SAFETY DATA SHEET
Fomtec AFFF 3% A

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

Date issued	12.11.2012
Revision date	22.04.2014

1.1. Product identifier

Product name	Fomtec AFFF 3% A
Article no.	10-3004-XX

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

1.3. Details of the supplier of the safety data sheet

Company name	Dafo Fomtec AB
Office address	Garnisonsg. 47 A, Helsingborg
Postal address	Box 683
Postcode	S-13526
City	Tyresö
Country	Sweden
Tel	+ 46 850640500
E-mail	info@fomtec.com
Website	http://www.fomtec.com/

1.4. Emergency telephone number

Emergency telephone	National Poisons Information Service London:+44 20 7771 5394

SECTION 2: Hazards identification

2.1. Classification of substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]	Eye Irrit. 2; H319; Calculation method
Substance / mixture hazardous properties	Not regarded as a health or environmental hazard under current legislation.

2.2. Label elements

Hazard Pictograms (CLP)

Signal word	Warning
Hazard statements	H319 Causes serious eye irritation.
Precautionary statements	P264 Wash thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents
Monopropylene glycol	CAS no.: 57-55-6 EC no.: 200-338-0 IUPAC name: Propane-1,2-diol		2 - 6 %
Sodium Alkyl Sulfate	CAS no.: 90583-25-8 EC no.: 292242	Xn; R22, R38, R41 Acute tox. 4; H302 Skin Irrit. 2;H315 Eye Dam. 1; H318	1 - 2 %
Alkyl polyglycoside	CAS no.: 68515-73-1 EC no.: 500-220-1 Registration number: 01-2119488530-36	Xi; R41 Eye Dam. 1;H318	0,1 - 0,9 %
Diethylene glycol monobutyl ether	CAS no.: 112-34-5 EC no.: 203-961-6 Index no.: 603-096-00-8 Synonyms: 2-(2-Butoxyethoxy) ethanol	Xi; R36 Eye Irrit. 2; H319	5 - 10 %
Column headings	CAS no. = Chemical Abstracts Service; EU (Einecs or Elincs number) = European inventory of Existing Commercial Chemical Substances; Ingredient name = Name as specified in the substance list (substances that are not included in the substance list must be translated, if possible). Contents given in; %, %wt/wt, %vol/wt, %vol/vol, mg/m3, ppb, ppm, weight%, vol%		
HH/HF/HE	T+ = Very toxic, T = Toxic, C = Corrosive, Xn = Harmful, Xi = Irritating, E = Explosive, O = Oxidizing, F+ = Extremly flammable, F = Very flammable, N = Environmental hazard		

SECTION 4: First aid measures

4.1. Description of first aid measures

General	Provide rest, warmth and fresh air. Get medical attention if any discomfort continues.
Inhalation	Fresh air and rest. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothing and launder thoroughly before re-use. Wash skin thoroughly with soap and water for several minutes. Get medical attention if any discomfort continues.
Eye contact	Immediately flush with plenty of water or eyewash solution for up to 10 minutes. Make sure to remove any contact lenses from the eyes before rinsing.
Ingestion	Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable seek hospital and bring these instructions.
Recommended personal protective equipment for first aid responders	No recommendation given.

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

Information for health personnel	Get medical attention if any discomfort continues.

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

Medical monitoring for delayed effects	No recommendation given.
Separate first aid equipment	No recommendation given.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: This product is not flammable.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards: None.

5.3. Advice for firefighters

Fire fighting procedures: Follow the general fire precautions indicated by the workplace.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures: Avoid contact with skin and eyes. Do not breathe vapour. For personal protection, see section 8.

6.2. Environmental precautions

Environmental precautionary measures: Prevent discharge of larger quantity to drain. Avoid discharge to the aquatic environment.

6.3. Methods and material for containment and cleaning up

Cleaning method: Absorb with sand or other inert absorbent. Flush area clean with lots of water. Be aware of potential for surfaces to become slippery. For waste disposal, see section 13.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling: Avoid contact with skin and eyes. Avoid inhalation of vapours. Wash hands before breaks and before smoking, eating or drinking. Wash hands and contaminated areas with water and soap after finished work. Container must be kept tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

Storage: Store at specified temperature. Keep containers tightly closed. Protect against direct sunlight.

7.3. Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure limit values

Substance	Identification	Value	TWA Year
Monopropylene glycol	CAS no.: 57-55-6 EC no.: 200-338-0	8-hour TWA: 150 ppm WEL	
Sodium Alkyl Sulfate	CAS no.: 90583-25-8 EC no.: 292242		
Alkyl polyglycoside	CAS no.: 68515-73-1 EC no.: 500-220-1 Registration number: 01-2119488530-36		
Diethylene glycol monobutyl ether	CAS no.: 112-34-5 EC no.: 203-961-6 Index no.: 603-096-00-8 Synonyms: 2-(2-Butoxyethoxy) ethanol	8-hour TWA: 10 ppm 8-hour TWA: 67,5 mg/m3 15 min.: 15 ppm 15 min.: 101,2 mg/m3	2011

Substance: Monopropylene glycol

Recommended type of equipment	No recommendation given.
Suitable gloves type	Nitrile gloves are recommended.
Eye protection	If risk of splashing, wear safety goggles or face shield.
Suitable gloves type	Butyl rubber. Gloves of nitrile rubber, PVA or Viton are recommended.
Eye protection	Eye protection: Goggles/face shield are recommended.

