



Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
MOYNE ROBERTS AFFF 1% FOAM

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

1. IDENTIFICATION

Product Name
Uses
Manufacturer / Supplier

Moyne Roberts 1% AFFF Foam Concentrate.
Fire fighting foam concentrate for use on
Class A & B Fires
Moyne-Roberts (IRL) Limited
Moynehall, Cavan, Ireland.
Tel: +353 (0) 49 4332477
Fax: +353 (0) 49 4361159
E-Mail: irl@moyneroberts.com
Web: www.moyneroberts.com

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Eye Dam. 1; H318

Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Hazard pictograms



Signal word DANGER

Hazard statements	H318	Causes serious eye damage.
Precautionary statements	P262	Do not get in eyes, on skin, or on clothing.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other hazards

The product contains non-biodegradable fluorosurfactants.
Can harm the aquatic fauna when entering surface waters.
Can harm the bacteria population in waste water treatment plants when entering the sewerage system.
Breathing is not possible whilst submerged in the foam. Take care when spraying people!

SECTION 3: Composition / information on ingredients

Substances

Mixtures

1,2-ETHANDIOL

CAS No.: 107-21-1

EC No.: 203-473-3

REACH No.: 01--2119456816-28XXXX

Concentration: < 15%

Classification according to Regulation (EC) No. 1272/2008 [CLP]: GHS07-GHS08; Acute Tox. 4-STOT RE 2; H302-H373

2-(2-BUTOXYETHOXY)ETHANOL

CAS No.: 112-34-5

EC No.: 203-961-6

REACH No.: 01-2119475104-44-XXXX

Concentration: < 5%



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Classification according to Regulation (EC) No. 1272/2008 [CLP]: GHS07; Eye Irrit. 2; H319

OCTYLSULFATE

CAS No.: 142-31-4

EC No.: 205-535-5

REACH No.: 01-2119966908-16-XXXX

Concentration: < 10%

Classification according to Regulation (EC) No. 1272/2008 [CLP]: GHS05; Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1; H302, H315, H318

DECYLSULFATE

CAS No.: 142-87-0

EC No.: 205-568-5

REACH No.: 01-2119972287-26-XXXX

Concentration: < 10%

Classification according to Regulation (EC) No. 1272/2008 [CLP]: GHS05; Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1; H302-H315-H318

SODIUM-ALKYLEETHERSULFATE

CAS No.: 73665-22-2

EC No.: 500-485-3

REACH No.: Polymer

Concentration: < 5%

Classification according to Regulation (EC) No. 1272/2008 [CLP]: GHS05; Skin Irrit. 2-Eye Dam. 1; H315-H318

ALKYLPOLYGLYCOSIDE

CAS No.: 68515-73-1

EC No.: 500-220-1

REACH No.: 01-2119488530-36-XXXX

Concentration: < 5%

Classification according to Regulation (EC) No. 1272/2008 [CLP]: GHS05; Eye Dam. 1; H318

PERFLUORALKYLBETAINE

CAS No.: 34455-29-3

EC No.: 252-046-8

REACH No.: xxx

Concentration: < 5%

Classification according to Regulation (EC) No. 1272/2008 [CLP]: GHS07; Eye Irrit. 2-Aquatic Chronic 3; H319-H412

FLUOROSURFACTANT

Concentration: < 5%

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].

Full text of R-, H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

Description of first aid measures

General information

Remove contaminated, saturated clothing immediately.

Wash thoroughly the body (shower or bath).

Observe risk of aspiration if vomiting occurs.

When in doubt or if symptoms are observed, get medical advice.

Following inhalation

Provide fresh air.

Consult a doctor immediately in the case of inhaling spray mist and show him packing or label.



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In case of skin contact

Wash immediately with: Water

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Do NOT induce vomiting.

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

Most important symptoms and effects, both acute and delayed

Drowsiness

Nausea

Gastrointestinal complaints

Indication of any immediate medical attention and special treatment needed

If unconscious place in recovery position and seek medical advice.

IF SWALLOWED: Immediately call a POISON CENTER/doctor/....

SECTION 5: Firefighting measures

Extinguishing media

The product itself does not burn.

Co-ordinate fire-fighting measures to the fire surroundings

Special hazards arising from the substance or mixture

The product itself does not burn

Advice for firefighters

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation

Environmental precautions

Cover drains.

