HALLIBURTON

SAFETY DATA SHEET

DCA-32008

Revision Date: 16-Dec-2015 **Revision Number:** 6

1. Product Identifier & Identity for the Chemical

Statement of Hazardous Nature Hazardous according to the criteria of the 3rd Revised Edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), Dangerous Goods according to the criteria of ADG.

1.1. Product Identifier

Product Name DCA-32008

Other means of Identification

Synonyms: None

Product Code: HM007688

Recommended use of the chemical and restrictions on use

Recommended Use Cleaner

Uses Advised Against No information available

Supplier's name, address and phone number

Manufacturer/Supplier

Halliburton Australia Pty. Ltd.
15 Marriott Road
Jandakot
WA 6164
Australia

ACN Number: 009 000 775
Telephone Number: + 61 1 800 686 951
Fax Number: 61 (08) 9455 5300

E-Mail address: fdunexchem@halliburton.com

Emergency phone number

+ 61 1 800 686 951

Australian Poisons Information Centre

24 Hour Service: - 13 11 26

Police or Fire Brigade: - 000 (exchange): - 1100

2. Hazard Identification

Statement of Hazardous Nature Hazardous according to the criteria of the 3rd Revised Edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), Dangerous Goods according to the criteria of ADG.

Classification of the hazardous chemical

Skin Corrosion / irritation	Category 2 - H315
Serious Eye Damage / Eye Irritation	Category 1 - H318
Reproductive Toxicity	Category 1B - H360
Specific Target Organ Toxicity - (Repeated Exposure)	Category 2 - H373
Acute Aquatic Toxicity	Category 3 - H402
Chronic Aquatic Toxicity	Category 2 - H411
Flammable liquids.	Category 4 - H227

Label elements, including precautionary statements

Hazard Pictograms

Signal Word Danger

Hazard Statements

H227 - Combustible liquid
H315 - Causes skin irritation
H318 - Causes serious eye damage
H360 - May damage fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H402 - Harmful to aquatic life
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves/eye protection/face protection
P281 - Use personal protective equipment as required

Response

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P314 - Get medical attention/advice if you feel unwell
P391 - Collect spillage

Storage

P403 + P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up

Disposal

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

Contains

Substances	CAS Number
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8
Ethylene glycol monobutyl ether	111-76-2
2-Ethyl hexanol	104-76-7
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9
Ethylene glycol	107-21-1
Methanol	67-56-1

Other hazards which do not result in classification

This mixture contains substances considered to be persistent, bioaccumulating and toxic (PBT).
This mixture contains substances considered to be very persistent and very bioaccumulating (vPvB).

Australia Classification

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

Classification Xn - Harmful.

Risk Phrases

R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R61 May cause harm to the unborn child.
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Australia
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	30 - 60%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Chronic 2 (H411)
Ethylene glycol monobutyl ether	111-76-2	30 - 60%	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Flam. Liq. 4 (H227)
2-Ethyl hexanol	104-76-7	10 - 30%	Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) STOT SE 3 (H335) Aquatic Acute 3 (H402) Flam. Liq. 4 (H227)
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	5 - 10%	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)
Ethylene glycol	107-21-1	1 - 5%	Acute Tox. 4 (H302) STOT RE 1 (H372)
Methanol	67-56-1	0.1 - 1%	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Repr. 1B (H360) STOT SE 1 (H370) Flam. Liq. 2 (H225)

4. First aid measures

Description of necessary first aid measures

Inhalation If inhaled, move victim to fresh air and seek medical attention.

Eyes In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Seek immediate medical attention/advice. Suitable emergency eye wash facility should be immediately available

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 launder before reuse.

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

Symptoms caused by exposure

Causes severe eye irritation which may damage tissue. Causes skin irritation. Potential reproductive hazard. May cause birth defects. Prolonged or repeated exposure may cause damage to organs.

Medical Attention and Special Treatment
Notes to Physician Treat symptomatically

5. Fire Fighting Measures

Suitable extinguishing equipment
Suitable Extinguishing Media
Water fog, carbon dioxide, foam, dry chemical.
Extinguishing media which must not be used for safety reasons
None known.

Specific hazards arising from the chemical
Special Exposure Hazards
Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce harmful gases.

Special protective equipment and precautions for fire fighters
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. Wear self-contained breathing apparatus in enclosed areas.

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.