DNEL / PNEC from substances

Substance	Monopropylene glycol
DNEL	Group: Worker Exposure route: Inhalation Exposure frequency: Long term (repeated) Type of effect: Systemic effect Value: 168 mg/m3
DNEL	Group: Worker Exposure route: Inhalation Exposure frequency: Long term (repeated) Type of effect: Local effect Value: 10 mg/m3
DNEL	Group: Consumer Exposure route: Inhalation Exposure frequency: Long term (repeated) Type of effect: Systemic effect Value: 50 mg/m3
PNEC	Exposure route: Water Value: 260 mg/l Remarks: Fresh water
PNEC	Exposure route: Water Value: 26 mg/l Remarks: Marine water
PNEC	Exposure route: Water Value: 183 mg/l Remarks: Intermittent realeases water
PNEC	Exposure route: Soil Value: 50 mg/kg soil dw
Substance	Sodium Alkyl Sulfate
DNEL	Group: Consumer Exposure route: Dermal Exposure frequency: Long term (repeated) Type of effect: Systemic effect Value: 2440 mg/kg bw7day
DNEL	Group: Consumer Exposure route: Inhalation Exposure frequency: Long term (repeated) Type of effect: Systemic effect Value: 85 mg/m3
DNEL	Group: Consumer Exposure route: Oral Exposure frequency: Long term (repeated) Type of effect: Systemic effect Value: 24 mg/kg bw/day
DNEL	Group: Worker Exposure route: Dermal Exposure frequency: Long term (repeated) Type of effect: Systemic effect Value: 4060 mg/kg bw/day
DNEL	Group: Worker

	Exposure route: Inhalation Exposure frequency: Long term (repeated) Type of effect: Systemic effect Value: 285 mg/m3
PNEC	Exposure route: Water Critical Component: Fresh water Value: 0,112 mg/l
PNEC	Exposure route: Water Critical Component: Marine water Value: 0,0112 mg/l
PNEC	Exposure route: Sediment Critical Component: Fresh water Value: 1,25 mg/l
PNEC	Exposure route: Sediment Critical Component: marine water Value: 0,125 mg/l
PNEC	Exposure route: Sewage treatment plant STP Value: 1,35 mg/l
PNEC	Exposure route: Soil Value: 0,185 mg/l
Substance	Alkyl polyglycoside
DNEL	Group: Consumer Exposure route: Oral Exposure frequency: Long term (repeated) Type of effect: Systemic effect Value: 35,7 mg/kg bw/day
DNEL	Group: Consumer Exposure route: Inhalation Exposure frequency: Long term (repeated) Type of effect: Systemic effect Value: 124 mg/m3
DNEL	Group: Consumer Exposure route: Dermal Exposure frequency: Long term (repeated) Type of effect: Systemic effect Value: 357000 mg/kg bw/day
DNEL	Group: Worker Exposure route: Inhalation Exposure frequency: Long term (repeated) Type of effect: Systemic effect Value: 420 mg/m3
DNEL	Group: Worker Exposure route: Dermal Exposure frequency: Long term (repeated) Type of effect: Systemic effect Value: 595000 mg/kg bw/day

8.2. Exposure controls

Respiratory protection

Respiratory protection	Under normal conditions of use respiration protection should not be required.

Hand protection

Hand protection	Protective gloves must be used if there is a risk of direct contact or splash.
Suitable gloves type	Rubber or plastic.

Eye / face protection

Eye protection	Use approved safety goggles or face shield.

Skin protection

Skin protection (except hands)	Use protective clothing, which covers arms and legs.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Clear, yellowish liquid.
Colour	Yellowish.
Odour	Slight odour.
pH (as supplied)	Value: 6,5-8,5
Freezing point	Value: -4 °C
Specific gravity	Value: ~ 1,015 g/ml
Solubility description	Completely soluble in water.
Viscosity	Value: ≤ 20 mPas Method of testing: Brookfiled DV

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known conditions that are likely to result in a hazardous situation.

10.2. Chemical stability

Stability	Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None.

10.4. Conditions to avoid

Conditions to avoid	Earth metals such as sodium, potassium and barium.

10.5. Incompatible materials

Materials to avoid	Alkali earth metals.

10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological data for substances

Substance	Monopropylene glycol
LD50 oral	Value: ~ 22000 mg/kg Animal test species: Rat
LD50 dermal	Value: > 2000 mg/kg Animal test species: Rabbit
Substance	Sodium Alkyl Sulfate
LD50 oral	Value: > 2000 mg/kg
LD50 dermal	Value: > 2000 mg/kg Animal test species: Rat
Substance	Alkyl polyglycoside
LD50 oral	Value: > 2000 mg/kg Animal test species: Rat Test reference: OECD 401
LD50 dermal	Value: > 2000 mg/kg

	Animal test species: Rabbit
	Test reference: OECD 423
CMR effects	Germ cell mutagenicity : No known chronic or acute health risks.
	Carcinogenicity: No known chronic or acute health risks.
	Reproductive toxicity: No known chronic or acute health risks.

