

# Material Safety Data sheet

According to 1907/2006/EG annex II (REACH-regulation)

Latest Revision: 01/11/2009

MSDS No :

## Fomtec LS EXP (High Expansion)

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Identification of the substance or preparation : Class Hi-EX

Use of the substance/preparation : Fire Extinguishing Foam Concentrate

Company/Undertaking identification : Dafo Fomtec AB, P.O. Box 683, SE – 135 26 Tyreso, Sweden  
Tel: +46 8 506 405 66  
Fax: +46 8 506 405 29

Emergency telephone :

### 2. HAZARD IDENTIFICATION

- Irritating to eyes

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

No	Name of Ingredient	CAS-No	EINECS-No	Cons.Weight% LS EXP (Hi-Ex)	Health class
1	Water	7732-18-5	231-791-2	Balance	
2	2-(2-butoxyethoxy)etanol	112-34-5	203-961-6	10 – 20	Xi R36
3	Hydrocarbon surfactants blend	-	-	15 - 35	Xi, R36/38
4	Mono ethylene glycol	107-21-1	203-473-3	3 - 5	Xn R22

### 4. FIRST AID MEASURES

- Eye contact : Rinse thoroughly with running water at least for ten minutes. Seek medical advice if symptoms persists.
- Skin contact : Remove contaminated clothing etc and wash skin thoroughly with water. Seek medical advice if irritation persists.
- Ingestion : Rinse mouth with water. Give lots of water to drink. Do not induce vomiting. Seek medical advice if you are unwell.
- Inhalation : Remove the casualty into fresh air. Seek medical advice if symptoms Persists.

### 5. FIRE FIGHTING MEASURES

- No specific measures are required as the product itself is a fire fighting agent. If product containers are involved in fire, then a suitable extinguishing agent should be used.
- Evacuate all personnel, use protective clothing use breathing apparatus if required.
- Stop release of product to fire, Keep away from heat, use water to cool tanks. Move tanks from fire area if possible with out risk. Fire to be fought from safe distance. Poisonous decomposition products may be created during a fire.

### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Avoid eye and skin contact. Supply fresh air in enclosed spaces. See heading 8 of this MSDS.
- Environmental precautions : Seal off the spill area with absorbing materials to avoid spreading of release to water or water treatment systems.
- Method for cleaning up : Shovel up the absorbed material and place in a labeled, sealed container for subsequent disposal.. The practice of washing in to drains should be avoided.

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### 7. HANDLING AND STORAGE

Handling : The product should be diluted before use. Avoid skin and eye contact. Use personal protective equipment according to section 8. Avoid spill around the containers, the material may be slippery.

Storage : Product should be stored in sealed, original containers. Freezing and thawing do not effect the properties but care must be taken to avoid freezing of the container and its contents since the expansion of the container contents may cause cracking of the completely rigid container as ice forms. Do not store above +50C for longer periods.  
Must comply to the national regulations for products classified as water hazard class 1.

### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure limit values:

2-(2-butoxyethoxy) ethanol CAS No: 112-34-5

WEL-LTEL / EC 67.5 mg/cu.m.  
WEL-STEL / EC-STEL 101.2 mg/cu.m.

Ethane-1,2-diol CAS No: 107-21-1

WEL-LTEL / EC 10 mg/cu.m. Particulates, 52 mg/cu.m. Vapour Total 8hr TWA  
WEL-STEL / EC-STEL 104 mg/cu.m.

Exposure Controls: : Work under local ventilation

Hand protection : Suitable gloves made from nitrile or butyl rubber

Eye protection : Use safety goggles

Skin protection : Use protective clothings such as overalls

Respiratory protection : Gas mask with filter type A may be used if concentration in air > exposure limit

Environmental exposure control : Store or dispose concentrate in accordance with national regulations

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Type of material:	Liquid
Colour:	Clear pale yellow
Odour:	Organic odour
Solubility:	Miscible with water in all proportions
Viscosity Brookfield	<20 c.st
Freeze point:	0 C
Specific gravity at 20 C	0.950 – 1.015
pH	6.5 – 8.5
Boiling point	100 C at 760mm Hg
Flash point:	>98 C
Flammability	Not flammable
Oxidising properties	None
Explosive properties	Product has no explosive property

### 10. STABILITY AND REACTIVITY

Material to avoid : Keep away from heat sources. Avoid strong oxidisers.

