

**SECTION 1 – Identification of the substance/mixture and of the company/undertaking**

**1.1 Product Identifier**

Product Form Mixture  
 Product Name **HD FP 3-C6 (HD Fluoro-Protein Foam Concentrate)**  
 Type of Product Firefighting Foam Concentrate (FP)

**1.2 Relevant identified uses of the substance of mixture and uses advised against**

1.2.1 Relevant identified uses.  
 Industrial/Professional use spec Industrial, For professional use only  
 Use of the substance/mixture Firefighting Foam Concentrate  
 1.2.2 Uses advised against.  
 No additional information available

**1.3 Details of the supplier of the safety data sheet**

Company Name	Address	Contacts
Manufacturer:	D-6/2, Road Number 34, Wagle Estate, Thane 400604, India	Phone: +91 22 35287000, 22 21582600 Email: info@hdfire.com Website: <a href="http://www.hdfire.com">www.hdfire.com</a>
<b>HD Fire Protect Pvt. Ltd.</b>		

**1.4 Emergency telephone number**

Emergency number Mobile: +91-8169450885

**SECTION 2 – Hazards identification**

**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No. 1272/2008 (CLP) Skin corrosion/irritation, Category 2 H315  
 Serious eye damage/eye irritation, Category 2, H319  
 Full text of H statements: see section 16  
 Adverse physicochemical, human health and No additional information available

**2.2 Label elements**

Labelling according to Regulation (EC) No. 1272/2008 (CLP)  
 Hazard pictograms (CLP)



GHS07

**Signal work (CLP)**

**: Warning**

Hazard statements (CLP)	: H315 - Causes skin irritation. H319 - Causes serious eye irritation.
Precautionary statements (CLP)	: P264 - Wash hands thoroughly after handling. : P280 - Wear eye protection, protective clothing, protective gloves : P302+P352 - If on skin: Wash with plenty of water. : P305+P351+P338 - If in Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. : P332+P313 - If skin irritation occurs: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse.

**2.3 Other hazards**

PBT: not relevant – no registration required.  
 vPvB: not relevant – no registration required.

**SECTION 3 – Composition/information on ingredients**

**3.1. Substances**

Not applicable

**3.2. Mixtures**

Name	Product identifier	%	Classification as per Regulation (EC) No. 1272/2008 [CLP]
2-methyl-2,4-pentenediol	(CAS-No.) 107-41-5 (EC-No.) 203-489-0	3-6	Skin corrosion 2, Eye irritation 2, Repro. 2

Full text of H-statements: See section 16

**SECTION 4 – First aid measures**

**4.1 Description of first aid measures**

First-aid measures General	Remove patient from hazard area, keep patient calm & warm. Provide fresh air. Refer this Material Safety Data Sheet while giving medical treatment.
First-aid measures Inhalation	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.
First-aid measures Skin contact	Remove contaminated clothing. Wash immediately with plenty of clean water. If irritation persists, call for medical treatment.
First-aid measures Eye contact	Wash immediately with clean flowing water for at least 10 minutes, contact doctor if irritation/pain persists.
First-aid measures Ingestion	May cause nausea. Do not induce vomiting. Send immediately for medical attention

**4.2 Most important symptoms and effects, both acute and delayed**

Symptoms/effects	Causes damage to organs (kidneys) (if swallowed).
Symptoms/effects after eye contact	Causes serious eye irritation.

**4.3 Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5 – Firefighting measures**

**5.1. Extinguishing media**

Suitable extinguishing media	No specific measures necessary. This product is a fire extinguishing agent.
Unsuitable extinguishing media	Not applicable

**5.2. Special hazards arising from the substance or mixture**

Fire hazard	No fire hazard.
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**5.3. Advice for firefighters**

Firefighting instructions	Not applicable.
Protection during firefighting	Not applicable.

