HALLIBURTON

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

DCA-32004

Revision Date: 16-Sep-2015 **Revision Number:** 8

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product Identifier

Product Name DCA-32004
Internal ID Code HM007685

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 Energy Services
Halliburton House, Howemoss Place
Kirkhill Industrial Estate
Dyce
Aberdeen, AB21 0GN
United Kingdom

www.halliburton.com

For further information, please contact
E-Mail address: fdunexchem@halliburton.com

1.4. Emergency telephone number

+44 8 08 189 0979 / 1-760-476-3961

Emergency telephone - §45 - (EC)1272/2008	
Europe	**112**
Croatia	Centar za kontrolu otrovanja (CKO): (+385 1) 23-48-342 (Poison Control Center (PCC) - Institute for Medical Research and Occupational Health)
Cyprus	+210 7793777
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
Romania	+40 21 318 36 06
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

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

Specific Target Organ Toxicity - (Single Exposure)	Category 2 - (H371)
Acute Aquatic Toxicity	Acute 1 - (H400)
Chronic Aquatic Toxicity	Chronic 1 - (H410)

2.2. Label Elements

Hazard Pictograms

Signal Word **Danger**

Hazard Statements
H315 - Causes skin irritation
H318 - Causes serious eye damage
H371 - May cause damage to organs
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves/eye protection/face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P309 + P311 - If exposed or you feel unwell: Call a POISON CENTRE or doctor/physician
P501 - Dispose of contents/container to an approved waste disposal plant

Contains

Substances	**CAS Number**
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1

2.3. Other Hazards
This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on Ingredients

3.2. Mixtures Mixture

Substances	EINECS	CAS Number	PERCENT (w/w)	EU - CLP Substance Classification	REACH No.
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	500-315-8	127087-87-0	60 - 100%	Skin Irrit. 2 (H315) Eye Corr. 1 (H318) STOT SE 2 (H371) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	Not applicable	9014-93-1	1 - 5%	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319)	No data available

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

SECTION 4: First aid measures

4.1. 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 launder before reuse.

Ingestion Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

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

Causes severe eye irritation which may damage tissue. Causes skin irritation. May cause damage to internal organs.

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

Notes to Physician Treat symptomatically

SECTION 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

Do NOT spray pool fires directly with water. A solid stream of water directed into hot burning liquid can cause splattering.

5.2. Special hazards arising from the substance or mixture

Special Exposure Hazards

Decomposition in fire may produce harmful 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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation.

See Section 8 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 8 and 13 for additional information.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Avoid breathing mist. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

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 away from acids. Store in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 24 months.

7.3. Specific End Use(s)

Exposure Scenario No information available

Other Guidelines No information available

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Exposure Limits

Substances	CAS Number	EU	UK	Netherlands	France
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Not applicable	Not applicable	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Germany	Spain	Portugal	Finland
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Not applicable	Not applicable	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Not applicable	Not applicable	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Not applicable	Not applicable	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Not applicable	Not applicable	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	Not applicable	Not applicable	Not applicable	Not applicable

Derived No Effect Level (DNEL) No information available.

Worker

General Population

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls Use in a well ventilated area.

Personal protective equipment

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional. However, if significant exposures are likely then wear a Organic vapor respirator with a dust/mist filter. (A2P2/P3)

Hand Protection Polyvinylchloride gloves. Butyl rubber gloves. Neoprene gloves. Nitrile gloves.

Skin Protection Normal work coveralls.

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 Do not allow material to contaminate ground water system

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid
Color: Yellow
Odor: Mild
Odor Threshold: No information available

Property Remarks/ - Method	Values
pH:	6.1
Freezing Point/Range	3.8 °C
Melting Point/Range	No data available
Boiling Point/Range	< 200 °C
Flash Point	247 °C / 478 °F ASTM D 93
Flammability (solid, gas)	No data available
upper flammability limit	No data available
lower flammability limit	No data available
Evaporation rate	No data available
Vapor Pressure	< 0.01 mmHg
Vapor Density	>1
Specific Gravity	1.057
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

SECTION 10: Stability and Reactivity

10.1. Reactivity
Not expected to be reactive.
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. Strong acids. Strong alkalis.
10.6. Hazardous Decomposition Products
Carbon monoxide and carbon dioxide.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

Inhalation	May cause respiratory irritation.
Eye Contact	Causes severe eye irritation which may damage tissue.
Skin Contact	Causes skin irritation.
Ingestion	May be harmful if swallowed.