Conditions to avoid : Stable under normal conditions

Hazardous decomposition products : Thermal decomposition of containers and/or products may generate acrid smoke, fumes, carbon monoxide, carbon dioxide (oxygen depleting), traces of nitrogen oxide and Sox.

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### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity:

2-(2-butoxyethoxy) ethanol	
LD50 oral rat	5660 mg/Kg
LD50 dermal rabbit	2700 mg/Kg
Ethane-1,2-diol	
LD50 oral rat	>5000 mg/Kg
LD50 dermal rabbit	10483 mg/Kg

#### Acute effects:

Skin contact	: Classified as non-irritant according to the dangerous preparation directive 1999/45/EU
Eye contact	: Can cause redness or irritation of the eye tissue

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Data has been deduced from a similar product

Rainbow Trout	LC50 (96 hours)	3%
Daphnia Magna	EC50 (24 hours)	>2000mg/l
		>1000mg/l

#### Persistence and degradability

The product is biodegradable

	<u>5 days</u>	<u>28 days</u>
BOD	9100mg/l	12600 mg/l
COD	17291mg/l	17391 mg/l
Biodegradation	52.6%	72.5%

#### BIOACCUMULATION

Not expected to bioaccumulate due to metabolism and excretion.

### 13. DISPOSAL CONSIDERATIONS

Waste should be disposed via local authority waste collection service or registered waste carrier ensuring that the destination is a licensed facility. All packaging shall be emptied and removed according to regulations, or be re circulated without removal of labeling. Do not dispose with house hold garbage.

European Waste Code	: 16	Wastes not otherwise specified in the list
	1603	Off-specification batches and unused products
	160306	Organic wastes other than those mentioned in 160305

### 14. TRANSPORT INFORMATION

Not classified as Dangerous or hazardous for transport under:

ADR (Transport by road)  
RID (Transport by rail)  
ADNR (Transport by inland waterways)  
IMDG (Maritime Transport)  
ICAO (Transport by air)  
Not restricted for any mode of international transport

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### 15. REGULATORY INFORMATION

#### Classification according to European directive 67/548/EEC and 1999/45/EC

Label For Supply :

**X**

Irritant

Risk Phrases:           R36 / R38           Irritating to eyes and skin  
                              R22                    Harmful if swallowed

#### REFERENCES

Health and Safety at work Act 1974

Chemicals (Hazard Information & Packaging for supply) Regulations 1994 / Amendment 1996

EC Directives:            Substance Directive 67/548/EEC as amended by 69/81/EEC, 75/409/EEC, 79/831/EEC General  
                              Preparations Directive 88/379/EEC. 1999/45/EC, 2001/58/EC

Classification and Labelling of Substances and Preparations Dangerous for Supply.

Transport of Dangerous Goods: ADR,RID,IMDG and IATA

Guidance Notes:       Occupational Exposure Limits EH40/96

Note: EH40 is revised on an annual basis and latest issue should therefore be applied

### 16. OTHER INFORMATION

**RELEASED:** 01/11/2009

#### INFORMATION SOURCES

Datasheet from the suppliers

Work protection agency information pamphlet about protective equipment

Work protection agency information pamphlet about gloves

“What you Need to know when you use protective breathing equipment” (Information, order number.: 539, Work protection agency)

Sax,N.I. and R.J. Lewis,Sr: Dangerous Properties of Industrial Materials, Seventh Edition, Volumes 1 to 3 (1991).

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DISCLAIMER: This information is based on our current knowledge and is intended to describe the product for the purpose of health, safety and environmental requirements. The product should not be used for purposes other than fire fighting. The user is responsible for ensuring that requirements of relevant legislation are complied with.

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