Do not allow to enter into soil/subsoil.

Do not allow to enter into surface water or drains.

Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

Treat the recovered material as prescribed in the section on waste disposal.

Suitable material for taking up

Sand

Sawdust

Chemical binding agents, containing acids

Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8



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SECTION 7: Handling and storage

Precautions for safe handling

Avoid

Skin contact

Eye contact

Wear personal protection equipment (see chapter 8).

Measures to prevent fire

The product is not Oxidising Combustible

Flammable Explosive

Highly flammable

No special fire protection measures are necessary.

Environmental precautions

Shafts and sewers must be protected from entry of the product. See chapter 8.

Advices on general occupational hygiene

When using do not eat, drink, smoke, sniff.

Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Do not store at temperatures above: +50°C

Requirements for storage rooms and vessels

Suitable container/equipment material

Refined steel

Polyethylene (PE)

Unsuitable container/equipment material

Aluminium Light metal Copper

Zinc

Alloy, containing copper

Alloy, contains light metal

Iron.

Steel

Hints on joint storage

Storage class

12: Non-combustible liquids

Specific end use(s)

Fire-extinguishing foams based on synthetic surfactants

Do not use for cleaning purposes.

Recommendation

Observe technical data sheet

SECTION 8: Exposure controls/personal protection

Control parameters

Substance name: 2-(2-Butoxyethoxy)ethanol

CAS No.: 112-34-5

EC No.: 203-961-6

United Kingdom



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long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin) TWA (EN) short-term occupational exposure limit value: 15 ppm; Limit value type (country of origin) STEL (EN) peak limitation: ---; Limit value type (country of origin) Ceil (EN)

European Union

long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin) TWA (EC) short-term occupational exposure limit value: 15 ppm; Limit value type (country of origin) STEL (EC) peak limitation: ---; Limit value type (country of origin) Ceil (EC)

Germany

long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin) AGW (DE) short-term occupational exposure limit value: 15 ppm; Limit value type (country of origin) Peak (DE) peak limitation: ---; Limit value type (country of origin) Ceil (DE)

Ireland

long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin) TWA (IE) short-term occupational exposure limit value: 15 ppm; Limit value type (country of origin) STEL (IE) peak limitation: ---; Limit value type (country of origin) Ceil (IE)

Substance name: 1,2-Ethandiol

CAS No.: 107-21-1

EC No.: 203-473-3

United Kingdom

long-term occupational exposure limit value: 20 ppm; Limit value type (country of origin) TWA (EN) short-term occupational exposure limit value: 40 ppm; Limit value type (country of origin) STEL (EN) peak limitation: ---; Limit value type (country of origin) Ceil (EN)

European Union

long-term occupational exposure limit value: 20 ppm; Limit value type (country of origin) TWA (EC) short-term occupational exposure limit value: 40 ppm; Limit value type (country of origin) STEL (EC) peak limitation: ---; Limit value type (country of origin) Ceil (EC)

Germany

long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin) AGW (DE) short-term occupational exposure limit value: 20 ppm; Limit value type (country of origin) Peak (DE) peak limitation: ---; Limit value type (country of origin) Ceil (DE)

Ireland

long-term occupational exposure limit value: 20 ppm; Limit value type (country of origin) TWA (IE) short-term occupational exposure limit value: 40 ppm; Limit value type (country of origin) STEL (IE) peak limitation: ---; Limit value type (country of origin) Ceil (IE)

Exposure controls

Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500. Avoid contact with skin, eyes and clothes.

Remove contaminated, saturated clothing. Wash contaminated clothing prior to re-use. Wash hands before breaks and after work. Apply skin care products after work.

Eye/face protection

Suitable eye protection

Eye glasses
with side
protection



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goggles
Face protection shield
Recommended eye protection articles
DIN EN 166

Hand protection

Suitable gloves type
Gloves with long cuffs
Suitable material
NBR (Nitrile rubber)
Butyl
caoutchouc (butyl rubber)
Breakthrough time
(maximum wearing time)
120 min.
Recommended glove articles
DIN EN 374

Breakthrough times and swelling properties of the material must be taken into consideration.

Body protection

Body protection: not required.

Respiratory protection

Usually no personal respiratory protection necessary.

Environmental exposure controls

Store concentrate according to national regulations (VAWS). Do not let the concentrate get into the environment.

