

# HAZMAT FOAM FOR VAPOUR SUPPRESSION

## HD HF



### DESCRIPTION

Controlling the release of hazardous fumes is a major concern of safety for everyone.

**HD HF** is a specially developed formulation from hydrocarbon surfactants, foam stabilizer, solvents and additives that generate a very stable foam blanket when applied through suitable foam application equipments.

Other foam concentrates may generate a foam layer, but the layer created by those foams is destroyed quickly by the chemicals and effective suppression of vapour is not obtained.

**HD HF** offers following advantages:

- Generates a stable foam blanket on chemicals surface which suppresses the release of hazardous vapours.
- Protects on-site emergency crew.
- Gives extra time for evacuation & clean up operations.
- More time available for repairs and maintenance.

**HD HF** is available as:

Hazmat number 1 for alkaline spills,

Hazmat number 2 for acidic spills and

Hazmat number 3 for acidic, alkaline and neutral material spills

### APPLICATION

**HD HF** is to be used for vapour suppression applications. It is generally used in bund walls, dyke areas, pits, exposed areas where chemicals are transferred and stored. It is also used in manufacturing areas, warehouses, loading and unloading areas and transportation.

HD HF can be used as 3% or 6% solution in fresh water. It can be applied with a portable equipment or by a fixed system. Great care should be taken in not plunging the foam directly into spilled material. The foam should be applied by banking it off an obstacle such as a tank or wall, or by discharging the foam.

### FIXED SYSTEMS

Fixed Hazmat foam systems may be used on hazardous material processing, storage or transfer systems. Fixed systems are used when the hazard is large, when quick actuation is desired, when trained personnel are not available, and when automatic actuation is desired.

It is recommended that Hazmat foam blanket fully covers the hazardous spill in shortest possible time which enables the crew members to evacuate in time.



### APPLICATION RATE CALCULATION

It is recommended that Hazmat foam blanket fully covers the hazardous spill in shortest possible time. The coverage time for Hazmat foam to form a blanket on the spill is a function of the spill area, foam application rate and expansion ratio of foam.

**For Hazmat 1 & 2:** Rate (lpm) = 5.00 a/t

**For Hazmat 3** : Rate (lpm) = 12.5 a/t

a = area in m<sup>2</sup> , t = time in minutes

### LIMITATIONS

Foam blanketing should not be used on running spills. But the foam will give reasonable measure of protection before containment is achieved or on a slow running spill. Highly reactive chemicals like Anhydrous HF, Oxychloride, Oleum, Phosgene, POCI<sub>3</sub> etc. may destroy the foam blanket fast and frequent application may be required to maintain thickness of foam blanket for effective vapour suppression.

### Why Hazmat number 1, 2 & 3?

The different pH of different chemicals requires specific type of HD HF Hazmat foam for effective vapour suppression.

HD HF 1 is suitable for alkaline chemicals

- Anhydrous Ammonia & Solution
- Methyl/Ethyl & Alkyl Amines
- Ethylene Di amine
- DMA,
- Hydrazine
- Sodium Hypo Chloride and other similar products

### HD HF 2 is suitable for acidic chemicals

- Acetic Acid & Acetic Anhydride
- HCL, HBr, HF(70%)
- Bromine, Chlorine
- Di methyl chloride
- Methyl chloro acetate
- Titanium chloride

### HD HF 3 is suitable for Neutral chemicals

- Aliphatic chemicals
- Esters
- Ethylene & Propylene Oxides

### COMPATIBILITY

HD HF 1, 2 & 3 are tested and found suitable by manufacturers and users of such hazardous chemicals for vapour suppression.

HD HF is compatible with dry powders and other equivalent products

### STORAGE AND SHELF LIFE

It has a shelf life of 15 years when stored in its original container. Storage temperature should be below 49°C. The product can withstand intermittent short time exposure up to 60°C. Ensure that the containers are not directly exposed to sunlight and heat. It is unaffected by freeze/thaw cycles.

### ENVIRONMENTAL INFORMATION

HD HF is environmentally safe, bio-degradable, low toxic to the aquatic organisms. Local regulations should be complied with & AHJ should be consulted for discharge into common drainage/ sewage systems. Refer MSDS for additional information.

### PACKAGING

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

### TYPICAL PROPERTIES

PARAMETERS	VALUES		
	HD HF 1	HD HF 2	HD HF 3
Appearance	Clear Liquid	Clear liquid	Amber viscous liquid
Specific Gravity @20°C	1.00 – 1.10	1.00 – 1.10	1.00 – 1.10
Viscosity @ 20°C	≤ 10 cSt	≤ 10 cSt	≤ 2500 cSt
pH @ 20°C	7.5 - 8.5	4.5 - 5.5	6.5 - 8.5

### 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.

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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

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