

## SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

### CLAYFIX MATERIAL

Revision Date: 20-Dec-2012

Revision Number: 11

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

**Product Identifier**

Product Name CLAYFIX MATERIAL

**Relevant identified uses of the substance or mixture and uses advised against**

Recommended Use Clay Stabilizer  
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  
United Kingdom

Emergency Phone Number: +44 1224 795277 or +1 281 575 5000

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

For further information, please contact

E-Mail address: [fdunexchem@halliburton.com](mailto:fdunexchem@halliburton.com)

**Emergency telephone number**

+44 1224 795277 or +1 281 575 5000

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

#### 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

REGULATION (EC) No 1272/2008

Acute Oral Toxicity	Category 4 - (H302)
Serious Eye Damage / Eye Irritation	Category 2 - (H319)

**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** Xn - Harmful.

**Risk Phrases** R22 Harmful if swallowed.  
R36 Irritating to eyes.

### Label Elements

#### Hazard Pictograms



**Signal Word** Warning

#### Hazard Statements

H302 - Harmful if swallowed  
H319 - Causes serious eye irritation

#### Contains

**Substances**  
Ammonium chloride

**CAS Number**  
12125-02-9

#### Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear eye protection/face protection  
P301+ P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

#### Other Hazards

None known

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	EINECS	CAS Number	PERCENT	EEC Classification	EU - CLP Substance Classification	REACH No.
Ammonium chloride	235-186-4	12125-02-9	60 - 100%	Xn; R22 Xi; R36	Acute Tox. 4 (H302) Eye Irrit. 2 (H319)	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, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

##### Skin

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

#### 4. FIRST AID MEASURES

**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**

May cause eye irritation.

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

**Notes to Physician** Treat symptomatically

#### 5. FIREFIGHTING MEASURES

**Extinguishing media**

**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.

**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. Avoid creating and breathing dust.

See Section 12 for additional information

**Environmental precautions**

Prevent from entering sewers, waterways, or low areas.

**Methods and material for containment and cleaning up**

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. Avoid creating or inhaling dust.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice

**Conditions for safe storage, including any incompatibilities**

Store away from alkalis. Store away from acids. Store in a cool, dry location. Product has a shelf life of 60 months.

**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
Ammonium chloride	Not applicable	10 mg/m <sup>3</sup>	Not applicable	10 mg/m <sup>3</sup>	Not applicable

Substances	Italy	Poland	Hungary	Czech Republic	Denmark
Ammonium chloride	Not applicable	10 mg/m <sup>3</sup>	Not applicable	5 mg/m <sup>3</sup>	Not applicable

**Derived No Effect Level (DNEL)** No information available.  
**Predicted No Effect Concentration (PNEC)** No information available.

**Exposure controls****Engineering Controls**

Use in a well ventilated area. Localized ventilation should be used to control dust levels.

**Personal protective equipment****Respiratory Protection**

Dust/mist respirator. (N95, P2/P3)

**Hand Protection**

Impervious rubber gloves.

**Skin Protection**

Normal work coveralls.

**Eye Protection**

Wear safety glasses or goggles to protect against exposure.

**Other Precautions**

Eyewash fountains and safety showers must be easily accessible.

**Environmental Exposure Controls**

No information available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties****Physical State:** Solid**Color:** White**Odor:** Odorless**Odor Threshold:** No information availablePropertyValuesRemarks/ Method**pH:**

4.3-5.5

**Melting Point/Range**

No data available

**Freezing Point/Range (C):**

No data available

**Boiling Point/Range**

No data available

**Flash Point**

No data available

**Evaporation rate**

No data available

**Vapor Pressure**

No data available

**Vapor Density**

No data available

**Specific Gravity**

1.567

**Water Solubility**

Soluble in water

**Solubility in other solvents**

No data available

**Partition coefficient: n-octanol/water**

No data available

**Autoignition Temperature**

No data available

**Decomposition Temperature**

No data available

**Viscosity**

No data available

**Explosive Properties**

No information available

**Oxidizing Properties**

No information available

**Other information****Molecular Weight**

53.46

**VOC Content (%)**

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**

Strong alkalis. Carbonates of alkalis. Contact with lead. Silver salts.

**Hazardous Decomposition Products**

Ammonia. Oxides of nitrogen. Hydrogen chloride.

## 11. TOXICOLOGICAL INFORMATION

**Information on Toxicological Effects**

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

<b>Inhalation</b> <b>Eye Contact</b> <b>Skin Contact</b> <b>Ingestion</b>	May cause respiratory irritation. Coughing, chest pains, and breathing difficulty may occur. May cause severe eye irritation. May cause skin irritation. Irritation of the mouth, throat, and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea.
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**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
Ammonium chloride	1410 mg/kg ( Rat )	No data available	No data available

**Test species:** Rat

## 12. ECOLOGICAL INFORMATION

### Toxicity Ecotoxicity Effects

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

### Persistence and degradability

No information available

### Bioaccumulative potential

No information available

### 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

Bury in a licensed landfill according to federal, state, and local regulations.

#### Contaminated Packaging

Follow all applicable national or local regulations.

## 14. TRANSPORT INFORMATION

### IMDG/IMO

<b>UN Number:</b>	Not restricted.
<b>UN Proper Shipping Name:</b>	Not restricted
<b>Transport Hazard Class(es):</b>	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**

R22 Harmful if swallowed.  
R36 Irritating to eyes.

**Key literature references and sources for data**

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

**Revision Date:** 20-Dec-2012  
**Revision Note** Not applicable

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

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**16. OTHER INFORMATION**

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**Disclaimer Statement**

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**End of Safety Data Sheet**