Chronic Effects/Carcinogenicity May contain ethylene oxide in the headspace of the drum. Ethylene oxide is a cancer and reproductive hazard.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation

Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	2000 - 5000 mg/kg (Rat) (Similar substance)	> 2000 mg/kg (Rabbit) (similar substance)	No data available
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	No data available	No data available	No data available

Substances	**CAS Number**	**Skin corrosion/irritation**
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Causes moderate skin irritation. (Rabbit)
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	Irritating to skin. (Rabbit)

Substances	**CAS Number**	**Eye damage/irritation**
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Causes severe eye irritation which may damage tissue. (Rabbit)
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	Irritating to eyes. (Rabbit)

Substances	**CAS Number**	**Skin Sensitization**
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Patch test on human volunteers did not demonstrate sensitization properties
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	No information available

Substances	**CAS Number**	**Respiratory Sensitization**
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	No information available
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	No information available

Substances	**CAS Number**	**Mutagenic Effects**
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	In vitro tests did not show mutagenic effects (similar substances)
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	Not regarded as mutagenic.

Substances	**CAS Number**	**Carcinogenic Effects**
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Did not show carcinogenic or teratogenic effects in animal experiments (similar substances)
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	No information available.

Substances	**CAS Number**	**Reproductive toxicity**
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Not a confirmed teratogen or embryotoxin. (similar substances)
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	No information available

Substances	**CAS Number**	**STOT - single exposure**
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-ome	127087-87-0	May cause disorder and damage to the Central Nervous System (CNS)

ga-hydroxy-, branched		
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	No significant toxicity observed in animal studies at concentration requiring classification.
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Not applicable
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	Not applicable

SECTION 12: Ecological Information

12.1. Toxicity

Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	EC50 (72h) > 3 mg/L (Pseudokirchnerella subcapitata) (similar substance)	LC50 (96h) 0.323 mg/L (Pimephales promelas) (similar substance)	EC50 (3h) 104 mg/L (Activated sludge) (similar substance)	EC50 (48h) 0.148 mg/L (Daphnia magna) (similar substance) NOEC (21d) 0.006 mg/L (Daphnia magna) (similar substance) NOEC (21d) 0.1 mg/L (Daphnia magna) (similar substance)
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	No information available	EC50 (96h) 1.2 - 9.3 mg/L (Pimephales promelas)	No information available	EC50 (48h) 1.6 - 10 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	(58.7% @ 28d) (similar substances)
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	No information available

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	2.1-3.4
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	No information available
Poly(oxy-1,2-ethanediyl), alpha-(dinonylphenyl)-, omega-hydroxy-	9014-93-1	No information available

12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Disposal Method Disposal should be made in accordance with federal, state, and local regulations. Incineration recommended in approved incinerator according to federal, state, and local regulations.

Contaminated Packaging Follow all applicable national or local regulations.

SECTION 14: Transport Information

IMDG/IMO

UN Number: UN3082
UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Alcohol C13-C15 Poly (1-6) Ethoxylate)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: Marine Pollutant

RID

UN Number: UN3082
UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Alcohol C13-C15 Poly (1-6) Ethoxylate)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: Marine Pollutant

ADR

UN Number: UN3082
UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Alcohol C13-C15 Poly (1-6) Ethoxylate)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: Marine Pollutant

IATA/ICAO

UN Number: UN3082
UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Alcohol C13-C15 Poly (1-6) Ethoxylate)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: Marine Pollutant

14.1. UN Number: UN3082

14.2. UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Alcohol C13-C15 Poly (1-6) Ethoxylate)

14.3. Transport Hazard Class(es): 9

14.4. Packing Group: III

14.5. Environmental Hazards: Marine Pollutant

14.6. Special Precautions for User: None

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

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/NDSL - 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

SECTION 16: Other Information

Full text of H-Statements referred to under sections 2 and 3
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H371 - May cause damage to organs
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Key or legend to abbreviations and acronyms
bw – body weight
CAS – Chemical Abstracts Service
CLP – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification, Labelling and Packaging of substances and mixtures
EC – European Commission
EC10 – Effective Concentration 10%
EC50 – Effective Concentration 50%
EEC – European Economic Community
ErC50 – Effective Concentration growth rate 50%
IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL0 – Lethal Loading 0%
LL50 – Lethal Loading 50%
MARPOL – International Convention for the Prevention of Pollution from Ships
mg/kg – milligram/kilogram
mg/L – milligram/liter
NIOSH – National Institute for Occupational Safety and Health
NOEC – No Observed Effect Concentration
NTP – National Toxicology Program
OEL – Occupational Exposure Limit
PBT – Persistent Bioaccumulative and Toxic
PC – Chemical Product category
PEL – Permissible Exposure Limit
ppm – parts per million
PROC – Process category
REACH – REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL – Short Term Exposure Limit
SU – Sector of Use category

Key literature references and sources for data
www.ChemADVISOR.com/

Revision Date: 16-Sep-2015
Revision Note
SDS sections updated: 1

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

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End of Safety Data Sheet