**SECTION 6 – Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

6.1.1 For non-emergency personnel	
Emergency procedures	Evacuate unnecessary personnel.
6.1.2 For emergency responders	
Protective equipment	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

**6.2. Environmental precautions**

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

**6.3. Methods and material for containment and cleaning up**

Methods for cleaning up	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
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**6.4. Reference to other sections**

Section:- 8. Exposure controls/personal protection. Section:-13. Disposal considerations.

**SECTION 7 – Handling and storage**

**7.1 Precautions for safe handling**

Precaution for safe handling	Avoid contact with skin and eyes. Wear recommended personal protective equipment. Read and follow manufacturer's recommendations. Handle in accordance with good industrial hygiene and safety procedures. Read and follow the Safety Data Sheet (SDS) before use.
Hygiene measures	Wash hands thoroughly after handling.

**7.2 Conditions for safe storage, including any incompatibilities**

Storage conditions	Store the product in original shipping container or tanks designed for product storage, away from direct Sunlight and heat. Protect from freezing. Store at temperatures not exceeding 60°C (140°F) (intermittent). Do not put into contact with material which reacts violently with water. Keep/Store away from incompatible materials.
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**7.3 Specific end use(s)**

Firefighting foam concentrate.

**SECTION 8 – Exposure controls/personal protection**

**8.1 Control parameters**

<b>2-methyl-2,4-pentandiol (107-41-5)</b>	Ingredients with workplace control parameters
Other information	Do not eat, drink or smoke when using this product.

**SECTION 9 – Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Appearance/Physical state	Dark Brown liquid.
Odour	Characteristic
Odour threshold	No data available
pH	6.5 - 7.5
Melting point / freezing point	Does not apply / -2°C
Initial boiling point & boiling range	100° C at 760 mm Hg
Flash point	> 100°C
Relative evaporation rate	No data available
Flammability (solid, gas)	Does not apply
Upper/lower flammability/explosive limit	Does not apply
Vapour pressure	Does not apply
Vapour density	Does not apply
Relative density	Does not apply
Specific Gravity	1.14 ± 0.03
Solubility(ies)	Soluble in Water
Partition coefficient: n-octanol/water	Does not apply
Auto-ignition temperature	Does not apply
Decomposition temperature	Does not apply
Viscosity, kinematic	< 20 cSt
Explosive properties	Does not apply
Oxidising properties	Does not apply

**9.2. Other information**

No additional information available

**SECTION 10 – Stability and reactivity**

**10.1. Reactivity**

The product is stable and non reactive under normal conditions of use, storage and transport.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**

Incompatible materials. Extremely high or low temperatures. Direct Sunlight.

**10.5. Incompatible materials**

Alkali metals. Oxidizing agent. Water reactive substances.

**10.6. 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<sub>2</sub>O, Cl<sup>-</sup>, SO<sub>x</sub>, NO<sub>x</sub> & HF.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

Acute toxicity Not classified

**2-methyl-2,4-pentenediol (107-41-5)**

Acute toxicity	LD50 Oral - Rat - 3.200 mg/kg
Acute dermal toxicity	LD50 Dermal - Rabbit - 7.892 mg/kg
Acute inhalation toxicity	No data available
Irritation/corrosion	Skin:- Rabbit, Irritating to skin. - 4 h (OECD Test Guideline 404) Eye:- Rabbit, Causes serious eye irritation (OECD Test Guideline 405)
Respiratory or skin sensitization	Maximization Test - Guinea pig, Result: negative, (OECD Test Guideline 406)
Germ cell mutagenicity	Chromosome aberration test in vitro, Result: negative, (OECD Test Guideline 473),
Carcinogenicity	No data available
STOT-single exposure & repeated exposure	No data available

Skin corrosion/irritation Not classified (pH 6.5 - 7.5)

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Serious eye damage/irritation	Causes eye irritation (pH 6.5 - 7.5)
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified

