

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

1.1 Product Identification

FP70

1.2 Application and Use

Fire fighting foam concentrate

1.3 Manufacturer/Supplier

Angus Fire*, Thame Park Road, Thame, Oxfordshire, OX9 3RT

Telephone: (01844) 265000 Fax: (01844) 265156

Emergency Telephone Number (24 hours)

For information and supply: Angus Fire (015242) 61166

*(Angus Fire is a trading brand of Kidde Products Ltd, registered in England No. 462271)

1.4 Product Description

Hydrolysed protein solution containing fluorosurfactants and glycol solvent.

2. COMPOSITION

Substance	Synonyms	Concentration %	Health class	Cas-No.
Hexylene glycol	1,2-Hexanediol 2-Methylpentan-2,4-diol	1 – 5	X _i , R36/38	107-41-5
Sodium chloride		5 – 10		7647-14-5
Other metal salts		1 – 5		
Zinc oxide		< 1	N, R50/53	1314-13-2
Bactericide		< 1	X _n ,R22,43	
Hydrolysed protein		~ 30		
Fluorosurfactants		< 5	X _i ,R36,37,38	
Water		Balance		

3. HAZARDS IDENTIFICATION

Human health hazards: Not classified as hazardous under CHIP. May cause sensitisation by skin contact.

4. FIRST AID MEASURES

4.1 General

First aiders should know and take the precautions appropriate to avoid danger to themselves and the casualty.

Take casualty together with material safety data sheet of this product to hospital or doctor, if necessary.

First Aid - Skin: Remove contaminated clothing. If there is skin contact, wash immediately with plenty of clean, gently flowing water. If persistent irritation occurs, obtain medical attention.

First Aid - Eye: If there is eye contact, wash immediately with plenty of clean, gently flowing water for 10 minutes.

First Aid - Ingestion: If ingestion is suspected, do not induce vomiting. Send casualty to hospital immediately.

First Aid - Inhalation: Remove casualty from exposure. If there is breathing difficulty or cough, keep patient at rest seated in position of maximum comfort.

5. FIRE FIGHTING MEASURES

General Hazards

Fire fighting measures are not applicable as FP70 is a fire extinguishing medium. If product containers are involved in fire, then a suitable extinguishing agent should be applied.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Avoid contact with skin, eyes and clothing. Do not breathe mists, aerosols.
Personal protection:	Wear protective clothing specified for normal operations.
Environmental precautions:	SPILLAGE: The practice of washing spills into drains should be avoided if at all possible and should under no circumstances be allowed without first consulting the local Water Authority and the Environment Agency.
Clean-up methods - small spillage:	Absorb or contain liquid with sand, earth or spill control material. Shovel up and place in a labelled, sealable container for subsequent safe disposal.

7. HANDLING AND STORAGE

No special handling techniques required. For best results, the product should be stored in sealed, original containers above -13°C and below 40°C. Freezing and thawing do not affect the substance properties but care must be taken to avoid freezing the container and its contents since the expansion of the container contents may cause cracking of a completely rigid container as ice forms.

Personal Protective Equipment - Fire Fighting

Angus Fire Foam Concentrates will be used by professional fire-fighters to control and extinguish flammable liquid fires. The nature of this process may involve exposure to heat, flame and possibly toxic vapours and fumes. It is normal procedure to wear appropriately designed personal protective equipment designed for use in firefighting situations. Angus Fire advises that this form of personal protective equipment should be used if the packaging materials become involved in fire.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering control measures: Use only in well ventilated areas

Occupational Exposure Limit:

Pure hexylene glycol: Occupational Exposure Standard (OES)

Long term exposure limit (8 hour time weighted average): 25ppm

Short term exposure limit (10 minutes): 25ppm

Personal Protective Equipment - Other Handling

Avoid prolonged, extensive or repeated inhalation or contact to eyes and skin.

Hand Protection Wear impervious gloves of an approved type (e.g. neoprene).

