

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

1.1. Product identifier

Trade name or designation of the mixture	Extra-Eco
Registration number	-
Synonyms	Aqueous Film Forming Foam (AFFF)
SDS number	-
Product code	120-45
Issue date	12-May-2010
Version number	03
Revision date	24-July-2014
Supersedes date	24-July-2012

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

Identified uses	Firefighting foam concentrate.
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name	Chubb
Address	Chubb House, Staines Road West Sunbury on Thames, Middlesex, TW16 7AR
Telephone	Telephone: 0044 (0)1932 785588 Fax: 0044 (0)1932 765630
e-mail	info@chubb.co.uk
Contact person	EH&S Manager

1.4. Emergency telephone number 0044 (0)15 2426 4000 (Standard office hours: Monday to Friday 8:30am - 4:30pm GMT)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification Xi;R36/38, R43

The full text for all R-phrases is displayed in section 16.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Skin sensitisation	Category 1	H317 - May cause an allergic skin reaction.

Hazard summary

Physical hazards	Not classified for physical hazards.
Health hazards	Irritating to eyes and skin. May cause sensitisation by skin contact. Occupational exposure to the substance or mixture may cause adverse health effects.
Environmental hazards	Not classified for hazards to the environment.
Specific hazards	May cause central nervous system effects.
Main symptoms	Symptoms can include irritation, redness, scratching of the cornea, and tearing. Symptoms may include redness, oedema, drying, defatting and cracking of the skin. Itching, redness, burning of skin.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: 2-(2-Butoxyethoxy)-Ethanol, 5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1), Alkyl polyglycoside, Sodium octyl sulphate

Hazard pictograms**Signal word**

Warning

Hazard statements

H315 - Causes skin irritation.
 H319 - Causes serious eye irritation.
 H317 - May cause an allergic skin reaction.

Precautionary statements**Prevention**

P280 - Wear eye/face protection.
 P280 - Wear protective gloves.
 P264 - Wash hands thoroughly after handling.
 P272 - Contaminated work clothing should not be allowed out of the workplace.

Response

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 CENTRE or doctor/physician.
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P362 - Take off contaminated clothing and wash before reuse.

Storage

Store away from incompatible materials.

Disposal

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

Supplemental label information Not applicable.**2.3. Other hazards** Not a PBT or vPvB substance or mixture.**Section 3: Composition/information on ingredients****3.2. Mixtures****General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
2-(2-Butoxyethoxy)-Ethanol	10 - < 20	112-34-5 203-961-6	-	603-096-00-8	#
Classification:	DSD: Xi;R36				
	CLP: Eye Irrit. 2;H319				
Sodium octyl sulphate	10 - < 20	142-31-4 205-535-5	-	-	
Classification:	DSD: Xi;R36/37/38				
	CLP: Skin Irrit. 2;H315, Eye Irrit. 2;H319, STOT SE 3;H335				
Alkyl polyglycoside	5 - < 10	132778-08-6 603-654-0	-	-	
Classification:	DSD: Xi;R38-41				
	CLP: Skin Irrit. 2;H315, Eye Dam. 1;H318				
Perfluoroalkyl amine oxide	1 - < 3	80475-32-7 279-481-6	-	-	
Classification:	DSD: Xn;R22				
	CLP: Acute Tox. 4;H302				

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
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5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1)	<0,06	55965-84-9 220-239-6	-	613-167-00-5	
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Classification: **DSD:** T;R23/24/25, C;R34, R43, N;R50/53
CLP: Acute Tox. 3;H301, Acute Tox. 3;H311, Skin Corr. 1B;H314, Skin Sens. 1;H317, Acute Tox. 3;H331, Aquatic Acute 1;H400, Aquatic Chronic 1;H410

Water	Balance	7732-18-5 231-791-2	-	-	
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Classification: **DSD:** -
CLP: -

#: This substance has been assigned Community workplace exposure limit(s).
DSD: Directive 67/548/EEC.
CLP: Regulation No. 1272/2008.

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
The full text for all R- and H-phrases is displayed in section 16.

Section 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation Move injured person into fresh air and keep person calm under observation. Get medical attention immediately.

Skin contact Immediately flush skin at least 15 minutes with plenty of water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids wide apart. Get medical attention if irritation develops and persists.

Ingestion Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and take these instructions.

4.2. Most important symptoms and effects, both acute and delayed Symptoms can include irritation, redness, scratching of the cornea, and tearing. Symptoms may include redness, oedema, drying, defatting and cracking of the skin. Itching, redness, burning of skin.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

Section 5: Firefighting measures

General fire hazards Product is an extinguishing medium. It does not burn or support combustion.

5.1. Extinguishing media

Suitable extinguishing media No specific measures are required as this product is a fire extinguishing medium.