Potential acute effects

Skin contact	Liquid may irritate skin.
Eye contact	Spray and vapour in the eyes may cause irritation and smarting.

Delayed effects / repeated exposure

Sensitisation	No known chronic or acute health risks.

Carcinogenic, Mutagenic or Reprotoxic

Carcinogenicity	No known chronic or acute health risks.
Mutagenicity	No known chronic or acute health risks.
Reproductive toxicity	No known chronic or acute health risks.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic, fish	Value: > 800 mg/l
	Fish, species: Rainbow Trout
	Duration: 96 h
Acute aquatic, Daphnia	Value: ~ 3000 mg/l
	Daphnia, species: Daphnia Magna
	Duration: 24 h
Aquatic, comments	On basis of test data.

Toxicological data for substances

Substance	Monopropylene glycol
Acute aquatic, fish	Value: > 40613 mg/l
	Species: not specified
	Duration: 96hrs
Acute aquatic, algae	Value: 19000 mg/l
	Species: not specified
Acute aquatic, Daphnia	Value: > 18340 mg/l
	Species: Daphnia Magna
	Duration: 48 hrs
Biodegradability	Value: > 80 %
	Test period: 28 days
	Method of testing: OECD 301F
Substance	Sodium Alkyl Sulfate
Acute aquatic, fish	Value: ~ 110 mg/l
	Method of testing: DIN 38412 T15
	Species: Leuciscus Idus
	Duration: 48 h
Acute aquatic, algae	Value: > 100 mg/l
	Species: Pseudokirchn. Subcapitata
	Duration: 48 h
Acute aquatic, Daphnia	Value: ~ 240 mg/l
	Method of testing: DIN 38412 T11
	Species: Daphnia Magna
	Duration: 48 h
Persistence and degradability	The product is easily biodegradable.
Biodegradability	Value: ~ 60 %
	Test period: 10 days
Chemical oxygen demand (COD)	Value: 698 mg/l

	Method of testing: DIN 38408 H41
Biological oxygen demand (BOD)	Value: 494 mg/l Test period: 5 days Method of testing: EN 1899-1
Substance	Alkyl polyglycoside
Acute aquatic, fish	Value: ~ 20 mg/l Method of testing: OCDE 203 Species: Cyprinodon Variegatus Duration: 96 hrs
Acute aquatic, algae	Value: ~ 21 mg/l Method of testing: ISO 10253 Species: Skeletonerna Costatum Duration: 72 hrs
Acute aquatic, Daphnia	Value: ~ 150 mg/l Method of testing: ISO 14669 Species: Acartia Tonsa Duration: 48 hrs
Persistence and degradability	The product is easily biodegradable.
Biodegradability	Value: ~ 100 % Test period: 28 days Method of testing: OCDE 301E
Bioaccumulation	Bioaccumulation: Is not expected to be bioaccumulable.

12.2. Persistence and degradability

Biodegradability	Value: ~ 92 % Test period: 28 days
Persistence and degradability	The product is expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential	Bioaccumulation: Is not expected to be bioaccumulable.

12.4. Mobility in soil

Mobility	The product contains substances, which are water soluble and may spread in water systems.

12.5. Results of PBT and vPvB assessment

PBT assessment results	Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Specify the appropriate methods of disposal	Dispose of waste and residues in accordance with local authority requirements.
Relevant waste regulation	Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance).
EWC waste code	EWC: 160305 organic wastes containing dangerous substances

SECTION 14: Transport information

14.1. UN number

Comments	Not applicable. No information required.

14.2. UN proper shipping name

Comments	Not applicable. No information required.

14.3. Transport hazard class(es)

Comments	Not applicable. No information required.

14.4. Packing group

Comments	Not applicable. No information required.

14.5. Environmental hazards

Comments	Not applicable. No information required.

14.6. Special precautions for user

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Additional information.

Additional information.	The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

SECTION 15: Regulatory information

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

EEC-directive	COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Methods of evaluating information (Art. 9 Regulation (EC) No 1272/2008): Dangerous Preparations Directive 1999/45/EC. Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC.
Legislation and regulations	Directive 2008/68/EC of the European Parliament and of the Council of 24 September 2008 on the inland transport of dangerous goods (Text with EEA relevance).

15.2. Chemical safety assessment

Chemical safety assessment performed	Yes

SECTION 16: Other information

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]	Eye Irrit. 2; H319; Calculation method
List of relevant R-phrases (under headings 2 and 3).	R38 Irritating to skin. R36 Irritating to eyes. R22 Harmful if swallowed. R41 Risk of serious damage to eyes.
List of relevant H-phrases (Section 2 and 3).	H318 Causes Serious eye damage. H302 Harmful if swallowed. H319 Causes serious eye irritation. H315 Causes skin irritation.
Responsible for safety data sheet	Dafo Fomtec AB