

## MATERIAL SAFETY DATA SHEET

**Product Trade Name:** ALUMINUM CHLORIDE SOLUTION

**Revision Date:** 20-Dec-2012

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

**Statement of Hazardous Nature** Hazardous according to the criteria of NOHSC, Dangerous Goods according to the criteria of ADG.

**Manufacturer/Supplier** Halliburton Australia Pty. Ltd.  
15 Marriott Road  
Jandakot  
WA 6164  
Australia

ACN Number: 009 000 775  
Telephone Number: 61 (08) 9455 8300  
Fax Number: 61 (08) 9455 5300

**Product Emergency Telephone**

Australia: 08-64244950  
Papua New Guinea: 05 1 281 575 5000  
New Zealand: 06-7559274

**Fire, Police & Ambulance - Emergency Telephone**

Australia: 000  
Papua New Guinea: 000  
New Zealand: 111

#### Identification of Substances or Preparation

**Product Trade Name:** ALUMINUM CHLORIDE SOLUTION  
**Synonyms:** None  
**Chemical Family:** Inorganic Salt  
**UN Number:** , UN2581  
**Dangerous Goods Class:** 8  
**Subsidiary Risk:** None  
**Hazchem Code:** 2X  
**Poisons Schedule:** None Allocated  
**Application:** Additive

**Prepared By** Chemical Compliance  
Telephone: 1-580-251-4335  
e-mail: fdunexchem@halliburton.com

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

| Substances        | CAS Number  | PERCENT  | Australia<br>NOHSC       | New Zealand<br>WES       | ACGIH TLV-TWA  |
|-------------------|-------------|----------|--------------------------|--------------------------|----------------|
| Aluminum chloride | Proprietary | 10 - 30% | TWA: 2 mg/m <sup>3</sup> | TWA: 2 mg/m <sup>3</sup> | Not applicable |

## Non-Hazardous Substance to Total of 100%

### 3. HAZARDS IDENTIFICATION

|                            |  |
|----------------------------|--|
| <b>Hazard Overview</b>     | May cause eye, skin, and respiratory burns. May be harmful if swallowed. |
| <b>Risk Phrases</b>        | R34 Causes burns.  |
| <b>HSNO Classification</b> | Not Determined   |

### 4. FIRST AID MEASURES

|                           |   |
|---------------------------|---|
| <b>Inhalation</b>         | If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.         |
| <b>Skin</b>               | In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse. |
| <b>Eyes</b>               | In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.             |
| <b>Ingestion</b>          | 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.                      |
| <b>Notes to Physician</b> | Not Applicable  |

### 5. FIRE FIGHTING MEASURES

|  |  |
|--|--|
| <b>Suitable Extinguishing Media</b>                                  | Water fog, carbon dioxide, foam, dry chemical.   |
| <b>Extinguishing media which must not be used for safety reasons</b> | None known.  |
| <b>Special Exposure Hazards</b>                                      | Decomposition in fire may produce toxic gases.   |
| <b>Special Protective Equipment for Fire-Fighters</b>                | Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel. |

### 6. ACCIDENTAL RELEASE MEASURES

|   |   |
|---|---|
| <b>Personal Precautionary Measures</b>      | Use appropriate protective equipment.   |
| <b>Environmental Precautionary Measures</b> | Prevent from entering sewers, waterways, or low areas.  |
| <b>Procedure for Cleaning / Absorption</b>  | Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Neutralize to pH of 6-8. Scoop up and remove. |

### 7. HANDLING AND STORAGE

|                             |  |
|-----------------------------|--|
| <b>Handling Precautions</b> | Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Launder contaminated clothing before reuse.        |
| <b>Storage Information</b>  | Store away from alkalis. Store in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 24 months. |