7. Handling and storage

7.1. Precautions for Safe Handling
Handling Precautions
Avoid contact with eyes, skin, or clothing. Wash hands after use. Avoid breathing vapors. Do NOT consume food, drink, or tobacco in contaminated areas.
Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities
Storage Information
Store away from oxidizers. Store in a dry location. Store in a cool well ventilated area. Keep from heat, sparks, and open flames. Keep container closed when not in use. Store at temperatures between 50 and 100 F (10 and 37.8 C). Do not freeze. Product has a shelf life of 24 months.
Other Guidelines
No information available

8. Exposure Controls/Personal Protection

Control parameters - exposure standards, biological monitoring
Exposure Limits

Substances	CAS Number	Australia NOHSC	ACGIH TLV-TWA
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	Not applicable	Not applicable
Ethylene glycol monobutyl ether	111-76-2	TWA: 20 ppm TWA: 96.9 mg/m^3	TWA: 20 ppm Skin

		STEL: 50 ppm STEL: 242 mg/m³	
2-Ethyl hexanol	104-76-7	TWA: 50 ppm TWA: 266 mg/m³	TWA: 50 ppm
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	Not applicable	Not applicable
Ethylene glycol	107-21-1	TWA: 10 mg/m³ TWA: 20 ppm TWA: 52 mg/m³ STEL: 40 ppm STEL: 104 mg/m³	Ceiling: 100 mg/m³ (aerosol only)
Methanol	67-56-1	TWA: 200 ppm TWA: 262 mg/m³ STEL: 250 ppm STEL: 328 mg/m³	TWA: 200 ppm STEL: 250 ppm

Appropriate engineering controls

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

Personal protective equipment (PPE)

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.
Organic vapor respirator.

Hand Protection Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Nitrile gloves. (>= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.

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: White, opaque
Odor: Mild ether
Odor Threshold: No information available

Property Remarks/ - Method	Values
pH:	5-7
Freezing Point/Range	No data available
Melting Point/Range	No data available
Boiling Point/Range	171 °C / 340 °F
Flash Point	68 °C / 156 °F PMCC
Evaporation rate	No data available
Vapor Pressure	> 0.76 mmHg
Vapor Density	No data available
Specific Gravity	0.94
Water Solubility	Dispersible
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

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.
10.6. Hazardous Decomposition Products
Carbon monoxide and carbon dioxide.

11. Toxicological Information

Information on routes of exposure
Principle Route of Exposure Eye or skin contact, inhalation. Ingestion.

Symptoms related to exposure
Most Important Symptoms/Effects
Causes severe eye irritation which may damage tissue. Causes skin irritation. Potential reproductive hazard. May cause birth defects. Prolonged or repeated exposure may cause damage to organs.

Numerical measures of toxicity

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	1400 mg/kg (Rat) (similar substance)	> 2000 mg/kg (Rabbit) (similar substance)	> 0.22 mg/L (Rat) 4h
Ethylene glycol monobutyl ether	111-76-2	470 mg/kg (Rat) 1414 mg/kg (Guinea pig) 1746 mg/kg (Rat) 320 mg/kg (Rabbit) 530 mg/kg (Rat) 560 mg/kg (Rat) 3000 mg/kg (Rat) 2400 mg/kg (Rat)	220 mg/kg (Rabbit) 2270 mg/kg (Rat) 200 mg/kg (Guinea pig) >2000 mg/kg (Rabbit) 841 mg/kg (Rabbit) 435 mg/kg (Rabbit) >2000 mg/kg (Guinea pig) >2000 mg/kg (Rat) 100 mg/kg (Rabbit) 207 mg/kg (Guinea pig) 400-500 mg/kg (Rabbit)	450 mg/L (Rat) 4h 2.174 mg/L (Rat) 4h 2.21 mg/L (Rat) 4h 450-486 mg/L (Rat) 4h 925 mg/L (Rat) 4h >633 mg/L (Guinea pig) 1h
2-Ethyl hexanol	104-76-7	> 2000 mg/kg	1980 mg/kg	1.45 mg/L (Rat) 4h
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	1310 mg/kg (Rat) 4290-5000 mg/kg (Rat) 4290 mg/kg (Mouse) (similar substance) 510 mg/kg (Rat) > 2500 mg/kg (Rat)	2 mg/kg (Rabbit) 2500 mg/kg (Rabbit) 2830 mg/kg (Rabbit)	> 0.0213 mg/L (Rat)
Ethylene glycol	107-21-1	4000 mg/kg (Rat) 7712 mg/kg (Rat) > 10000 mg/kg (Rat) 1670 mg/kg (Cat) 1400 – 1600 mg/kg (Human)	9530 µL/kg (Rabbit) > 3500 mg/kg (Mouse)	> 2.5 mg/L (Rat) 6h (saturated concentration)