HD FP 3% - C6 Viscosity,  
 kinematic < 20 cSt

**SECTION 12: Ecological information**

**12.1. Toxicity**

2-methyl-2,4-pentanediol (107-41-5)	Parameter	Method	Value	Duration	Species
Toxicity to fish	LC50	OECD Test Guideline 203	8.510 mg/l	96 h	Gambusia affinis
Toxicity to aquatic invertebrates	EC50	OECD Test Guideline 202	5.410 mg/l	48 h	Daphnia Magna
Toxicity to algae	ErC50	OECD Test Guideline 201	429 mg/l	72 h	Pseudokirchnerella subcapitata
Toxicity to bacteria	EC50	-	3.070 mg/l	5 Min	Photobacterium phosphoreum

**12.2. Persistence and degradability**

HD FP 3% - C6	
Persistence and degradability	No data available.
2-methyl-2,4-pentanediol (107-41-5)	Aerobic - Exposure time 28 d, Result: 81 % - Readily biodegradable. (OECD Test Guideline 301F)

**12.3. Bioaccumulative potential**

HD FP 3% - C6	
Bioaccumulative potential	The product is not expected to bioaccumulate.
2-methyl-2,4-pentanediol (107-41-5)	No data available

**12.4. Mobility in soil**

HD FP 3% - C6	
Mobility in soil	No data available.
2-methyl-2,4-pentanediol (107-41-5)	No data available

**12.5. Results of PBT and vPvB assessment**

HD FP 3% - C6	
PBT & vPvB: not relevant	No registration required.
2-methyl-2,4-pentanediol (107-41-5)	This substance contains no components considered to be either persistent, bioaccumulative and toxic

**12.6. Other adverse effects**

Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
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**SECTION 13 – Disposal considerations**

**13.1. Waste treatment methods**

Product/Packaging disposal recommendations	Dispose in a safe manner in accordance with relevant local/national regulations. Do not allow to enter into surface, water or drains. Do not re-use empty containers.
Ecology - waste materials	Avoid release to the environment.
European List of Waste (LoW) code	16 03 05* - organic wastes containing dangerous substances

**SECTION 14 – Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

	ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

No supplementary information available

**14.6. Special precautions for user**

Overland transport	Not applicable
Transport by sea	Not applicable

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Air transport	Not applicable
Inland waterway transport	Not applicable
Rail transport	Not applicable

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable

**SECTION 15 – Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

**2-methyl-2,4-pentandiol (107-41-5)** This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Contains no substance on the REACH candidate list.

Contains no REACH Annex XIV substances.

15.1.2. National Regulations

AIR (Prevention & Control of pollution) Act, 1981.

Water (Prevention and Control of Pollution) Cess (Amendment) Act, 2003.

Hazardous and Other Wastes (Management & Transboundary Movement) Amendment Rules, 2019

**15.2. Chemical safety assessment**

No additional information available.

**SECTION 16 – Other information**

Revision Date	November 2022.
Data Source	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

**Full text of H- and EUH-statements:**

Acute Toxicity 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Toxicity 4 (Oral)	Acute toxicity (oral), Category 4
Acute Toxicity 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Toxicity 3 (Dermal)	Acute toxicity (Dermal), Category 3
Eye Damage 1	Serious eye damage/eye irritation, Category 1
Eye Irritation 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity Repeated exposure, Category 2
STOT SE 1	Toxic to humans from single exposure, Category 1
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H370	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.

Abbreviations and acronyms

- ACGIH = American Conference of Governmental Industrial Hygienists.
- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- CAS = Chemical Abstracts Service
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- EC = European Community / Effective Concentration.
- EINECS = European Inventory of Existing Commercial chemical Substances
- EUH statement = CLP-specific Hazard statement
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association

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IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LC = Lethal Concentration, LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PEL = Permissible Exposure Limit

REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals.

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

STEL = Short Term Exposure Limit

STOT-SE = Specific Target Organ Toxicity - Single Exposure

SVHC = Substances of Very High Concern

TWA = Time weighted average

UN = United Nations

vPvB = Very Persistent and Very Bioaccumulative

**DISCLAIMER:**

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore 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.