

# 3%x3% AR SFFF (SYNTHETIC FLUORINE FREE FOAM) HD AR SFFF F3 3x3



## DESCRIPTION

HD AR SFFF F3 3x3 is a superior quality 3% Synthetic Fluorine-free foam concentrate designed for extinguishing high-risk areas, where both Hydrocarbon and Polar Solvents are stored, processed, or transported.

HD AR SFFF F3 3x3 foam concentrate is based on environmentally friendly synthetic formulation and comprises of specialty hydrocarbon surfactants, stabilizers and preservatives to create a long-lasting vapour sealing blanket of foam, which blocks the oxygen supply to the fuel & slow drainage retains the water content in the bubbles to cool the fuel surface reducing the evaporation, thus helping in providing an effective control and extinguishing of both hydrocarbon and polar solvent fires and prevention of fire re-ignition. A polymeric membrane is formed on polar solvent to effectively extinguish these types of fires.

HD AR SFFF F3 3x3 is a next generation foam concentrate used for multipurpose fire risks. It is non-toxic and totally free from fluorinated surfactants and fluorinated polymers (PFAS free). It is a 100% biodegradable product and giving maximum performance. This has been designed for extinguishing and securing Class B flammable liquid fires on Heptane, Acetone, IPA & Ethyl Alcohol with both Potable & Sea water. It also effectively covers Class A fire risks which involve involving combustible materials such as wood, cloth, rubber, paper and plastic material.

This new formulation provides superior flexibility, good firefighting performance and environmental friendly, balancing it with high performance and having a minimum environmental impact.

It fights fire in the following ways:

- Rapid spreading and coverage provide effective control & extinguishment on both Hydrocarbons & Polar Solvents.
- Provides stable blanketing effect over a longer time thereby cools the fuel surface, suppresses combustible vapour release, and reduces rekindling risk.
- Superior wetting & penetrating properties of the foam acts as an insulating barrier and reduces heat radiation.

## APPLICATION

HD AR SFFF F3 3x3 is an ideal fire extinguishing agent capable of extinguishing all types of fire risks which are stored, processed, or transported including polar solvents (like Isopropyl Alcohol, Ketones, Esters, Ethers, etc.).

It is also used as a superior wetting agent in fighting class A fires like wood, cloth, paper, and rubber.



HD AR SFFF F3 3x3 due to its special surfaceactive agents, provides a very slow drain time which helps for effective cooling & stronger penetration of the product.

HD AR SFFF F3 3x3 cuts the oxygen supply; stopping its free combustion & helping to extinguish the fire effectively.

## PROPORTIONING & DISCHARGE DEVICES

HD AR SFFF F3 3x3 is recommended to be used as 3% both for hydrocarbon and polar solvents.

HD AR SFFF F3 3x3 can be inducted with Portable or Fixed Inline Inductors, Ratio Controllers, and Foam Bladder Tanks. It can be used with air aspirating discharge devices including Low Expansion Foam Nozzles, Sprinklers, Foam-Monitors, and Fixed Foam Discharge Devices. When used in systems, the same should be designed as per the recommended minimum application rate, its application duration & type of discharge devices.

HD AR SFFF F3 3x3 is a newly launched foam concentrate. Please check with HD Sales on UL approval details and compatibility information with respect to specific foam hardware.

## TYPICAL PROPERTIES @20°C (68°C)

PARAMETERS	VALUES
Appearance	Light Yellow Viscous liquid
Specific Gravity	1.020 ± 0.02
pH Value	8.00 ± 1.00
Viscosity*	1400 ± 300 cPs
Lowest used Temperature*	1.7°C (35°F)
Freezing Point	-2°C
Expansion Ratio**	6:1 - 10:1
25% Drainage time**	>45 min.

\* Spindle 4, rpm 60

\*\* When tested with UNI 86 Test Nozzle

## COMPATIBILITY

HD AR SFFF F3 3x3 can be used with soft or hard, fresh, sea or brackish water. It is recommended not to be mixed with any other type of foam concentrate in long term storage.

