



## Material Safety Datasheet (MSDS)



### Section 1: Product & Company Identification:

Trade Name/Product identification	LIFECO Resistant Aqueous Film Forming Foam Concentrate Type 1X 1
Application & Use	Fire Extinguishing Foam Concentrate
Manufacturer Address	LICHFIELD FIRE & SAFETY EQUIPMENT CO LTD Address: Edmund House, 12-22 Newhall Street, Birmingham, B3 3AS, United Kingdom. T. + 44 (0) 1902 798 706 Email: sales@lifeco-uk.com – engg@lifeco-uk.com Website : www.lifeco-uk.com
Product Description	Mixture of hydrocarbon surfactants, fluoro surfactants & solvents

### Section 2: Ingredient - Composition Information:

MAJOR INGREDIENTS	CONCENTRATION %	CAS.No.	HEALTH CLASS
1. Fluorinated Sufactant	7.0-10.0	N/A	Xi R 36, 37, 38
2. Amphoteric fluorinated Polymer	5.0 – 10.0	N/A	Xi R 36, 37, 38
3. Solvent	35 -50	--	--
4. Polysaccharide	0.5-1.0	--	--
5. Water	QS	7732-18-5	

### Section 3: Hazard Identification:

Flammability		Corrosive Material		Little corrosive to metal
LEL %v	N/A			likes MS, Bronze,
UEL %v	N/A			Aluminum
TDG Flammability	N/A	Organic Peroxide	No	
Explosion Sensitivity to Impact	None	Auto-ignition	N/A	
Flammable Material	No	Temperature °C		
Oxidizer	No	Hazardous Polymerization	Will not occur	
Flash Point	>98°C	Explosive Material	No	
Explosion Sensitivity to static Electricity	None	Pyrophoric Material	No	
Combustible Liquid	No	Others	N/A	
Hazardous Combustion Products: Not known. However, oxides of carbon, nitrogen and sulfur may be formed during use for extinction of fire.				
NFPA Hazard Signals	Health 1	Flammability 0	Stability 0	Special N/A

## Emergency Overview:

	FIRE
Fire Extinguishing Media	Material is itself a fire extinguishing agent
Special Procedures	None
Unusual Hazard	None
	EXPOSURE
User guidelines	Avoid getting chemicals on you or in you. Cause eye-irritation and may cause skin irritation. Swallowing large amount of chemicals may cause injury or irritation
	SPILLS
Steps to be taken	Stop leak. Collect spilled concentrates. Rinse the affected area with plenty of water until it no longer foams. Care should be taken to avoid slip hazard.

## Section 4: First Aid Measures:

Flush eyes with water at least for 15 minutes. Remove contaminated clothing. Wash skin with ample water several times. If ingested, have victim drink water and obtain medical attention immediately.

## Section 5: Fire Fighting Measures:

Fire Extinguishing Media	Material is itself a fire extinguishing agent
Unusual Hazard	None
Flammability	
LEL %v	N/A
UEL %v	N/A
TDG Flammability	N/A
Explosion Sensitivity to impact	None
Flammable Material	No
Flash Point	>98°C

## Section 6: Accidental Released Measures:

Stop leak. Use appropriate protective equipment during cleanup. Collect spilled concentrates. Rinse the affected area with plenty of water until it no longer foams. Care should be taken to avoid slip hazard. Disposal into drains should be avoided if at all possible and should under no circumstances be allowed without first consulting the local water authority and environment agency and also be made in accordance with federal, state and local regulations. Spillage can be absorbed with sand or contained with earth or spill control material. Shovel up spillage and place in labeled, sealable container for subsequent safe disposal as per local laws.

## Section 7: Handling & Storage:

Handling: No special handling techniques are required. Avoid getting chemicals on you or in you. Wash hands after handling chemicals. Don't eat or drink while handling chemicals.



Storage: Recommended storage temperature is( - ) 8°C to 50°C. No Special conditions are required for safe storage.  
The product should be stored in original sealed containers ( - ) 8°C to 50°C and as much as possible  
it should keep from being washed into surface water.

## Section 8: Exposure Controls / Personal Protection:

Avoid getting chemicals on you or in you. Use tightly sealed safety glass or goggles for eye protection, use PVC/Nitrile or butyl rubber gloves, apron and rubber boots for skin protection. Use in well ventilation area and avoid prolong, extensive or repeated inhalation.