Methanol	67-56-1	< 790 mg/kg (rat) 7300 mg/kg (mouse) 14200 mg/kg (rabbit) 300 mg/kg (Human) 6200 mg/kg (Rat)	15800 mg/kg (Rabbit) 393 mg/kg bw (primates) 1000 mg/kg (Human) 15800 mg/kg (Rabbit)	10 mg/L (Human) 4h (vapor) 22,500 ppm (Rat) 8h 64,000 ppm (Rat) 4h 83.2 mg/L (rat) 4h 128.8 mg/L (rat) 4h

Immediate, delayed and chronic health effects from exposure

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 Causes severe eye irritation which may damage tissue.

Skin Contact Causes moderate skin irritation. May cause skin defatting with prolonged exposure. Can dry skin.

Ingestion May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation and central nervous system depression. May cause liver and kidney damage.

Chronic Effects/Carcinogenicity Prolonged or repeated exposure may cause reproductive system damage. Prolonged or repeated exposure may cause embryo and fetus toxicity. May contain ethylene oxide in the headspace of the drum. Ethylene oxide is a cancer and reproductive hazard.

Exposure Levels

No data available

Interactive effects

Skin disorders. Eye ailments.

Data limitations

No data available

Substances	CAS Number	Skin corrosion/irritation
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	Causes moderate skin irritation. (Rabbit) (similar substances)
Ethylene glycol monobutyl ether	111-76-2	Causes moderate skin irritation. (Rabbit)
2-Ethyl hexanol	104-76-7	Causes moderate skin irritation. (Rabbit)
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	Causes skin irritation. (Rabbit)
Ethylene glycol	107-21-1	Non-irritating to the skin (Rabbit)
Methanol	67-56-1	Non-irritating to the skin (Rabbit)

Substances	CAS Number	Eye damage/irritation
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	Causes severe eye irritation which may damage tissue. (Rabbit) (similar substances)
Ethylene glycol monobutyl ether	111-76-2	Causes moderate eye irritation. (Rabbit)
2-Ethyl hexanol	104-76-7	Causes moderate eye irritation. (Rabbit)
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	Causes moderate eye irritation. (Rabbit)
Ethylene glycol	107-21-1	Non-irritating to the eye (Rabbit)
Methanol	67-56-1	Non-irritating to the eye (Rabbit)

Substances	CAS Number	Skin Sensitization
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)
Ethylene glycol monobutyl ether	111-76-2	Did not cause sensitization on laboratory animals (guinea pig)
2-Ethyl hexanol	104-76-7	Did not cause sensitization on laboratory animals (guinea pig)
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	Patch test on human volunteers did not demonstrate sensitization properties
Ethylene glycol	107-21-1	Did not cause sensitization on laboratory animals (guinea pig) Patch test on human volunteers did not

		demonstrate sensitization properties
Methanol	67-56-1	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	No information available
Ethylene glycol monobutyl ether	111-76-2	No information available
2-Ethyl hexanol	104-76-7	Not regarded as a sensitizer.
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	No information available
Ethylene glycol	107-21-1	No information available
Methanol	67-56-1	No information available

Substances	CAS Number	Mutagenic Effects
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (similar substances)
Ethylene glycol monobutyl ether	111-76-2	In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects
2-Ethyl hexanol	104-76-7	In vitro tests did not show mutagenic effects.
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	In vivo tests did not show mutagenic effects. (similar substances)
Ethylene glycol	107-21-1	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Methanol	67-56-1	The weight of evidence from available in vitro and in vivo studies indicates that this substance is not expected to be mutagenic.

Substances	CAS Number	Carcinogenic Effects
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	Did not show carcinogenic effects in animal experiments (similar substances)
Ethylene glycol monobutyl ether	111-76-2	Not regarded as carcinogenic.
2-Ethyl hexanol	104-76-7	Did not show carcinogenic effects in animal experiments
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	Did not show carcinogenic effects in animal experiments (similar substances)
Ethylene glycol	107-21-1	Did not show carcinogenic effects in animal experiments
Methanol	67-56-1	No data of sufficient quality are available.