Most expanded foams are compatible for side-by-side application during an incident and can be applied in sequence or simultaneously.

## STORAGE AND SHELF LIFE

It has a shelf life of more than 10 years when stored in its original container.

Foam concentrates are subject to evaporation which accelerates when the product is exposed to air, storage tanks should be sealed and fitted with a pressure vacuum vent to prevent free exchange of air. The recommended storage environment is within the temperature range of 35°F to 120°F (2°C to 49°C).

All foam concentrates should be tested annually & the test be carried out by an Approved laboratory to the relevant standards.

Exposure to the direct sunlight should be avoided and storage location should be preferred where the fluctuations of temperature should be as stable as possible.

## ENVIRONMENTAL INFORMATION

HD AR SFFF F3 3x3 is PFOS, PFOA free and is environmentally safe, 100% bio-degradable, low toxic to the aquatic organisms and is manufactured without any fluorinated surfactants and fluorinated polymers or other organo-halogens and does not contain any PFAS.

HD AR SFFF F3 3x3 is biodegradable, however as care is taken, we should prevent it to be discharged from entering ground water, surface water, or storm drains. Local regulations should be complied with for discharge into common drainage/sewage systems. Refer MSDS for additional information..

## PACKAGING

The product is available in 20L Jerry Cans, 200L Drums, 1000 L Tote and bulk packing.

## APPROVALS AND LISTINGS

UL Listed as per UL-162 standard.

It also meets the requirement of IMO-MSC.1/  
Circ.1312

## LIMITED WARRANTY

HD FIRE PROTECT PVT. LTD. hereby referred to as HD FIRE warrants to the original purchaser of the fire protection products manufactured by HD FIRE and to any other person to whom such equipment is transferred, that such products will be free from defect in material and workmanship under normal use and care, for two (2) years from the date of shipment by HD FIRE. Products or Components supplied or used by HD FIRE, but manufactured by others, are warranted only to the extent of the manufacturer's warranty. No warranty is given for product or components which have been subject to misuse, improper installation, corrosion, unauthorized repair, alteration or un-maintained. HD FIRE shall not be responsible for system design errors or improper installation or inaccurate or incomplete information supplied by buyer or buyer's representatives. HD FIRE will repair or replace defective material free of charge, which is returned to our factory, transportation charge prepaid, provided after our inspection the material is found to have been defective at the time of initial shipment from our works. HD FIRE shall not be liable for any incidental or consequential loss, damage or expense arising directly or indirectly from the use of the product including damages for injury to person, damages to property and penalties resulting from any products and components manufactured by HD FIRE. HD FIRE shall not be liable for any damages or labour charges or expense in making repair or adjustment to the product. HD FIRE shall not be liable for any damages or charges sustained in the adaptation or use of its engineering data & services. In no event shall HD Fire's product liability exceed an amount equal to the sale price. The foregoing warranty is exclusive and in lieu of all other warranties and representation whether expressed, implied, oral or written, including but not limited to, any implied warranties or merchantability or fitness for a particular purpose. All such other warranties and representations are hereby cancelled.

### NOTICE :

The equipment presented in this bulletin is to be installed in accordance with the latest publication standards of NFPA or other similar organisations and also with the provision of government codes or ordinances wherever applicable.

The information provided by us is to the best of our knowledge and belief, and consist of general guidelines only. Site handling and installation control is not in our scope. Hence we give no guarantee for result and take no liability for damages, loss or penalties whatsoever, resulting from our suggestion, information, recommendation or damages due to our product.

Product development is a continuous programme of HD FIRE PROTECT PVT. LTD. and hence the right to modify any specification without prior notice is reserved with the company.



**HD FIRE PROTECT PVT. LTD.**  
Protecting What Matters Most to You

D-6/2, ROAD NO. 34, WAGLE INDUSTRIAL ESTATE, THANE 400 604, INDIA.

• TEL: + (91) 22 2158 2600

• FAX: +(91) 22 2158 2602

• EMAIL: info@hdfire.com

• WEB: www.hdfire.com