Eye Protection Wear safety goggles of an approved type (BS 2092).

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid	pH at 20°C:	7 – 8
Colour:	Dark brown	Boiling point:	100°C at 760 mm Hg
Odour:	Organic	Freeze point:	-13°C
		Flash point:	>100°C
		Flammability:	Not flammable
		Solubility:	Miscible with water in all proportions
		Viscosity at 20°C:	10cs
		Specific gravity:	1.15 - 1.17

10. STABILITY/REACTIVITY

Stability

Generally stable. As with all aqueous solutions FP70 should be excluded from contact with any materials which have violent reactions with water.

Hazardous Decomposition Products

Do not expose containers to heat or flame, since the containers are made from high density polyethylene and will burn.

Thermal decomposition of containers and/or products may generate acrid smoke and fumes and traces of Na₂O, Cl⁻, SO_x, NO_x, and HF.

11. TOXICOLOGICAL INFORMATION

Inhalation

Inhalation of hazardous amounts is unlikely when used as intended. May cause irritation to respiratory tract when inhaled.

Ingestion

Low oral risk when used as intended. May cause nausea, vomiting and diarrhoea when ingested.

Contact to eyes or skin

Low risk if appropriate precaution measures are taken (see section 6). May cause skin and eye irritation when in contact with eyes or skin. May cause sensitisation by skin contact.

Aquatoxicity

Rainbow Trout (<i>Ocorhynchus mykiss</i>)		Water Flea (<i>Dapnia magna</i>)	
LC ₅₀ (24hrs)	3860 ppm	EC ₅₀ (24hrs)	8906 ppm
LC ₅₀ (48hrs)	3400 ppm	EC ₅₀ (48hrs)	4977 ppm
LC ₅₀ (72hrs)	3220 ppm		
LC ₅₀ (96hrs)	2540 ppm		

12. ECOLOGICAL INFORMATION

Persistence/degradability:	Biodegradable.
Bioaccumulation:	Bioaccumulation is unlikely to occur due to metabolism and excretion.

Biodegradation

Biodegradable:	COD	0.46 gg ⁻¹	
	BOD (5 day)	0.44gg ⁻¹	(96%)

Sewage treatment:	Data not available.
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Disposal

Local legislation:

14. TRANSPORT INFORMATION

Label for conveyance:

No Transport Warning Sign Required

UN No: N/C

Rail:

Rail Transport Class No: N/C

Sea:

Sea Transport Class No: N/C

EmS No: N/C

MFAG Table No: N/C

Air:

Air Transport Class No: N/C

15. REGULATORY INFORMATION

Risk phrases: R43

Safety phrases: S24,28

May cause sensitisation by skin contact.

Avoid contact with the skin.

After contact with skin, wash immediately with plenty of water.

UK Regulatory References:

Health and Safety at work Act 1974.

Chemicals (Hazard Information & Packaging for Supply) Regulations 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 Directive 88/379/EEC.

Statutory Instruments: Chemicals (Hazard Information and Packaging for Supply) Regulations.

Approved Code of Practice:

Classification and Labelling of Substances and Preparations Dangerous for Supply.

Guidance Notes: Occupational Exposure Limits EH40/96.

16. OTHER INFORMATION

Uses and restrictions:

Sources of Information

Clayton, G.D. and F.E. Clayton: Patty's Industrial Hygiene and Toxicology. Fourth edition volumes I - III (1991).

Sax, N.I. and R.J. Lewis, Sr: Dangerous Properties of Industrial Materials. Seventh edition volumes I - III (1991).

Health & Safety Executive: Occupational Exposure Limits (EH 40/96).

Note: EH40 is revised on an annual basis and newest issue should be applied.

Huntingdon Research Centre: May 1990

Huntingdon Research Centre: August 1982

Acer Environmental: RT-ESV-023-01/R3

Other information:

DISCLAIMER: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