Substances	CAS Number	Reproductive toxicity
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	Animal testing did not show any effects on fertility. (similar substances)
Ethylene glycol monobutyl ether	111-76-2	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
2-Ethyl hexanol	104-76-7	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	No data of sufficient quality are available.
Ethylene glycol	107-21-1	Fetotoxic and teratogenic effects observed in experimental animals at concentrations that did not produce maternal toxicity.
Methanol	67-56-1	Experiments have shown reproductive toxicity effects on laboratory animals

Substances	CAS Number	STOT - single exposure
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	No data of sufficient quality are available.
Ethylene glycol monobutyl ether	111-76-2	No data of sufficient quality are available.
2-Ethyl hexanol	104-76-7	May cause respiratory irritation.
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	No information available
Ethylene glycol	107-21-1	No significant toxicity observed in animal studies at concentration requiring classification.
Methanol	67-56-1	May cause disorder and damage to the Central Nervous System (CNS)

Substances	CAS Number	STOT - repeated exposure

Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Ethylene glycol monobutyl ether	111-76-2	No data of sufficient quality are available.
2-Ethyl hexanol	104-76-7	No significant toxicity observed in animal studies at concentration requiring classification.
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	No significant toxicity observed in animal studies at concentration requiring classification.
Ethylene glycol	107-21-1	Causes damage to organs through prolonged or repeated exposure: (Kidney)
Methanol	67-56-1	No data of sufficient quality are available.

Substances	**CAS Number**	**Aspiration hazard**
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	Not applicable
Ethylene glycol monobutyl ether	111-76-2	No adverse health effects are expected from swallowing.
2-Ethyl hexanol	104-76-7	Not applicable
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	Not applicable
Ethylene glycol	107-21-1	No information available
Methanol	67-56-1	Not applicable

12. Ecological Information

Ecotoxicity

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	**Toxicity to Algae**	**Toxicity to Fish**	**Toxicity to Microorganisms**	**Toxicity to Invertebrates**
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	EC50 (72h) 475.51 mg/L (Skeletonema costatum)	LC50 (96h) >215 mg/L (Scophthalmus maximus) NOEC (30d) 0.28 mg/L (Pimephales promelas) (similar substance)	LC50 (14d) > 1000 mg/kg (Eisenia fetida, soil) (similar substance)	EC50 (48h) 213.24 mg/L (Acartia tonsa) NOEC (21d) 1.75 mg/L (Daphnia magna) (similar substance)
Ethylene glycol monobutyl ether	111-76-2	EC50 839.56 mg/L (Skeletonema costatum) EbC50 (72h) 911 mg/L EC50 > 500 mg/L (Scenedesmus subspicatus) NOEC (72h) 88 mg/L (biomass)(Pseudokirchnerella subcapitata)	LC50 > 1000 mg/L (Scophthalmus maximus, juvenile) LC50 (96h) 1474 mg/L (Oncorhynchus mykiss) NOEC (21d) > 100mg/L (Danio rerio)	TT/EC3 (48h) 463 mg/L (Uronema parduzci) TT/EC3 (72h) 73 mg/L (Entosiphon sulcatum) TT/EC3 (16h) 700 mg/L (Pseudomonas putida)	No information available
2-Ethyl hexanol	104-76-7	No information available	LC50 (96h) 17.1 mg/L (Leuciscus idus melanotus)	No information available	No information available
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	EC50 (48h) 20 mg/L (growth inhibition) (Pseudokirchnerella subcapitata) EC50 (48h) 50 mg/L (growth rate) (Pseudokirchnerella subcapitata)	LC50 (96h) 5.6 mg/L (Brachydanio rerio) LC50 (96h) 1.3 mg/L (Lepomis macrochirus) LC50 (96h) 5 mg/L (Danio rerio)	No information available	EC50 (48h) 1.821 mg/L (Daphnia sp.) (QSAR)
Ethylene glycol	107-21-1	EC50 6500 - 13000 mg/L (Pseudokirchneriella subcapitata) TGK (8d) > 10000 mg/L (Scenedesmus quadricauda)	LC50 41000 mg/L (Oncorhynchus mykiss) LC50 (96h) 72860 mg/L (Pimephales promelas) NOEC (7d) 15380 mg/L (mortality) (Pimephales promelas)	TTC (16h) > 10000 mg/L (Pseudomonas putida) EC20 (30 m) > 1995 mg/L (activated sludge, domestic) (similar substance)	EC50 46300 mg/L (Daphnia magna) EC50 (48h) >100 mg/L (Daphnia magna) NOEC (7d) 8590 mg/L (reproduction) (Ceriodaphnia dubia)
Methanol	67-56-1	ErC50 (96h) 22000 mg/L (Pseudokirchnerella subcapitata)	LC50 28200 mg/L (Pimephales promelas) LC50 (96h) 12700 –	IC50 (3h) > 1000 mg/L (activated sludge)	EC50 (96h) 18260 mg/L (Daphnia magna) NOEC (21d) 122 mg/L