If possible, hold back the application solution and dispose of after use.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	:	liquid		
Colour	:	yellow	/	brown
pH	at °C 20	:	6,5 - 8,5	DIN 19268
Density	at °C 20	:	1,050 - 1,090 g/ml	DIN 12791
Kinematic viscosity	at °C 20	:	< 15 mm ² /s	DIN 51562 Newton
Kinematic viscosity	at °C -15	:	< 60 mm ² /s	DIN 51562 Newton
Solidification point	:		-15°C	DIN ISO 3016
Initial boiling point and boiling range	:		> 100°C	DIN 51751
Water solubility (g/L)	:		completely miscible	OECD 105
Flash point	:		No flash point up to 100 °C.	

Physical hazards

Breathing is not possible whilst submerged in the foam. Take care when spraying people!

Other information



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SECTION 10: Stability and reactivity

Reactivity

Materials to avoid

Alkali (lye), concentrated
Alkali metals
Acid, concentrated
Oxidising agent, strong
Reducing agent, strong
Acid halides

Chemical stability

No special measures are necessary

Possibility of hazardous reactions

No special measures are necessary

Conditions to avoid

Do not store at temperatures above: +50°C

Incompatible materials

See section 7. No additional measures necessary

Hazardous decomposition products

Pyrolysis products, containing fluorine
Fluorinated hydrocarbons
Hydrofluoric acid

SECTION 11: Toxicological information

Mixture related information

Non-human toxicological data

Acute oral toxicity

LD50	> 2000 mg/kg	The acute oral toxicity is corresponding to GHS-category 5.
Species	Rat	
Method	OECD 420	

Acute dermal toxicity

The product has not been tested.

Acute inhalation toxicity

The product has not been tested.

Irritant and corrosive effects

Skin corrosion/irritation

Not an irritant.	
species	Albino rabbit
Method	OECD 404

Eye damage/irritation

Not an irritant.	
species	Albino rabbit
Method	OECD 404



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Irritation to respiratory tract

The product has not been tested.

Respiratory or skin sensitisation

The product has not been tested.

Repeated dose toxicity

The product has not been tested.

Carcinogenicity

The product has not been tested.

In vivo mutagenicity/genotoxicity

The product has not been tested.

Reproductive toxicity

The product has not been tested.

SECTION 12: Ecological information

Toxicity

Acute (short-term) fish toxicity

Effective dose LC50 : ~ 2540 mg/L
Exposure time : 96 h
Species : Leuciscus idus (golden orfe)
Method : OECD 203

Acute (short-term) toxicity to crustacea

Effective dose EC50 : ~ 707 mg/L
Exposure time : 48 h
Species : Daphnia magna (Big water flea)
Method : OECD 202

Acute (short-term) toxicity to aquatic algae

and cyanobacteria Effective dose EC50 : ~ 91 mg/L Exposure time : 72 h
Species : Scenedesmus subspicatus
Method : OECD 201

Effects in sewage plants

Method : Respiratory inhibition of municipal activated sludge.
600 mg/L ► Concentration : 100% Dilution : > 1667
60000 mg/L ► Concentration : 1% Dilution : > 17

The product contains non-biodegradable fluorosurfactants
Some of the components are poorly biodegradable.

remark

Observe local regulations concerning effluent treatment. Special pre-treatments are necessary.

Persistence and degradability

Biodegradation

Readily biodegradable (according to OECD criteria).

Additional information : The product contains non-biodegradable fluorosurfactants. Degradation rate (%)
: ~ 97%



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Test duration : 28 d
Analytical method : BOD (% of COD).
Method : OECD 302B/ ISO 9888/ EEC 92/69/V, C.9 type : Aerobic
biological treatment

Chemical oxygen demand (COD)

- 768000 mg*O₂/L ► Concentration : 100% Method DIN EN 38409-H41-1
- 7680 mg*O₂/L ► Concentration : 1% Method DIN EN 38409-H41-1

Biochemical oxygen demand (BOD)

- 630000 mg*O₂/L ► Concentration : 100% Method DIN EN 1899-1 Test duration 5 d
- 6300 mg*O₂/L ► Concentration : 1% Method DIN EN 1899-1 Test duration 5 d

BOD5/COD ratio

82%

Bioaccumulative potential

1,2-ETHANDIOL: No indication of bioaccumulation potential.
2-(2-BUTOXYETHOXY)ETHANOL: No indication of bioaccumulation potential. OCTYLSULFATE:
No indication of bioaccumulation potential. DECYLSULFATE: No indication of bioaccumulation
potential.
SODIUM-ALKYLEETHERSULFATE: No indication of bioaccumulation potential.
ALKYLPOLYGLYCOSIDE: No indication of bioaccumulation potential. PERFLUORALKYLBETAINE:
No indication of bioaccumulation potential. FLUOROSURFACTANT: No indication of
bioaccumulation potential.

