

# ORION HYDROFILM –

## FFFP 3% Film Forming Fluoroprotein



### Description

Orion FFFP 3% is a film forming fire extinguishing foam based on a special formulation of natural protein along with fluorinated additives, foam stabilisers and antifreezing compounds .

Orion FFFP 3% virtually combines the extinguishing performance of AFFF with the sealability of fluoroprotein foam concentrates

### Properties

Orion FFFP 3% is designed for generating low expansion foam and owing to its high foam density long throwing distances are achieved. Orion FFFP 3% provides outstanding flowability and burn back resistance. The aqueous film formed out of the foam extinguishers areas of hydrocarbon fires not reached by the foam.

The foam does not emulsify with hydrocarbon fuels and is therefore ideal for sub-surface and semi sub-surface application. Where required Orion FFFP 3% can be used in non-aspirated form The aqueous film extinguishes fires even in areas not yet reached by the foam and prevents reignition should the foam blanket get ruptured. The foam is oil-repellent (oleophobic), i.e. it does not load itself with petroleum products and is, therefore ideal for sub-surface foam application.

Orion FFFP 3% foam safely extinguishes class A + B fires and forms a gastight cover on liquid surfaces. It is stable on fuels with proportions of polar additives like alcohol and other additives.

Orion FFFP 3% complies with applicable standards

### Physical properties and technical data

Recommended Induction Rate	3%	low expansion foam	non-polar solvents
Expansion ration	5 - 10	low expansion foam	
25%/50% water drainage time	2 – 5 minutes	5 – 10 minutes	low expansion foam
pH value @20°C	6.5 – 8.5		
Density @20°C	1.030 – 0.02 g/ml		
Sedimentation	free of sediment		
Spreading coefficient	>3 mN/m	(Cyclohexane)	
Frost resistance	-15°C		
Viscosity @20°C @-15°C	<10 mm <sup>2</sup> /sec <30 mm <sup>2</sup> /sec		
Environmental acceptability	Orion FFFP 3% Fluoroprotein is physiologically harmless and easily biodegradable. For further information please consult the material safety data sheet.		
Special notes	Orion FFFP 3% is not detrimental to health, provided it is used for the intended purpose. Fire extinguishing exercises and tests may have to be co-ordinated with the local authorities. When persons are sprayed with foam, please bear in mind that they will not be able to breathe while covered with foam.  For further information users are asked to refer to the material safety data sheet.		

## ORION FIRE ENGINEERING PTY LIMITED

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### Application

Orion FFFP 3% is used with all commonly available low expansion foam equipment and installations for fighting fires of class A + B. This, of course includes sub-surface, semi sub-surface and sprinkler systems. Non-aspirating equipment may be used for hydrocarbon fires where the aqueous film is active even without expanded foam. The concentrate is induced at 3% to water. Sea water, brackish water or treated industrial water does not adversely affect the excellent efficiency of this concentrate.

Orion FFFP 3% is typically used in the petrochemical and chemical industry, on airports, onshore and offshore, in recycling plants and in locations where large fires have to be safely and reliably extinguished within a very short time.

### Packaging

Orion FFFP 3% is available in a range of container:

20L pail	24kg
200L drum	216kg
1000L tote	1130kg

### Compatibility with other fire extinguishing foams

Orion FFFP 3% foams are compatible with all other readily expanded fire extinguishing foams.

### Compatibility with powder

Orion FFFP 3% is suitable for the combined use with foam compatible dry chemical powders.

### Compatibility with other foaming agents

Orion FFFP 3% can be mixed for immediate usage with other equivalent foaming agents, independent of the mixing ratio.

Orion FFFP 3% stocks must not be mixed with other products.

### Storage

Orion FFFP 3% can be stored for long periods of time in the sealed original containers and in corrosion resistant plastic or stainless steel tanks.

High temperatures up to +50°C do not affect the quality, neither does temporary freezing at temperatures below the specified frost resistant limit.

### Approval

Orion FFFP 3% is approved as fire extinguishing agent for fires of class A and B according to the following standards:

=>	acc. to DIN EN 1568 Certificate-No.: SP 127/10 Low exp. foam acc. to part 3:	IA/IA
=>	acc. to LASTfire Semi-Aspirating: Aspirating: System:	good good good
=>	acc. To UL 162 Certificate-No. : 20101129	

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