			15400 mg/L (Lepomis macrochirus)		(Daphnia magna, Reproduction)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	(50% @ 28d)
Ethylene glycol monobutyl ether	111-76-2	Readily biodegradable (75-88% @ 28d)
2-Ethyl hexanol	104-76-7	Readily biodegradable (100 @ 14d)
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	Readily biodegradable (98-99% @ 28d)
Ethylene glycol	107-21-1	Readily biodegradable (100% @ 10d)
Methanol	67-56-1	(95-97% @ 20d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	BCF = 12.7 L/kg (Pimephales promelas) (similar substance)
Ethylene glycol monobutyl ether	111-76-2	0.81
2-Ethyl hexanol	104-76-7	2.73 BCF = 25.33
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	3.7 @ 25°C
Ethylene glycol	107-21-1	-1.36
Methanol	67-56-1	-0.77 BCF = 1.0 – 4.5 (Cyprinus carpio) BCF < 10 (Leuciscus idus melanotus)

12.4. Mobility in soil

Substances	CAS Number	Mobility
Poly(oxy-1,2-ethanediyl), alpha-hexyl-omega-hydroxy(C2H4O)N(C6H14O)	31726-34-8	No information available
Ethylene glycol monobutyl ether	111-76-2	No information available
2-Ethyl hexanol	104-76-7	KOC = 26
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	No information available
Ethylene glycol	107-21-1	No information available
Methanol	67-56-1	No information available

12.6. Other adverse effects

Endocrine Disruptor Information

This product contains ethoxylated nonylphenols

Substances	**EU - Endocrine Disrupters Candidate List**	Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	Group III

13. Disposal Considerations

Safe handling and disposal methods

Disposal should be made in accordance with federal, state, and local regulations.

Disposal of any contaminated packaging

Follow all applicable national or local regulations.

Environmental regulations

Not applicable

14. Transport Information

Transportation Information

UN Number: UN3082

UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S.

Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: Marine Pollutant

Special precautions during transport
None

HazChem Code
None Allocated

15. Regulatory Information

Safety, health and environmental regulations specific for the product

International Inventories

Australian AICS Inventory	All components are listed on the AICS or are subject to a relevant exemption, permit, or assessment certificate.
New Zealand Inventory of Chemicals	All components are listed on the AICS or are subject to a relevant exemption, permit, or assessment certificate.
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.

Poisons Schedule number
None Allocated

International Agreements

Montreal Protocol - Ozone Depleting Substances:	Does not apply
Stolkhom Convention - Persistent Organic Pollutants:	Does not apply
Rotterdam Convention - Prior Informed Consent:	One or more substances listed.
Basel Convention - Hazardous Waste:	Does not apply

16. Other information

Date of preparation or review

Revision Date: 16-Dec-2015

Revision Note

Full text of R-phrases referred to under Sections 2 and 3
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R61 May cause harm to the unborn child.

Full text of H-Statements referred to under sections 2 and 3
H225 - Highly flammable liquid and vapor
H227 - Combustible liquid
H301 - Toxic if swallowed
H302 - Harmful if swallowed
H311 - Toxic in contact with skin
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H331 - Toxic if inhaled
H332 - Harmful if inhaled
H370 - Causes damage to organs
H372 - Causes damage to organs through prolonged or repeated exposure

H373 - May cause damage to organs through prolonged or repeated exposure
H401 - Toxic to aquatic life
H402 - Harmful to aquatic life
H411 - Toxic to aquatic life with long lasting effects

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 Stewardship at 1-580-251-4335.

Key abreviations or acronyms used

bw – body weight
CAS – Chemical Abstracts Service
EC50 – Effective Concentration 50%
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
NOEC – No Observed Effect Concentration
OEL – Occupational Exposure Limit
PBT – Persistent Bioaccumulative and Toxic
ppm – parts per million
STEL – Short Term Exposure Limit
TWA – Time-Weighted Average
vPvB – very Persistent and very Bioaccumulative
h - hour
mg/m^3 - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
w/w - weight/weight
d - day

Key literature references and sources for data

www.ChemADVISOR.com/
OSHA
ECHA C&L

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End of Safety Data Sheet