HALLIBURTON

# MATERIAL SAFETY DATA SHEET

**Product Trade Name:** **DCA-16003**

**Revision Date:** 09-Dec-2013

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Trade Name:** DCA-16003
**Synonyms:** None
**Chemical Family:** Blend
**Application:** Clay Stabilization Agent

**Manufacturer/Supplier**
Halliburton Energy Services
P.O. Box 1431
Duncan, Oklahoma 73536-0431
Emergency Telephone: (281) 575-5000

**Prepared By**
Chemical Compliance
Telephone: 1-580-251-4335
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## 2. COMPOSITION/INFORMATION ON INGREDIENTS

| Substances | CAS Number | PERCENT (w/w) | ACGIH TLV-TWA | OSHA PEL-TWA |
|---|---|---|---|---|
| Ammonium chloride | 12125-02-9 | 10 - 30% | TWA: 10 mg/m$^3$<br>STEL: 20 mg/m$^3$ | 10 mg/m$^3$ |

## 3. HAZARDS IDENTIFICATION

**Hazard Overview** May cause eye burns. May cause skin and respiratory irritation. May be harmful if swallowed.

## 4. FIRST AID MEASURES

**Inhalation** If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

**Skin** Wash with soap and water. Get medical attention if irritation persists.

**Eyes** 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.

**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.

**Notes to Physician** Not Applicable

## 5. FIRE FIGHTING MEASURES

| | |
|---|---|
| **Flash Point/Range (F):** | Not Determined |
| **Flash Point/Range (C):** | Not Determined |
| **Flash Point Method:** | Not Determined |
| **Autoignition Temperature (F):** | Not Determined |
| **Autoignition Temperature (C):** | Not Determined |
| **Flammability Limits in Air - Lower (%):** | Not Determined |
| **Flammability Limits in Air - Upper (%):** | Not Determined |

**Fire Extinguishing Media** All standard firefighting media.

**Special Exposure Hazards** Decomposition in fire may produce toxic gases.

**Special Protective Equipment for Fire-Fighters** Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

**NFPA Ratings:** Health 2, Flammability 0, Reactivity 0
**HMIS Ratings:** Health 2, Flammability 0, Reactivity 0

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautionary Measures** Use appropriate protective equipment.

**Environmental Precautionary Measures** Prevent from entering sewers, waterways, or low areas.

**Procedure for Cleaning / Absorption** Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

## 7. HANDLING AND STORAGE

**Handling Precautions** Avoid contact with eyes, skin, or clothing. Avoid breathing vapors.

**Storage Information** Store away from oxidizers. Store in a cool well ventilated area. Keep container closed when not in use.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls** Use in a well ventilated area.

**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:** | Clear light yellow |
| **Odor:** | Mild amine |

| | |
|---|---|
| **pH:** | Not Determined |
| **Specific Gravity @ 20 C (Water=1):** | 1.03 |
| **Density @ 20 C (lbs./gallon):** | 8.58 |
| **Bulk Density @ 20 C (lbs/ft3):** | Not Determined |
| **Boiling Point/Range (F):** | 148 |
| **Boiling Point/Range (C):** | 64 |
| **Freezing Point/Range (F):** | Not Determined |
| **Freezing Point/Range (C):** | Not Determined |
| **Vapor Pressure @ 20 C (mmHg):** | Not Determined |
| **Vapor Density (Air=1):** | > 5 |
| **Percent Volatiles:** | Not Determined |
| **Evaporation Rate (Butyl Acetate=1):** | Not Determined |
| **Solubility in Water (g/100ml):** | Soluble |
| **Solubility in Solvents (g/100ml):** | Not Determined |
| **VOCs (lbs./gallon):** | 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 |

## 10. STABILITY AND REACTIVITY

**Stability Data:** Stable

**Hazardous Polymerization:** Will Not Occur

**Conditions to Avoid** None anticipated

**Incompatibility (Materials to Avoid)** Strong oxidizers.

**Hazardous Decomposition Products** Oxides of nitrogen. Carbon monoxide and carbon dioxide.

**Additional Guidelines** Not Applicable

## 11. TOXICOLOGICAL INFORMATION

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

**Sympotoms related to exposure**

**Acute Toxicity**

**Inhalation** May cause respiratory irritation.

**Eye Contact** Causes severe eye irritation May cause eye burns.

**Skin Contact** May cause skin irritation.

**Ingestion** Irritation of the mouth, throat, and stomach.

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

**Toxicology data for the components**

| Substances | CAS Number | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|---|
| Ammonium chloride | 12125-02-9 | 1410 mg/kg (Rat)<br>1220 mg/kg (Rat)<br>1630 mg/kg (Rat)<br>1300 mg/kg (Mouse) | No data available | No data available |

## 12. ECOLOGICAL INFORMATION

### Ecotoxicological Information

**Ecotoxicity Product**

**Acute Fish Toxicity:** Not determined
**Acute Crustaceans Toxicity:** TLM96: 10-33 ppm (Crangon crangon)
**Acute Algae Toxicity:** Not determined

**Ecotoxicity Substance**

| Substances | CAS Number | Toxicity to Algae | Toxicity to Fish | Toxicity to Microorganisms | Daphnia Magna (Water Flea) |
|---|---|---|---|---|---|
| Ammonium chloride | 12125-02-9 | EC50: 40-70 mg/l (Skeletonema costatum) | No information available | No information available | TLM96: 16 mg/l (Crangon crangon) |

**12.2 Persistence and degradability**
No information available

**12.3 Bioaccumulative potential**
No information available

**12.4 Mobility in soil**
No information available

**12.5 Results of PBT and vPvB assessment**
No information available.

**12.6 Other adverse effects**

## 13. DISPOSAL CONSIDERATIONS

**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

### Land Transportation

**DOT**
Not restricted

**Canadian TDG**
Not restricted

**ADR**
Not restricted

### Air Transportation

**ICAO/IATA**
Not restricted

### Sea Transportation

**IMDG**
Not restricted

## Other Transportation Information

**Labels:** None

## 15. REGULATORY INFORMATION

## US Regulations

**US TSCA Inventory** All components listed on inventory or are exempt.

**EPA SARA Title III Extremely Hazardous Substances** Not applicable

**EPA SARA (311,312) Hazard Class** Acute Health Hazard

**EPA SARA (313) Chemicals** This product contains toxic chemical(s) listed below which is(are) subject to the reporting requirements of Section 313 of Title III of SARA and 40 CFR Part 372: Ammonium Chloride//12125-02-9

**EPA CERCLA/Superfund Reportable Spill Quantity** EPA Reportable Spill Quantity is 5649 Gallons based on Ammonium chloride (CAS: 12125-02-9).

**EPA RCRA Hazardous Waste Classification** If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

**California Proposition 65** All components listed do not apply to the California Proposition 65 Regulation.

**MA Right-to-Know Law** One or more components listed.

**NJ Right-to-Know Law** One or more components listed.

**PA Right-to-Know Law** One or more components listed.

## Canadian Regulations

**Canadian DSL Inventory** All components listed on inventory or are exempt.

**WHMIS Hazard Class** D2B Toxic Materials

## 16. OTHER INFORMATION

**The following sections have been revised since the last issue of this SDS**
Not applicable

**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*****