Unsuitable extinguishing media Not applicable.

5.2. Special hazards arising from the substance or mixture Not a fire hazard.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus, operated in positive pressure mode and full protective clothing must be worn in case of fire.

Special fire fighting procedures No specific precautions.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Avoid contact with skin and eyes. Avoid inhalation of mists or aerosols. Provide adequate ventilation. Wear protective clothing as described in section 8 of this safety data sheet.

For emergency responders Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Prevent entry into waterways, sewer, basements or confined areas.

6.3. Methods and material for containment and cleaning up Absorb spillage with suitable absorbent material. Collect and dispose of spillage as indicated in Section 13.

6.4. Reference to other sections For personal protection, see section 8.
For waste disposal, see section 13.

Section 7: Handling and storage

7.1. Precautions for safe handling Avoid contact with skin and eyes. Wear appropriate personal protective equipment. Wash hands after handling. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store at temperature below 40°C. Store above freezing. Read and follow manufacturer's recommendations. Store away from incompatible materials.

7.3. Specific end use(s) Firefighting foam concentrate.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	MAK	97,5 mg/m ³
	STEL	10 ppm
		101,2 mg/m ³ 15 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	STEL	101,2 mg/m ³
	TWA	15 ppm
		67,5 mg/m ³ 10 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	Ceiling	100 mg/m ³
	TWA	70 mg/m ³

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	VLE	101,2 mg/m ³
	VME	15 ppm
		67,5 mg/m ³ 10 ppm

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	TWA	67 mg/m ³
		10 ppm

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	AGW	67 mg/m ³
		10 ppm

Italy. OELs

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
	TWA	15 ppm
		67,5 mg/m3 10 ppm

Netherlands. OELs (binding)

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	STEL	100 mg/m3
	TWA	50 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	TLV	68 mg/m3
		10 ppm

Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	STEL	100 mg/m3
	TWA	67 mg/m3

Russian Federation. Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

Components	Type	Value	Form
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	Ceiling	10 mg/m3	Aerosol

Spain. Occupational Exposure Limits

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
	TWA	15 ppm
		67,5 mg/m3 10 ppm

Sweden. Occupational Exposure Limit Values

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	STEL	200 mg/m3
	TWA	30 ppm
		100 mg/m3 15 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
	TWA	15 ppm
		67 mg/m3 10 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
	TWA	15 ppm
		67,5 mg/m3 10 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived No Effect Level (DNEL)

Components	Type	Route	Value	Form
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	Workers	Dermal	20 mg/kg	Long term exposure systemic effects

Components	Type	Route	Value	Form
		Inhalation	67,5 mg/m ³	Long term exposure local effects
		Inhalation	67,5 mg/m ³	Long term exposure systemic effects
		Inhalation	101,2 mg/m ³	Acute exposure local effects

Predicted no effect concentrations (PNECs)

Components	Type	Route	Value	Form
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)	Aqua (freshwater)	Not applicable	1 mg/l	
	Aqua (intermittent releases)	Not applicable	3,9 mg/l	
	Aqua (marine water)	Not applicable	0,1 mg/l	
	Sediment (freshwater)	Not applicable	4 mg/kg	
	Sediment (marine water)	Not applicable	0,4 mg/kg	
	Soil	Not applicable	0,4 mg/kg	
	STP	Not applicable	200 mg/l	

8.2. Exposure controls

Appropriate engineering controls Ensure adequate ventilation, especially in confined areas. Observe occupational exposure limits and minimise the risk of exposure.

Individual protection measures, such as personal protective equipment

General information	Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection	Wear approved safety goggles.
Skin protection	
- Hand protection	Wear suitable gloves. Butyl rubber gloves are recommended. Suitable gloves can be recommended by the glove supplier.
- Other	Wear suitable protective clothing.
Respiratory protection	In case of inadequate ventilation: Use respiratory equipment with combination filter, type A2/P2.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Handle in accordance with good industrial hygiene and safety practices. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls Contain spills and prevent releases and observe national regulations on emissions. Environmental manager must be informed of all major spillages.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Colour	Yellow-orange.

Odour Detergent like.

Odour threshold Not available.

pH 7 - 9 at 20°C

Melting point/freezing point -6 °C (21,2 °F)

Initial boiling point and boiling range 100 °C (212 °F)

Flash point Not applicable.

Evaporation rate Not applicable.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not applicable.

Flammability limit - upper (%) Not applicable.

Vapour pressure Not applicable.

Vapour density Not applicable.

Relative density	1,043 - 1,083
Solubility(ies)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	11 - 16,6 cSt at 20°C
Explosive properties	Not available.
Oxidizing properties	Not available.
9.2. Other information	No relevant additional information available.

