

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

AKTAFLO® E

Revision Date: 24-Sep-2013

Revision Number: 15

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

1.1 Product Identifier

Product Name AKTAFLO® E

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

Recommended Use	Surfactant
Sector of use	SU2 - Mining, (including offshore industries)
Product category	PC20 - Products such as pH-regulators, flocculants, precipitants, neutralization agents, other unspecific
Process categories	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 Manufacturing Services, Ltd.
Halliburton House, Howemoss Crescent
Kirkhill Industrial Estate
Dyce
Aberdeen, AB21 0GN
United Kingdom

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

www.halliburton.com

For further information, please contact

E-Mail address: fdunexchem@halliburton.com

1.4 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
Skin Corrosion / irritation	Category 2 - H315
Serious Eye Damage / Eye Irritation	Category 1 - H318

Chronic Aquatic Toxicity	Chronic 2 - H411
Flammable liquids.	Category 3 - H226

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.
	Xi - Irritant.
	N - Dangerous For The Environment.

Risk Phrases	R10 Flammable.
	R22 Harmful if swallowed.
	R38 Irritating to skin.
	R41 Risk of serious damage to eyes.
	R53 May cause long-term adverse effects in the aquatic environment.

2.2 Label Elements**Hazard Pictograms**

Signal Word **Danger**

Hazard Statements

H318 - Causes serious eye damage
H315 - Causes skin irritation
H302 - Harmful if swallowed
H226 - Flammable liquid and vapor
H411 - Toxic to aquatic life with long lasting effects

Contains**Substances**

Branched ethoxylated nonylphenol
Isopropanol

CAS Number

68412-54-4
67-63-0

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.
Branched ethoxylated nonylphenol	500-209-1	68412-54-4	60 - 100%	Xn; R22 Xi; R38-41 N; R53	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Aquatic Chronic 2 (H411)	No data available
Isopropanol	200-661-7	67-63-0	1 - 5%	F; R11 Xi; R36 R67	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)	01-2119457558-25

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**Inhalation**

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.

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	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 laundry 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.

4.2 Most Important symptoms and effects, both acute and delayed

May cause severe eye irritation. May cause skin irritation. 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**

Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce toxic gases.

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. Remove ignition sources and work with non-sparking tools. 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.

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. Store in a cool well ventilated area. 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
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Branched ethoxylated nonylphenol	68412-54-4	Not applicable	Not applicable	Not applicable	Not applicable
Isopropanol	67-63-0	Not applicable	STEL: 500 ppm STEL: 1250 mg/m ³ TWA: 400 ppm TWA: 999 mg/m ³	Not applicable	Not applicable

Substances	CAS Number	Germany MAK/TRK	Spain	Portugal	Finland
Branched ethoxylated nonylphenol	68412-54-4	Not applicable	Not applicable	Not applicable	Not applicable
Isopropanol	67-63-0	TWA: 200 ppm TWA: 500 mg/m ³ MAK: 200 ppm MAK: 500 mg/m ³	500 ppm VLA-EC; 1250 mg/m ³ VLA-EC VLA-ED: 400 ppm VLA-ED: 998 mg/m ³	STEL: 400 ppm TWA: 200 ppm	STEL: 250 ppm STEL: 620 mg/m ³ TWA: 200 ppm TWA: 500 mg/m ³

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Branched ethoxylated nonylphenol	68412-54-4	Not applicable	Not applicable	Not applicable	Not applicable
Isopropanol	67-63-0	Not applicable	Not applicable	Not applicable	STEL: 150 ppm STEL: 306.25 mg/m ³ TWA: 100 ppm TWA: 245 mg/m ³

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Branched ethoxylated nonylphenol	68412-54-4	Not applicable	Not applicable	Not applicable	Not applicable
Isopropanol	67-63-0	Not applicable	NDSch: 1200 mg/m ³ NDS: 900 mg/m ³	TWA: 500 mg/m ³ STEL: 2000 mg/m ³	TWA: 500 mg/m ³

Substances	CAS Number	Denmark
Branched ethoxylated nonylphenol	68412-54-4	Not applicable
Isopropanol	67-63-0	TWA: 200 ppm TWA: 490 mg/m ³

Derived No Effect Level (DNEL) Worker

No information available.

General Population

Predicted No Effect Concentration (PNEC)

No information available.

8.2 Exposure controls

Engineering Controls

Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

Personal protective equipment

Respiratory Protection

Organic vapor respirator.

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.

Environmental Exposure Controls

No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State: Liquid

Color: Light yellow

Odor: Characteristic

Odor Threshold: No information available

Property

Remarks/ - Method

Values

pH:

8-10

Freezing Point/Range

-12 °C

Melting Point/Range

No data available

Boiling Point/Range

100 °C

Flash Point

48.5 °C

PMCC

Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	1.05
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

9.2 Other information

VOC Content (%)	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

None anticipated

10.5 Incompatible Materials

Strong oxidizers.

10.6 Hazardous Decomposition Products

Oxides of nitrogen. Oxides of sulfur. Carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects**Acute Toxicity****Inhalation**

May cause respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Eye Contact

May cause severe eye irritation. May cause corneal injury.

Skin Contact

May cause severe skin irritation. May be absorbed through the skin and contribute to the symptoms listed under ingestion.

Ingestion

May cause abdominal pain, vomiting, nausea, and diarrhea. Irritation of the mouth, throat, and stomach.

Chronic Effects/Carcinogenicity Repeated overexposure may cause liver and kidney effects.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Branched ethoxylated nonylphenol	68412-54-4	1310 mg/kg (Rat)	2 mL/kg (Rabbit)	No data available
Isopropanol	67-63-0	4396 mg/kg (Rat) 3600 mg/kg (mouse)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h

12. ECOLOGICAL INFORMATION

12.1 Toxicity**Ecotoxicity Effects**

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
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Branched ethoxylated nonylphenol	68412-54-4	No information available	No information available	No information available	No information available
Isopropanol	67-63-0	EC50: > 1000 mg/l(Desmodesmus subspicatus)	LC50: 9640 mg/l (Pimephales promelas)	No information available	EC50: 13299 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 contains ethoxylated nonylphenols

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: UN1993,
UN Proper Shipping Name: Flammable Liquid, N.O.S.
Transport Hazard Class(es): , 3
Packing Group: , III
EMS: EmS F-E, S-E

RID

UN Number: UN1993,
UN Proper Shipping Name: Flammable Liquid, N.O.S.
Transport Hazard Class(es): , 3
Packing Group: , III

ADR

UN Number: UN1993,
UN Proper Shipping Name: Flammable Liquid, N.O.S.
Transport Hazard Class(es): , 3
Packing Group: , III

IATA/ICAO

UN Number: UN1993,
UN Proper Shipping Name: Flammable Liquid, N.O.S.
Transport Hazard Class(es): , 3
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, 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/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

Germany, Water Endangering Classes (WGK) WGK 2: Hazard to waters.

15.2 Chemical Safety Assessment

No information available

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

R10 Flammable.
R22 Harmful if swallowed.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R53 May cause long-term adverse effects in the aquatic environment.

Key literature references and sources for data

www.ChemADVISOR.com/

Revision Date: 24-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