

## SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

### ChannelSeal® II Surfactant

Revision Date: 25-Sep-2013

Revision Number: 7

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

##### 1.1 Product Identifier

**Product Name** ChannelSeal® II Surfactant

##### 1.2 Relevant identified uses of the substance or mixture and uses advised against

<b>Recommended Use</b>	Surfactant
<b>Sector of use</b>	SU2 - Mining, (including offshore industries)
<b>Product category</b>	PC20 - Products such as pH-regulators, flocculants, precipitants, neutralization agents, other unspecific
<b>Process categories</b>	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises

##### 1.3 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)

##### 1.4 Emergency telephone number

+44 1224 795277 or +1 281 575 5000

Emergency telephone - §45 - (EC)1272/2008	
<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

Acute Oral Toxicity	Category 4 - H302
Skin Corrosion / irritation	Category 1 - H314
Serious Eye Damage / Eye Irritation	Category 1 - H318

Acute Aquatic Toxicity	Acute 1 - H400
Chronic Aquatic Toxicity	Chronic 1 - H410

**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

**Classification**

Xn - Harmful.  
 C - Corrosive.  
 N - Dangerous For The Environment.

**Risk Phrases**

R22 Harmful if swallowed.  
 R34 Causes burns.  
 R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**2.2 Label Elements****Hazard Pictograms****Signal Word****Danger****Hazard Statements**

H314 - Causes severe skin burns and eye damage  
 H318 - Causes serious eye damage  
 H302 - Harmful if swallowed  
 H400 - Very toxic to aquatic life  
 H410 - Very toxic to aquatic life with long lasting effects

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

P280 - Wear protective gloves/eye protection/face protection  
 P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
 P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing  
 P310 - Immediately call a POISON CENTER or doctor/physician  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Contains****Substances**

N-Tallow alkyltrimethyldiamines, ethoxylated  
 Ethylene glycol

**CAS Number**

61790-85-0  
 107-21-1

**2.3 Other Hazards**

None known

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances	EINECS	CAS Number	PERCENT (w/w)	EEC Classification	EU - CLP Substance Classification	REACH No.
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N-Tallow alkyltrimethyldiamines , ethoxylated	500-149-6	61790-85-0	60 - 100%	Xn; R22 C; R34	Skin Corr. 1 (H314) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Ethylene glycol	203-473-3	107-21-1	10 - 30%	Xn; R22	Acute Tox. 4 (H302)	No data available

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

## 4. FIRST AID MEASURES

### 4.1 Description of 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>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>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>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.

### 4.2 Most Important symptoms and effects, both acute and delayed

May cause eye and skin burns. May be harmful if swallowed.

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

**Notes to Physician** Treat symptomatically

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

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

None known.

### 5.2 Special hazards arising from the substance or mixture

#### Special Exposure Hazards

Decomposition in fire may produce toxic gases. Closed containers may explode in fire. Use water spray to cool fire exposed surfaces. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations.

### 5.3 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

### 6.1 Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment.  
See Section 12 for additional information

### 6.2 Environmental precautions

Prevent from entering sewers, waterways, or low areas.

### 6.3 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.

### 6.4 Reference to other sections

See Section 12 for additional information.

## 7. HANDLING AND STORAGE

**7.1 Precautions for Safe Handling**

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Launder contaminated clothing before reuse.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice

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

Store away from oxidizers. Keep from heat, sparks, and open flames. Keep container closed when not in use.

**7.3 Specific End Use(s)****Exposure Scenario**

No information available

**Other Guidelines**

No information available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters****Exposure Limits**

Substances	CAS Number	EU	UK OEL	Netherlands	France OEL
N-Tallow alkyltrimethyldiamines, ethoxylated	61790-85-0	Not applicable	Not applicable	Not applicable	Not applicable
Ethylene glycol	107-21-1	Not applicable	STEL: 40 ppm STEL: 104 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> TWA: 20 ppm TWA: 52 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 52 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup> STEL: 104 mg/m <sup>3</sup>	20 ppm

Substances	CAS Number	Germany MAK/TRK	Spain	Portugal	Finland
N-Tallow alkyltrimethyldiamines, ethoxylated	61790-85-0	Not applicable	Not applicable	Not applicable	Not applicable
Ethylene glycol	107-21-1	TWA: 10 ppm TWA: 26 mg/m <sup>3</sup> MAK: 10 ppm MAK: 26 mg/m <sup>3</sup>	40 ppm VLA-EC; 104 mg/m <sup>3</sup> VLA-EC VLA-ED: 20 ppm VLA-ED: 52 mg/m <sup>3</sup>	Not applicable	STEL: 40 ppm STEL: 100 mg/m <sup>3</sup> TWA: 20 ppm TWA: 50 mg/m <sup>3</sup>

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
N-Tallow alkyltrimethyldiamines, ethoxylated	61790-85-0	Not applicable	Not applicable	Not applicable	Not applicable
Ethylene glycol	107-21-1	Not applicable	Not applicable	Not applicable	STEL: 20 ppm TWA: 10 mg/m <sup>3</sup>