## Section 9: Physical & Chemical Properties:

Physical State	Viscous Liquid	Vapour Density (Air=1)	Data not available
Odour	Characteristic	Specific gravity (Water=1)	1.07-1.1
Appearance	Pale Yellow gel Liquid	Vapour Pressure	Data not available
Boiling point/Range	100°C (Initial)	@35°C,mm Hg	
Pour point	Freely flow at ( - ) 2°C	Solubility in water @30°C	100% Soluble
Viscosity	<1500 CST	pH	7.0 - 8.0

## Section 10: Stability & Reactivity:

Chemical Stability	Stable
Incompatibility with other material	Avoid use of product on burning metals, electrically energized equipment and contact with water reactive material
Reactivity	None
Hazardous Reaction Products	Not known

## Section 11: Toxicological Information

Description	LIFECO AR AFFF-1/1%	Amber Colour Viscous Liquid	
		Temperature	28°C
	Test Results	Limit	Reference
C.O.D.(mg./L)	3,22 ,500.0	1000K (max) *	APHA 22 <sup>nd</sup> Edn. 5220B
B.O.D./C.O.D. 20 Days	0.98	0.65 (min) *	APHA 22 <sup>nd</sup> Edn.5210B
Toxicity, LC50 d(mg./L)	1582	500 (min) *	ASTM: E 729
Skin Irritation/Dermatological Effect (14 Days test)	Not Irritant, (No reversible skin lesions, such as inflamed skin, ulcers, bleeding and bloody scabs observed at the end of test period)	A chemical is considered to be an irritant if it causes reversible skin lesions, such as inflamed skin, ulcers, bleeding ,and bloody scabs observed at the end of test period	FHSA- Federal Hazardous Substances Act, EPA – Environmental Protection Agency

N.B. \* Requirement as per U S MIL. SPEC MIL-F-24385F [ calculated from Table I]

In line with our policy of continuous product improvement LIFECO reserves the right to modify specifications without prior notice.

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## Section 12: Ecological Information;

This product is an ecologically inert material. It does not contain ozone depleting substances and is not expected to exert an eco-toxic effect or bio-accumulated in the food chain. This product is an ecologically inert material. It does not contain ozone depleting substances and is not expected to exert an eco-toxic effect or bio-accumulated in the food chain. This product does not contain PFOS or PFOA.

## Section 13: Disposal Consideration

Prevent discharge foam/foam solution to waterways without treatment. Waste disposal should be made in accordance with central, state and local regulations. Waste may be incinerated or disposed of by treatment at a permitted facility only with permission or as advised by competitive authority.

## Section 14: Transport Information

Not classified as dangerous or Hazardous for transport under UN, IMO, ADR/RID and IATA/ICAO

## Section 15: Regulatory Information

Shipping Name	N/A
Shipping Code/Label	N/A
Hazardous waste I.D. No	N/A
Label for supply	None required
UK regulatory references	Health and safety at work act 1974 Chemical (Hazard information & Packaging for supply) Regulation 1994/Amendment Regulations 1996
EC directives	Substances Directive 67/548/EEC as amended by 69/81/EEC, 70/189/EEC, 73/146/EEC, 75/409/EEC, 79/831/EEC, General Preparations Directives 88379/EEC
Statutory Instruments	Chemical (Hazard information & Packaging for supply) Regulation 1994/Amendment Regulations 1996
Guidance Notes	Occupational exposure limit EH40/96
Transportation of Dangerous Goods information	Non required as per ADR/RID/IMGD, IATA & 49 CFR

## Section 16: Other Information

CAS	:	Chemical Abstracts Service
DOT	:	Department of Transportation
NFPA	:	National Fire Protection Association
TDG	:	Transportation of dangerous goods.
UEL	:	Upper exposure limit
LEL	:	Lower exposure limit.



## DISCLAIMER

This information is based on our knowledge and is intended to describe the product for the purpose of health, safety and environmental requirements only. It should therefore not be construed as guaranteeing any specific property of the product. User is required to ensure suitability of the product for the intended use, compliance to regulations, for its safe use and disposal. **LICHFIELD FIRE & SAFETY EQUIPMENT CO LTD** will not be held responsible or liable for any injury or accident of any kind.