SECTION 1- CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Identification	**HD AFFF 3% - C6 / HD AFFF 3F-C6**
Application & Use	Fire Extinguishing Foam Concentrate
Product Description	Mixture of Hydrocarbon Surfactants, Fluorinated Surfactants & Solvents

SECTION 2- COMPOSITION

INGREDIENT	CONCENTRATION %	CAS No	HEALTH CLASS
Butyl Di Glycol	5-20	112-34-5	Xi R 36
Metal salt	≤ 5	7487-88-9	
Proprietary Mixture of Hydrocarbon & Fluorinated Surfactants	5- 20	...	Xi R 36, 37, 38
Water	QS	7732-18-5	

SECTION 3- HAZARD IDENTIFICATION

Human health hazards	Not classified under CHIP III
Ingestion	May cause nausea, vomiting & diarrhea

SECTION 4- FIRST AID MEASURES

	Remove patient from hazard area, keep patient calm & warm. Provide fresh air. Refer this Material Safety Data Sheet while giving medical treatment.
Skin	Remove contaminated clothing. Wash immediately with plenty of clean water. If irritation persists, call for medical treatment.
Eye	Wash immediately with clean flowing water for at least 10 minutes, contact doctor if irritation/pain persists.
Ingestion	May cause nausea. Do not induce vomiting. Send immediately for medical help.
Inhalation:	If the patient is conscious, it is anticipated to be a minor problem. If there is breathing difficulty or cough, keep patient at rest, seated in maximum comfortable position. Call for medical attention if symptoms do not go away quickly or patient is unconscious.

SECTION 5- FIRE FIGHTING MEASURES

Fire fighting measures are not applicable as HD AFFF is a fire extinguishing medium. If product containers are involved in fire, then a suitable extinguishing agent should be applied. Evacuate all persons from area involved in fire, use PPE.

SECTION 6- ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with skin, eyes and clothing. Do not breathe mist, aerosols.
Personal Protections:	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 Environment Agency.
Spillage	Small spills can be absorbed with sand or contained with earth or spill control material. Shovel up spillage and place in labelled,sealable container for subsequent safe disposal as per local laws.

SECTION 7- HANDLING AND STORAGE

Handling	No special handling techniques required
Storage	Recommended storage environment is 0° to 49° C.Store the product in original shipping container or tanks designed for product storage, away from direct Sunlight and heat. Do not put into contact with material which reacts violently with water. The product should be stored in sealed, original containers above 0° C and below 40° C for the best results. Protect from frost.
Personal Protective Equipment-Fire Fighting	HD Fire Protect Foam concentrates will be used by professional fire fighters to control and extinguish flammable liquid fires. This process may involve exposure to heat, flame and possibly toxic vapours and fumes. It is normal procedure to wear appropriately designed personal protective equipments suitable for fire fighting operations.

SECTION 8- EXPOSURE CONTROL & PERSONAL PROTECTION

Occupational Exposure limit:	Not determined
Ventilation & engineering control measur	Use only in well ventilated areas, avoid prolong, extensive or repeated inhalation or contact with eye and skin.
Personal Protective & Handling	Body covering clothing recommended
Hand protection:	Wear impervious gloves of approved type (eg Neoprene)
Eye protection:	Wear safety goggles of an approved type
Respiratory protection:	Not required

SECTION 9- PHYSICAL & CHEMICAL PROPERTIES

Physical state	Clear to Amber coloured liquid
pH at 20° C	6.5 - 9.0
Boiling Point	100° C at 760 mm Hg
Odour	Organic
Flash Point	> 98° C
Flammability	Non flammable
Solubility	Miscible with water in all proportions
Viscosity at 20° C	< 10 cSt
Specific gravity	1.0 - 1.05
Special fire fighting procedures	**None. This is an extinguishing agent**
Unusual fire and explosion hazards	None

SECTION 10- REACTIVITY & STABILITY

Stability	Generally stable. As with all aqueous solutions, prevent from contact with any material which have violent reaction 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 product may generate acid smoke, fumes and traces of Na_2O, Cl^-,SOx, NOx & HF.

SECTION 11- TOXICOLOGICAL INFORMATION/HEALTH EFFECT

Inhalation	Inhalation of hazardous amount is unlikely, when used as intended. May cause irritation to respiratory tract when inhaled.
Ingestion	Low oral risk when used as indented. May cause nausea, vomiting and diarrhea if ingested.
Contact to eye or skin	Low risk if appropriate precautionary measures are taken(see section 6). May cause skin and eye irritation when comes in contact with them.
Aqua toxicity	Guppi fish, No toxic effect till concentration of 1500 ppm for 96 hrs

SECTION 12- ECOLOGICAL INFORMATION

Persistence/degradability:	Biodegradable
Bioaccumulation:	Bioaccumulation is unlikely to occur due to metabolism and excretion
Biodegradation:	Biodegradable
	COD 7911.36
	BOD 17250
Sewage treatment:	Data not available

SECTION 13- DISPOSAL CONSIDERATION

Disposal	Waste should be disposed via local authority, waste collection service or registered waste carrier. Ensure that the destination is a licenced facility. Container should be disposed off as per local rules.
Handling for disposal	Avoid contact with skin & eyes. Do not inhale excessively. Do not ingest. Wash thoroughly with clean water in case of contact.
Method of disposal	Do not discharge into drain or water source. Contact concerned local authorities

SECTION 14- TRANSPORT INFORMATION

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

SECTION 15- REGULATORY INFORMATION

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 Directive 88379/EEC
Statutory Instruments	Chemical (Hazard Information & Packaging for Supply) Regulation 1994 /Amendment Regulations 1996.
Approved Code of Practice	Classification and Labelling of Substances and Preparations Dangerous for Supply
Guidance Notes	Occupational Exposure Limits EH40/96
Transportation of Dangerous Goods (TDG) information	Non required as per ADR/RID/IMGD,IATA & 49 CFR

SECTION 16- OTHER INFORMATION

Use & restriction	For Fire extinguishment purpose only
Revision Date	April-19
Information Source	Data sheet of ingredients & packaging manufacturers, Literature from PPE manufacturers Central Pollution Control Board Guidelines - India

NOTE

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. **HD FIRE PROTECT PVT. LTD** will not be held responsible or liable for any injury or accident of any kind.