Mobility in soil

If product enters soil, it will be mobile and may contaminate groundwater.

Results of PBT and vPvB assessment

1,2-ETHANDIOL: This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.
2-(2-BUTOXYETHOXY)ETHANOL: This substance does not meet the PBT/vPvB criteria of REACH, annex XIII. OCTYLSULFATE:
This substance does not meet the PBT/vPvB criteria of REACH, annex XIII. DECYLSULFATE: This substance does not meet the
PBT/vPvB criteria of REACH, annex XIII.
SODIUM-ALKYLEETHERSULFATE: This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.
ALKYLPOLYGLYCOSIDE: This substance does not meet the PBT/vPvB criteria of REACH, annex XIII. PERFLUORALKYLBETAINE:
This substance does not meet the PBT/vPvB criteria of REACH, annex XIII. FLUOROSURFACTANT: This substance does not meet
the PBT/vPvB criteria of REACH, annex XIII.

Other adverse effects

The product contains non-biodegradable fluorosurfactants.

SECTION 13: Disposal considerations

Waste treatment methods

Dispose of waste according to "Kreislaufwirtschafts- und Abfallgesetz (KrW-/AbfG)".
Dispose of waste according to applicable legislation.

List of proposed waste codes/waste designations in accordance with EWC

Waste code product

16 WASTES NOT OTHERWISE SPECIFIED IN THE LIST
1603 off-specification batches and unused products
160305* organic wastes containing dangerous substances

Waste code packaging

15 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE



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1501	SPECIFIED packaging (including separately collected municipal packaging waste)
150110*	packaging containing residues of or contaminated by dangerous substances
remark	
	Delivery to an approved waste disposal company. Send to a hazardous waste incinerator facility under observation of official regulations. Dispose according to legislation

SECTION 14: Transport information

UN number	None
UN proper shipping name	not applicable
Transport hazard class(es)	Land transport (ADR/RID) No dangerous good in sense of these transport regulations. Inland waterway craft (ADN) No dangerous good in sense of these transport regulations. Sea transport (IMDG) No dangerous good in sense of these transport regulations. Air transport (ICAO-TI / IATA-DGR) No dangerous good in sense of these transport regulations
Packing group	not applicable
Environmental hazards	none Marine pollutant : No
Special precautions for user	None
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	not applicable

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
EU legislation Regulation (EC) No. 2037/2000 concerning materials, which cause damage to the ozone layer. not applicable Regulation (EC) No. 304/2003 of the European parliament and of the council concerning the export and import of dangerous chemicals not applicable Directive 96/59/EC (PCB-guideline) not applicable Regulation (EC) No. 648/2004 (Detergents regulation) The surfactants contained in this preparation comply with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Information according to 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline).



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Volatile organic compounds (VOC) content in percent by weight: max. 5

Regulation (EC) No. 842/2006 on certain fluorinated greenhouse gases
not applicable

National regulations

Störfallverordnung

Not subject to StörfallVO.

Water hazard class (WGK)

slightly hazardous to water (WGK 1) Classification according to
VwVwS, Annex 4.

annex Chemikalien-Verbotsverordnung (ChemVerbotsV)

not applicable

Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out

SECTION 16: Other information

The product described in the Safety Data Sheet may only be used for its intended purpose. For exercises please observe the recommendations of the technical committee of BMU/LAMA. The details in this safety data sheet are based on today's stand of our knowledge and is applicable to the product with regard to appropriate safety precautions. They do not represent any guarantee of the properties of the product and do not establish any legal relationship.

Please refer to our internet website for more information: www.sthamer.com

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Relevant R-, H- and EUH-phrases (Number and full text)

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes

serious eye damage.

H319 Causes

serious eye irritation.

H373 May cause damage to liver through prolonged or repeated exposure if inhaled.

H412 Harmful to aquatic life with long lasting effects.



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