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

|                        |  |
|------------------------|--|
| Engineering Controls   | Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation. |
| Respiratory Protection | Dust/mist respirator. (N95, P2/P3)   |
| Hand Protection        | Impervious rubber gloves.  |
| Skin Protection        | Rubber apron.  |
| Eye Protection         | Chemical goggles; also wear a face shield if splashing hazard exists.  |
| Other Precautions      | Eyewash fountains and safety showers must be easily accessible.  |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|   |                    |
|---|--------------------|
| Physical State:   | Liquid             |
| Color:  | Light yellow-green |
| Odor:   | Mild acidic        |
| pH:   | 1                  |
| Specific Gravity @ 20 C (Water=1):                      | 1.27               |
| Density @ 20 C (kg/l):                                  | 1.27               |
| Bulk Density @ 20 C (kg/m <sup>3</sup> ):               | Not Determined     |
| Boiling Point/Range (C):                                | 100                |
| Freezing Point/Range (C):                               | Not Determined     |
| Pour Point/Range (C):                                   | Not Determined     |
| Flash Point/Range (C):                                  | Not Determined     |
| Flash Point Method:                                     | Not Determined     |
| Autoignition Temperature (C):                           | Not Determined     |
| Flammability Limits in Air - Lower (g/m <sup>3</sup> ): | Not Determined     |
| Flammability Limits in Air - Lower (%):                 | Not Determined     |
| Flammability Limits in Air - Upper (g/m <sup>3</sup> ): | Not Determined     |
| Flammability Limits in Air - Upper (%):                 | Not Determined     |
| Vapor Pressure @ 20 C (mmHg):                           | 23                 |
| Vapor Density (Air=1):                                  | Not Determined     |
| Percent Volatiles:                                      | 73                 |
| Evaporation Rate (Butyl Acetate=1):                     | Not Determined     |
| Solubility in Water (g/100ml):                          | Soluble            |
| Solubility in Solvents (g/100ml):                       | Not Determined     |
| VOCs (g/l):   | Not Determined     |
| Viscosity, Dynamic @ 20 C (centipoise):                 | Not Determined     |
| Viscosity, Kinematic @ 20 C (centistokes):              | Not Determined     |
| Partition Coefficient/n-Octanol/Water:                  | Not Determined     |
| Molecular Weight (g/mole):                              | Not Determined     |
| Decomposition Temperature (C):                          | Not Determined     |

## 10. STABILITY AND REACTIVITY

|                                      |  |
|--------------------------------------|--|
| Stability Data:                      | Stable                                 |
| Hazardous Polymerization:            | Will Not Occur                         |
| Conditions to Avoid                  | Keep away from heat, sparks and flame. |
| Incompatibility (Materials to Avoid) | Strong alkalis. Mild steel. Cyanides.  |
| Hazardous Decomposition Products     | Hydrogen chloride.                     |

**11. TOXICOLOGICAL INFORMATION**

**Principle Route of Exposure** Eye or skin contact, inhalation.

Symptoms related to exposure

**Inhalation**

Causes severe respiratory irritation.

**Skin Contact**

Causes severe skin irritation. May cause skin burns.

**Eye Contact**

Causes severe eye irritation which may damage tissue. May cause eye burns.

**Ingestion**

Causes burns of the mouth, throat and stomach.

**Aggravated Medical Conditions**

Skin disorders.

**Chronic Effects/Carcinogenicity**

No data available to indicate product or components present at greater than 1% are chronic health hazards.

**Other Information**

None known.

**Toxicity Tests**

**Oral Toxicity:**

LD50: 7100 mg/kg (rat)

**Dermal Toxicity:**

LD50: > 7940 mg/kg (Rabbit)

**Inhalation Toxicity:**

Not determined

**Primary Irritation Effect:**

Not determined

**Carcinogenicity**

Not determined

**Genotoxicity:**

Not determined

**Reproductive /**

**Developmental Toxicity:**

Not determined

**12. ECOLOGICAL INFORMATION**

**Mobility (Water/Soil/Air)** Not determined

**Persistence/Degradability** Not determined

**Bio-accumulation** Not determined

**Ecotoxicological Information**

**Acute Fish Toxicity:**

Not determined

**Acute Crustaceans Toxicity:**

Not determined

**Acute Algae Toxicity:**

Not determined

**Chemical Fate Information** Not determined

**Other Information** Not applicable

**13. DISPOSAL CONSIDERATIONS**

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

ALUMINUM CHLORIDE SOLUTION

**14. TRANSPORT INFORMATION****Land Transportation****ADR**

UN2581, Aluminum Chloride Solution, 8, III

**Air Transportation****ICAO/IATA**

UN2581, Aluminum Chloride Solution, 8, III

**Sea Transportation****IMDG**UN2581, Aluminum Chloride Solution, 8, III  
EmS F-A, S-B**Other Transportation Information**

Labels: Corrosive

**15. REGULATORY INFORMATION****Chemical Inventories****Australian AICS Inventory**  
**New Zealand Inventory of Chemicals**  
**US TSCA Inventory**  
**EINECS Inventory**All components listed on inventory or are exempt.  
All components listed on inventory or are exempt.  
All components listed on inventory or are exempt.  
This product, and all its components, complies with EINECS**Classification**

C - Corrosive.

**Risk Phrases**

R34 Causes burns.

**Safety Phrases**S28 After contact with skin, wash immediately with plenty of water  
S45 In case of accident or if you feel unwell, seek medical advice immediately.  
S1/2 Keep locked up and out of reach of children.  
S7/8 Keep container tightly closed and dry.**16. OTHER INFORMATION****The following sections have been revised since the last issue of this SDS**  
Not applicable

## Contact

### Australian Poisons Information Centre

24 Hour Service: - 13 11 26

Police or Fire Brigade: - 000 (exchange): - 1100

### New Zealand National Poisons Centre

0800 764 766

### Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Compliance at 1-580-251-4335.

### Disclaimer Statement

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**\*\*\*END OF MSDS\*\*\***