

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

PERFOR MUL

Revision Date: 18-Sep-2015

Revision Number: 14

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

1.1. Product Identifier

Product Name PERFOR MUL
Internal ID Code HM006902

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

Recommended Use Emulsifier
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

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

H315 - Causes skin irritation

H318 - Causes serious eye damage

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

P280 - Wear eye protection/face protection

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

Contains**Substances**Poly(oxy-1,2-ethanediyl),
a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-**CAS Number**

57635-48-0

2.3. Other Hazards

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on Ingredients**3.1. Substances**

Substance

Substances	EINECS	CAS Number	PERCENT (w/w)	EU - CLP Substance Classification	REACH No.
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	611-563-2	57635-48-0	60 - 100%	Skin Irrit. 2 (H315) Eye Corr. 1 (H318)	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, 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

Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes

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.

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

None known.

5.2. Special hazards arising from the substance or mixture**Special Exposure Hazards**

Use water spray to cool fire exposed surfaces. Decomposition in fire may produce harmful gases. Do not allow runoff to enter waterways.

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 breathing vapors. Ensure adequate ventilation. Avoid contact with eyes, skin, or clothing. 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 alkalis. Store in a cool, dry location. Keep container closed when not in use.

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), a-(carboxymethyl)-w-[(9Z)-9- -octadecenyoxy]-	57635-48-0	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Germany	Spain	Portugal	Finland
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-	57635-48-0	Not applicable	Not applicable	Not applicable	Not applicable

-octadecenyloxy]-					
Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9 -octadecenyloxy]-	57635-48-0	Not applicable	Not applicable	Not applicable	Not applicable
Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9 -octadecenyloxy]-	57635-48-0	Not applicable	Not applicable	Not applicable	Not applicable
Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9 -octadecenyloxy]-	57635-48-0	Not applicable	Not applicable	Not applicable	Not applicable

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.

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

Not normally needed. But if significant exposures are possible then the following respirator is recommended:
Organic vapor respirator.

Hand Protection

Viton 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 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: Brown

Odor: Characteristic

Odor Threshold: No information available

Property

Values

Remarks/ - Method

pH:

2 - 3

Freezing Point/Range

No data available

Melting Point/Range

No data available

Boiling Point/Range

118 °C / 244 °F

Flash Point

> 100 °C PMCC

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

No data available

Vapor Density

No data available

Specific Gravity

1

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

None anticipated

10.5. Incompatible Materials

Strong oxidizers. Strong alkalis.

10.6. Hazardous Decomposition Products

Toxic fumes. 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 moderate skin irritation.

Ingestion

Irritation of the mouth, throat, and stomach.

Chronic Effects/Carcinogenicity

No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	> 2000 mg/kg (Rat)	> 10000 mg/kg (Rabbit) (similar substance)	No data available

Substances	CAS Number	Skin corrosion/irritation
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	Causes skin irritation.

Substances	CAS Number	Eye damage/irritation
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	Corrosive to eyes

Substances	CAS Number	Skin Sensitization
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	Did not cause sensitization on laboratory animals (similar substances)

Substances	CAS Number	Respiratory Sensitization
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	No information available

Substances	CAS Number	Mutagenic Effects

Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (similar substances)
--	------------	---

Substances	CAS Number	Carcinogenic Effects
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	No information available.

Substances	CAS Number	Reproductive toxicity
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	No data of sufficient quality are available.

Substances	CAS Number	STOT - single exposure
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	No information available

Substances	CAS Number	STOT - repeated exposure
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	Aspiration hazard
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	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), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	EC50 (72h): 25.21 mg/L (Skeletonema costatum)	EC50 (96h): 29.25 mg/L (Scopthalmus maximus) NOEC(10d): 416.78 mg/kg (Corophium volutator)	No information available	EC50 (48h): 597.37 mg/L (Acartia tonsa)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	Readily biodegradable (83% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	4.91

12.4. Mobility in soil

Substances	CAS Number	Mobility
Poly(oxy-1,2-ethanediyl), a-(carboxymethyl)-w-[(9Z)-9-octadecenyl]-	57635-48-0	No information available

12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not 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.

Contaminated Packaging

Follow all applicable national or local regulations.

SECTION 14: Transport Information

IMDG/IMO

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

RID

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

ADR

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

IATA/ICAO

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

14.1. UN Number: Not restricted

14.2. UN Proper Shipping Name: Not restricted

14.3. Transport Hazard Class(es): Not applicable

14.4. Packing Group: Not applicable

14.5. Environmental Hazards: Not applicable

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, 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 1: Low 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

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/

OSHA

ECHA C&L

Revision Date:

18-Sep-2015

Revision Note

SDS sections updated: 1

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

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

End of Safety Data Sheet