DK): +45 82 12 12 12  |
| <b>France</b>                                  | ORFILA (FR): + 01 45 42 59 59   |
| <b>Germany</b>                                 | Poison Center Berlin (DE): +49 030 30686 790  |
| <b>Italy</b>                                   | Poison Center, Milan (IT): +39 02 6610 1029   |
| <b>Netherlands</b>                             | National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals) |
| <b>Norway</b>                                  | Poisons Information (NO): +47 22 591300   |
| <b>Poland</b>                                  | Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97                                  |
| <b>Spain</b>                                   | Poison Information Service (ES): +34 91 562 04 20   |
| <b>United Kingdom</b>                          | NHS Direct (UK): +44 0845 46 47   |

### 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

REGULATION (EC) No 1272/2008

Not classified

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

For the full text of the R-phrases mentioned in this Section, see Section 16

## 2. HAZARDS IDENTIFICATION

**Classification** Not Classified  
**Risk Phrases** None

**Label Elements**  
 Not classified

**Hazard Pictograms**

**Signal Word** Not Hazardous

### Contains

| Substances         | CAS Number |
|--------------------|------------|
| Sodium bromide     | 7647-15-6  |
| Potassium chloride | 7447-40-7  |
| Sodium chloride    | 7647-14-5  |

### Other Hazards

None known

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Substances         | EINECS    | CAS Number | PERCENT  | EEC Classification | EU - CLP Substance Classification | REACH No.         |
|--------------------|-----------|------------|----------|--------------------|-----------------------------------|-------------------|
| Sodium bromide     | 231-599-9 | 7647-15-6  | 10 - 30% | Xi; R36            | Eye Irrit. 2 (H319)               | No data available |
| Potassium chloride | 231-211-8 | 7447-40-7  | 5 - 10%  | Not applicable     | Not applicable                    | No data available |
| Sodium chloride    | 231-598-3 | 7647-14-5  | 5 - 10%  | Not applicable     | Not applicable                    | No data available |

For the full text of the R-phrases mentioned in this Section, see Section 16

## 4. FIRST AID MEASURES

### 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.

#### Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

#### Skin

Wash with soap and water. Get medical attention if irritation persists. Remove contaminated clothing and launder before reuse.

#### Ingestion

Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

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

No information available

### Indication of any immediate medical attention and special treatment needed

**Notes to Physician** Treat symptomatically

## 5. FIREFIGHTING MEASURES

### Extinguishing mediaó

## 5. FIREFIGHTING MEASURES

### Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

### Extinguishing media which must not be used for safety reasons

None known.

### Special hazards arising from the substance of mixture

#### Special Exposure Hazards

Decomposition in fire may produce toxic gases. Product is not expected to burn unless all the water is boiled away.

### Advice for firefighters

#### Special Protective Equipment for Fire-Fighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment.

See Section 12 for additional information

### Environmental precautions

Prevent from entering sewers, waterways, or low areas.

### Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

### Reference to other sections

See Section 12 for additional information.

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Avoid contact with eyes, skin, or clothing.

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

### Conditions for safe storage, including any incompatibilities

Keep container closed when not in use.

### Specific End Use(s)

**Exposure Scenario** No information available

**Other Guidelines** No information available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

| Substances         | EU             | UK OEL               | Netherlands    | France OEL     | Germany MAK/TRK |
|--------------------|----------------|----------------------|----------------|----------------|-----------------|
| Sodium bromide     | Not applicable | 10 mg/m <sup>3</sup> | Not applicable | Not applicable | Not applicable  |
| Potassium chloride | Not applicable | 10 mg/m <sup>3</sup> | Not applicable | Not applicable | Not applicable  |
| Sodium chloride    | Not applicable | 10 mg/m <sup>3</sup> | Not applicable | Not applicable | Not applicable  |

| Substances         | Italy          | Poland         | Hungary        | Czech Republic | Denmark        |
|--------------------|----------------|----------------|----------------|----------------|----------------|
| Sodium bromide     | Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| Potassium chloride | Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| Sodium chloride    | Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

### Exposure controls

**Engineering Controls** None known.

**Personal protective equipment**

|  |   |
|--|---|
| <b>Respiratory Protection</b>          | Dust/mist respirator. (N95, P2/P3) Not normally needed. But if significant exposures are possible then the following respirator is recommended: |
| <b>Hand Protection</b>                 | Impervious rubber gloves.   |
| <b>Skin Protection</b>                 | Rubber apron.   |
| <b>Eye Protection</b>                  | Chemical goggles; also wear a face shield if splashing hazard exists.   |
| <b>Other Precautions</b>               | Eyewash fountains and safety showers must be easily accessible.   |
| <b>Environmental Exposure Controls</b> | No information available  |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|                        |          |                        |                          |
|------------------------|----------|------------------------|--------------------------|
| <b>Physical State:</b> | Liquid   | <b>Color:</b>          | Clear colorless          |
| <b>Odor:</b>           | Odorless | <b>Odor Threshold:</b> | No information available |