Section 10: Stability and reactivity

10.1. Reactivity	The product is stable and non reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Stable at normal conditions.
10.3. Possibility of hazardous reactions	Hazardous polymerisation does not occur.
10.4. Conditions to avoid	Contact with incompatible materials. Excessive heat. Freezing (Product properties are unaffected).
10.5. Incompatible materials	Alkali metals. Strong oxidising agents. Water reactive materials.
10.6. Hazardous decomposition products	Carbon oxides. Sulphur oxides. Hydrogen fluoride. Nitrogen oxides (NOx). Sodium oxides.

Section 11: Toxicological information

General information The information in this section is for the individual ingredients that are expected to contribute to the potential health effects of this product.

Information on likely routes of exposure

Ingestion	May cause discomfort if swallowed.
Inhalation	May cause respiratory tract irritation.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.

Symptoms Exposed may experience eye tearing, redness, and discomfort. Symptoms may include redness, drying and cracking of the skin.

11.1. Information on toxicological effects

Acute toxicity Causes skin and eye irritation. May cause allergic skin reaction.

Components	Species	Test results
2-(2-Butoxyethoxy)-Ethanol (CAS 112-34-5)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	2700 mg/kg
<i>Oral</i>		
LD50	Rat	4500 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation No data available.

Skin sensitisation May cause allergic skin reaction.

Germ cell mutagenicity No data available.

Carcinogenicity Not listed.

Reproductive toxicity No data available.

Specific target organ toxicity - single exposure No data available.

Specific target organ toxicity - repeated exposure No data available.

Aspiration hazard No data available.

Mixture versus substance information None known.

Other information Persons with pre-existing skin disorders may be more susceptible to the effects of the product.

Section 12: Ecological information

12.1. Toxicity	The product contains a substance which is toxic to aquatic organisms.
12.2. Persistence and degradability	No data available.
12.3. Bioaccumulative potential	The product is not expected to bioaccumulate.
Partition coefficient n-octanol/water (log Kow)	
2-(2-Butoxyethoxy)-Ethanol	0,56
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
Mobility in general	The product is water soluble and may spread in water systems.
12.5. Results of PBT and vPvB assessment	No data available.
12.6. Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of waste and residues in accordance with local authority requirements.
Contaminated packaging	Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	16 03 05* Waste codes should be assigned by the user based on the application for which the product was used.
Disposal methods/information	Dispose of waste and residues in accordance with local authority requirements.

Section 14: Transport information

ADR

The product is not covered by international regulation on the transport of dangerous goods.

RID

The product is not covered by international regulation on the transport of dangerous goods.

ADN

The product is not covered by international regulation on the transport of dangerous goods.

IATA

The product is not covered by international regulation on the transport of dangerous goods.

IMDG

The product is not covered by international regulation on the transport of dangerous goods.

Section 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Commission Decision 2000/479/EC on the implementation of a European pollutant emission register (EPER)

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA

Not listed.

Other regulations	The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.
National regulations	Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work.
15.2. Chemical safety assessment	No Chemical Safety Assessment has been carried out.

Section 16: Other information

List of abbreviations	DNEL: Derived No-Effect Level. PNEC: Predicted No-Effect Concentration. PBT: Persistent, bioaccumulative and toxic. vPvB: Very Persistent and very Bioaccumulative. DSD: Directive 67/548/EEC. CLP: Regulation No. 1272/2008.
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References	US. IARC Monographs on Occupational Exposures to Chemical Agents EPA: Acquire database ACGIH NLM: Hazardous Substances Data Base
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Information on evaluation method leading to the classification of mixture	The mixture is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. For details, refer to Sections 9, 11 and 12.
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Full text of any statements or R-phrases and H-statements under Sections 2 to 15	R22 Harmful if swallowed. R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R34 Causes burns. R36 Irritating to eyes. R36/37/38 Irritating to eyes, respiratory system and skin. R36/38 Irritating to eyes and skin. R38 Irritating to skin. R41 Risk of serious damage to eyes. R43 May cause sensitisation by skin contact. R50/53 Very toxic to aquatic organisms, May cause long-term adverse effects in the aquatic environment. H301 - Toxic if swallowed. H302 - Harmful if swallowed. H311 - Toxic in contact with skin. H314 - Causes severe skin burns and eye damage. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H319 - Causes serious eye irritation. H331 - Toxic if inhaled. H335 - May cause respiratory irritation. H400 - Very toxic to aquatic life. H410 - Very toxic to aquatic life with long lasting effects.
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Training information	Follow training instructions when handling this material.
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Disclaimer	This information is based on our current knowledge and is believed to be correct as of the date issued. The information is intended to describe the product for the purposes of health, safety and environmental requirements only and no warranty, express or implied, is made. It should also not be construed as guaranteeing any specific property of the product. In addition, information obtained from a database is subject to change and may not be as current as the information in the MSDS available directly from UTCFS.
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