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
N-Tallow alkyltrimethyldiamines, ethoxylated	61790-85-0	Not applicable	Not applicable	Not applicable	Not applicable
Ethylene glycol	107-21-1	STEL: 40 ppm STEL: 104 mg/m <sup>3</sup> TWA: 20 ppm TWA: 52 mg/m <sup>3</sup>	NDSch: 50 mg/m <sup>3</sup> NDS: 15 mg/m <sup>3</sup>	TWA: 52 mg/m <sup>3</sup> STEL: 104 mg/m <sup>3</sup>	TWA: 50 mg/m <sup>3</sup>

Substances	CAS Number	Denmark
N-Tallow alkyltrimethyldiamines, ethoxylated	61790-85-0	Not applicable
Ethylene glycol	107-21-1	TWA: 10 ppm TWA: 26 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>

**Derived No Effect Level (DNEL)  
Worker**

No information available.

**General Population****Predicted No Effect Concentration (PNEC)**

No information available.

**8.2 Exposure controls**

<b>Engineering Controls</b>	Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.
<b>Personal protective equipment</b>	
<b>Respiratory Protection</b>	In high concentrations, supplied air respirator or a self-contained breathing apparatus.
<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

### 9.1 Information on basic physical and chemical properties

<b>Physical State:</b>	Liquid	<b>Color:</b>	Amber
<b>Odor:</b>	Mild ether	<b>Odor Threshold:</b>	No information available

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
<b>pH:</b>	11.1
<b>Freezing Point/Range</b>	No data available
<b>Melting Point/Range</b>	No data available
<b>Boiling Point/Range</b>	No data available
<b>Flash Point</b>	> 76 °C PMCC
<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>	0.97
<b>Water Solubility</b>	Dispersable
<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

### 9.2 Other information

<b>VOC Content (%)</b>	No data available
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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Not applicable

### 10.2 Chemical Stability

Stable

### 10.3 Possibility of Hazardous Reactions

Will Not Occur

### 10.4 Conditions to Avoid

Keep away from heat, sparks and flame.

### 10.5 Incompatible Materials

Strong oxidizers.

### 10.6 Hazardous Decomposition Products

Oxides of nitrogen. Carbon monoxide and carbon dioxide.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects

#### Acute Toxicity

<b>Inhalation</b>	May cause respiratory irritation.
<b>Eye Contact</b>	Causes severe eye irritation May cause eye burns.
<b>Skin Contact</b>	Causes severe skin irritation. May cause skin burns. May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion.
<b>Ingestion</b>	Causes burns of the mouth, throat and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea.

**Chronic Effects/Carcinogenicity** Prolonged or repeated exposure may cause kidney damage. Prolonged or repeated exposure may cause central nervous system and brain effects. Prolonged or repeated exposure may cause embryo and fetus toxicity.

### Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
N-Tallow alkyltrimethyldiamines, ethoxylated	61790-85-0	No data available	No data available	No data available
Ethylene glycol	107-21-1	4000 mg/kg ( Rat ) 1670 mg/kg (Cat)	9530 µL/kg ( Rabbit )	No data available

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
N-Tallow alkyltrimethyldiamines, ethoxylated	61790-85-0	No information available	No information available	No information available	No information available
Ethylene glycol	107-21-1	EC50: 6500 - 13000 mg/L (Pseudokirchneriella subcapitata)	LC50: 41000 mg/L (Oncorhynchus mykiss)	No information available	EC50: 46300 mg/L (Daphnia magna)

### 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

#### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Disposal Method

#### Contaminated Packaging

Disposal should be made in accordance with federal, state, and local regulations. Follow all applicable national or local regulations.

## 14. TRANSPORT INFORMATION

### IMDG/IMO

UN Number: UN3267,  
UN Proper Shipping Name: Corrosive Liquid, Basic, Organic, N.O.S.  
Transport Hazard Class(es): , 8  
Packing Group: , III  
EMS: EmS F-A, S-B

**RID**

**UN Number:** UN3267,  
**UN Proper Shipping Name:** Corrosive Liquid, Basic, Organic, N.O.S.  
**Transport Hazard Class(es):** , 8  
**Packing Group:** , III

**ADR**

**UN Number:** UN3267,  
**UN Proper Shipping Name:** Corrosive Liquid, Basic, Organic, N.O.S.  
**Transport Hazard Class(es):** , 8  
**Packing Group:** , III

**IATA/ICAO**

**UN Number:** UN3267,  
**UN Proper Shipping Name:** Corrosive Liquid, Basic, Organic, N.O.S.  
**Transport Hazard Class(es):** , 8  
**Packing Group:** , III

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**15. REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories**

**All of the components in the product are on the following Inventory lists:** All of the components in the product are on the following Inventory lists:.

**EINECS Inventory** This product does not comply 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/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**Germany, Water Endangering Classes (WGK)** Not determined.

**15.2 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.

R34 Causes burns.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Key literature references and sources for data**

www.ChemADVISOR.com/

**Revision Date:** 25-Sep-2013

**Revision Note**

Not applicable

**This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010**

**Disclaimer Statement**

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**End of Safety Data Sheet**