| <u>Property</u>                               | <u>Values</u>            |
|---|--------------------------|
| <u>Remarks/ Method</u>                        |                          |
| <b>pH:</b>                                    | 8-10                     |
| <b>Melting Point/Range</b>                    | No data available        |
| <b>Freezing Point/Range (C):</b>              | No data available        |
| <b>Boiling Point/Range</b>                    | No data available        |
| <b>Flash Point</b>                            | No data available        |
| <b>Evaporation rate</b>                       | No data available        |
| <b>Vapor Pressure</b>                         | No data available        |
| <b>Vapor Density</b>                          | No data available        |
| <b>Specific Gravity</b>                       | 1.3                      |
| <b>Water Solubility</b>                       | No data available        |
| <b>Solubility in other solvents</b>           | No data available        |
| <b>Partition coefficient: n-octanol/water</b> | No data available        |
| <b>Autoignition Temperature</b>               | No data available        |
| <b>Decomposition Temperature</b>              | No data available        |
| <b>Viscosity</b>                              | No data available        |
| <b>Explosive Properties</b>                   | No information available |
| <b>Oxidizing Properties</b>                   | No information available |

### Other information

|                        |                   |
|------------------------|-------------------|
| <b>VOC Content (%)</b> | No data available |
|------------------------|-------------------|

## 10. STABILITY AND REACTIVITY

### Reactivity

Not applicable

### Chemical Stability

Stable

### Possibility of Hazardous Reactions

Will Not Occur

### Conditions to Avoid

None anticipated

### Incompatible Materials

None known.

### Hazardous Decomposition Products

Chlorine. Bromine.

## 11. TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

#### Acute Toxicity

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | May cause respiratory irritation.             |
| <b>Eye Contact</b>  | May cause eye irritation.                     |
| <b>Skin Contact</b> | May cause skin irritation.                    |
| <b>Ingestion</b>    | Irritation of the mouth, throat, and stomach. |

## 11. TOXICOLOGICAL INFORMATION

**Chronic Effects/Carcinogenicity** No data available to indicate product or components present at greater than 1% are chronic health hazards.

| Substances         | LD50 Oral    | LD50 Dermal       | LC50 Inhalation   |
|--------------------|--------------|-------------------|-------------------|
| Sodium bromide     | 3500 mg/kg   | No data available | No data available |
| Potassium chloride | > 5000 mg/kg | No data available | No data available |
| Sodium chloride    | 3000 mg/kg   | No data available | No data available |

## 12. ECOLOGICAL INFORMATION

### Toxicity Ecotoxicity Effects

| Substances         | Toxicity to Algae                                | Toxicity to Fish   | Toxicity to Microorganisms | Daphnia Magna (Water Flea)                |
|--------------------|--|--|----------------------------|---|
| Sodium bromide     | EC50: 5800 - 24000 mg/L (Scenedesmus pannonicus) | LC50: > 1000 mg/L (Lepomis macrochirus)  | No information available   | EC50: 5800 - 48000 mg/L (Daphnia magna)   |
| Potassium chloride | EC50: 2500 mg/l (Desmodesmus subspicatus)        | LC50: 1060 mg/L (Lepomis macrochirus); LC50: 750-1020 mg/L (Pimephales promelas) | No information available   | TLM96: 100-330 ppm (Crangon crangon)      |
| Sodium chloride    | No information available                         | TLM96: > 1000 mg/l (Oncorhynchus mykiss)   | No information available   | TLM96: > 1,000,000 ppm (Mysidopsis bahia) |

### Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

### Bioaccumulative potential

Does not bioaccumulate

### Mobility in soil

No information available

### Results of PBT and vPvB assessment

No information available.

### Other adverse effects

#### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

#### Disposal Method

Disposal should be made in accordance with federal, state, and local regulations.

#### Contaminated Packaging

Follow all applicable national or local regulations.

## 14. TRANSPORT INFORMATION

### IMDG/IMO

UN Number: Not restricted.  
 UN Proper Shipping Name: Not restricted  
 Transport Hazard Class(es): Not applicable

**14. TRANSPORT INFORMATION****RID**

**UN Number:** Not restricted.  
**UN Proper Shipping Name:** Not restricted  
**Transport Hazard Class(es):** Not applicable

**ADR**

**UN Number:** Not restricted.  
**UN Proper Shipping Name:** Not restricted  
**Transport Hazard Class(es):** Not applicable

**IATA/ICAO**

**UN Number:** Not restricted.  
**UN Proper Shipping Name:** Not restricted  
**Transport Hazard Class(es):** Not applicable

**Special Precautions for User** None

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable

**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories**

**EINECS Inventory** This product, and all its components, complies with EINECS  
**US TSCA Inventory** All components listed on inventory or are exempt.  
**Canadian DSL Inventory** All components listed on inventory or are exempt.

**Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**Germany, Water Endangering Classes (WGK)** WGK 1: Low hazard to waters.

**Chemical Safety Assessment**

No information available

**16. OTHER INFORMATION****Full text of R-phrases referred to under Sections 2 and 3**

None

**Key literature references and sources for data**

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

**Revision Date:** 17-Jan-2011  
**Revision Note** Not applicable

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer Statement**

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**16. OTHER INFORMATION**

End of Safety Data Sheet