SECTION 1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Identification: HD FLUORO PROTEIN FOAM CONCENTRATE 3 & 6 %
Application: Fire Extinguishing Foam concentrate
Product Description: Mixture of protein hydrolyase, fluoro surfactants & solvents

Company: HD Fire Protect Pvt. Ltd.
D-6/2, Road No 34, Wagle Industrial estate, Thane - 400604, INDIA
Phone: (91) 22 25826958, 21582600, Fax: (91) 22 21582602

SECTION 2 COMPOSITION

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>CONCENTRATION %</th>
<th>CAS No</th>
<th>HEALTH CLASS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl Carbitol</td>
<td>2-10</td>
<td>112-34-5</td>
<td>Xi R 36</td>
</tr>
<tr>
<td>Fluoro Surfactants</td>
<td>0-5</td>
<td>0-5</td>
<td>Xi R 36, 37, 38</td>
</tr>
<tr>
<td>Protein Hydrolyase</td>
<td>25-50</td>
<td>N/A</td>
<td>Xi R 36, 37, 38</td>
</tr>
<tr>
<td>Water</td>
<td>QS</td>
<td>7732-18-5</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 3 HAZARD IDENTIFICATION

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

SECTION 4 FIRST AID MEASURES

<table>
<thead>
<tr>
<th>Condition</th>
<th>First Aid Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingestion</td>
<td>Remove patient from hazard area, keep patient calm &amp; warm. Provide fresh air. Refer this Material Safety Data Sheet while giving medical treatment.</td>
</tr>
<tr>
<td>Skin</td>
<td>Remove contaminated clothing. Wash immediately with plenty of clean water If irritation persists, call for medical treatment.</td>
</tr>
<tr>
<td>Eye</td>
<td>Wash immediately with clean flowing water for at least 10 minutes, contact doctor if irritation/pain persists.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May cause nausea. Do not induce vomiting. Send immediately for medical attention</td>
</tr>
<tr>
<td>Inhalation:</td>
<td>If 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.</td>
</tr>
</tbody>
</table>

SECTION 5 FIRE FIGHTING MEASURES

Fire fighting measures are not applicable as HD-FP 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

<table>
<thead>
<tr>
<th>Measure Type</th>
<th>Precaution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Precautions:</td>
<td>Avoid contact with skin, eyes and clothing. Do not breathe mist, aerosols.</td>
</tr>
<tr>
<td>Personal Protections:</td>
<td>Wear protective clothing specified for normal operations.</td>
</tr>
<tr>
<td>Environmental precautions</td>
<td>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.</td>
</tr>
<tr>
<td>Spillage</td>
<td>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.</td>
</tr>
</tbody>
</table>
SECTION 7 HANDLING AND STORAGE

Handling
No special handling techniques required

Storage
Recommended storage environment is 0º to 49º 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 0º C and below 40º C. for the best results.

Personal Protective Equipment-Fire Fighting
HD Fire Fighting 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 measures: Use only in well ventilated areas, avoid prolong, extensive or repeated inhalation or contact with eye and skin.

Personal Protective & Handling equipment
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 Dark brownish coloured liquid
pH at 20º C 6.0 - 7.5
Boiling Point 100º C at 760 mm Hg
Odour Organic
Flash Point > 98º C
Flammability Non flammable
Solubility Miscible with water in all proportions
Viscosity at 20º C < 30 cSt

Specific gravity 1.12-1.15 1.08 - 1.12

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 Na2O, 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 Guppy 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

<table>
<thead>
<tr>
<th></th>
<th>COD</th>
<th>BOD(5days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3%</td>
<td>0.41 gg⁻¹</td>
<td>0.15 gg⁻¹</td>
</tr>
<tr>
<td>6%</td>
<td>0.09 gg⁻¹</td>
<td>0.05 gg⁻¹</td>
</tr>
</tbody>
</table>

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.

Local legislation
India
AIR (Prevention & Control of pollution) Act 1981
The Water (Prevention & control of Pollution) 1974
The Hazardous Waste (Mgt & Handling) 1989

Europe
Control of Pollution Act 1974
Special Wastage Regulation 1996
Environmental Protection Act 1990

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

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

Revision Date
Dec 2009. Rev-01

Information Source
Data sheet of ingredients & packaging manufacturers,
Literature from PPE manufacturers
Central Pollution Control Board Guidelines - India

DISCLAIMER
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.