

SECTION 1 – Identification of the substance/mixture and of the company/undertaking
1.1 Product Identifier

Product Form	Mixture
Product Name	HD AR-AFFF 3x3% - C6
Type of Product	Firefighting Foam Concentrate

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.

Not applicable.

1.3 Details of the supplier of the safety data sheet

Company Name	Address	Contact Information
HD Fire Protect Pvt. Ltd.	D-6/2, Road Number 34, Wagle Estate, Thane 400604, India	Phone: +91 22 35287000, 22 21582600 Email: info@hdfire.com Website: www.hdfire.com

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)	Acute toxicity, Oral Category 4, H302 Skin corrosion/irritation, Category 2 H315 Serious eye damage/eye irritation, Category 1, H318
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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)



Signal work (CLP)

: Warning

Hazard statements (CLP)

 : H302 - Harmful if Swallowed
 H315 - Causes skin irritation.
 H318 - Causes serious eye damage.

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

Ingredient	Concentration	Product identifier	Classification as per Regulation (EC) No. 1272/2008 [CLP]
2-(2-butoxyethoxy) ethanol	6 to 11%	(CAS-No.) 112-34-5 (EC-No.) 203-961-6 (REACH-no) 01-2119475104-44	Eye Irritation 2, H319
D-Glucopyranose, oligomers, glycosides	1 to 4%	(CAS-No.) 68515-73-1 (EC-No.) 500-220-1	Eye Damage 1, H318
Ethane-1,2-diol	1 to 2%	(CAS-No.) 107-21-1	Acute Toxicity 4 (Oral), H302
Sulfuric acid, alkyl esters, sodium salts	1 to 4%	(CAS-No.) 85338-42-7	Acute Toxicity 5 (Oral), Skin Corrosion 2, Eye Damage 1.
Proprietary mixture of active ingredients - Fire Fighting Foam Fluorosurfactant and 3088-31-1 Sodium 2-(2-dodecyloxyethoxy) Ethyl Sulphate. The mixture is Fluoroadditive Alcoholic Aqueous surfactant solution.	5 to 20%	(CAS-No.) 64-17-5, 34455-29-3, 3088-31-1	Acute Toxicity 2 (oral, dermal and inhalation), Eye Damage 1
Water	70 to 88%	(CAS-No.) 7732-18-5	Not classified but serves as the main solvent in the product.

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 the 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. Seek medical attention immediately.

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.

5.3. Advice for firefighters

Firefighting instructions	Not applicable.
Protection during firefighting	Use PPE, including gloves and protective clothing, to minimize the risk of skin contact with foam during firefighting operations

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 the 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.

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

Hygiene measures

7.2 Conditions for safe storage, including any incompatibilities.
Storage conditions

Store the product in original container or tanks designed for foam storage, away from direct Sunlight and heat. Protect from freezing. Store at temperatures not exceeding 60°C (140°F) (intermittent). And generally, in temperatures not exceeding 49°C (120°F). Do not put into contact with material which reacts violently with water. Keep away from incompatible materials. Refer to foam storage guidelines online on our website www.hdfire.com.

7.3 Specific end use(s)

Firefighting foam concentrate.

SECTION 8 – Exposure controls/personal protection
8.1 Control Parameters

2-(2-butoxyethoxy) ethanol (112-34-5) (The Netherlands) Public occupational exposure limit value	Short time value	100 mg/m ³ . 15 ppm
	Time-weighted average exposure time 8h	50 mg/m ³ , 7.4 ppm
EU - Indicative occupational exposure limit value	Short time value	101.2 mg/m ³ . 15 ppm
	Time-weighted average exposure time 8h	67.5 mg/m ³ , 10 ppm
Belgium	Short time value	101.2 mg/m ³ . 15 ppm
	Time-weighted average exposure time 8h	67.5 mg/m ³ , 10 ppm
Germany-TRGS 900	Time-weighted average exposure time 8h	67 mg/m ³ , 10 ppm
France VRI: Valeur Reglementaire indicative	Short time value	101.2 mg/m ³ . 15 ppm
	Time-weighted average exposure time 8h	67.5 mg/m ³ , 10 ppm
UK-Workplace exposure limit (EH40/2005)	Short time value	101.2 mg/m ³ . 15 ppm
	Time-weighted average exposure time 8h	67.5 mg/m ³ , 10 ppm
D-Glucopyranose, oligomers, glycosides (68515-73-1)	Worker: Long term exposure, dermal: 595000 mg/kg, Inhalation: 420 mg/m ³ Consumer: Long term exposure, dermal:357000 mg/kg, Inhalation: 124 mg/m ³ , Oral: 35.7 mg/kg	
Ethane-1,2-diol (107-21-1)	ACGIH Ceiling (mg/m ³)	100 mg/m ³ (aerosol only)
	Long term exposure (8 hours)	20 (vapour) ppm
	Long term exposure (8 hours)	10 (particulate)/52 (vapour) mg/m ³
	Short term exposure limit (15 minutes)	40 (vapour) ppm
	Short term exposure limit (15 minutes)	104 (vapour) mg/m ³
Sulfuric acid, alkyl esters, sodium salts (85338-42-7)	Occupational Exposure Limits: None.	

Appropriate engineering controls
 Personal protective equipment
 Eye protection
 Hand protection
 Skin and body protection
 Respiratory protection
 Thermal hazard protection
 Environmental exposure

Other information

Ensure adequate ventilation. Follow the exposure limits given on this material safety data sheet. Body covering clothing recommended.
 Wear sealed/tight fitting safety goggles of an approved type (eg: EN 166).
 Wear impervious gloves of approved type (eg: Neoprene, Butyl Rubber, PVA)
 Wear recommended personal protective equipment.
 In case of insufficient ventilation, wear suitable respiratory equipment (recommended filter type A2/P2). Wear thermal protective clothing, when necessary.
 Contain spills. Prevent releases. Observe national regulations on emissions. Ensure all national/local regulations are observed.

Do not eat, drink, or smoke when using this product. 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. Wash hands thoroughly after handling. 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.

SECTION 9 – Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Appearance/Physical state: Pale yellow viscous liquid.
- Odour: Characteristic
- Odour threshold: No data available
- pH: 6.5 - 8.5
- Melting point / freezing point: Does not apply / -2°C
- Initial boiling point & boiling range: 100° C at 760 mm Hg
- Flash point > 100°C
- 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: 1.02 ± 0.02
- 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: 1200 +/- 500 cPs

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 may generate acid smoke, fumes and traces of Na₂O, Cl⁻, SO_x, NO_x & HF.

SECTION 11: Toxicological information
11.1. Information on toxicological effects

Acute toxicity	Not classified.
Skin corrosion/irritation	Serious eye damage/irritation Not classified (pH 6.5 - 8.5) Causes eye irritation (pH 6.5 - 8.5)
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
Viscosity, kinematic	1200 +/- 500 cPs

2-(2-butoxyethoxy) ethanol (112-34-5)	
LD50 oral Male rat	2410 mg/kg bw, Method: Equivalent to OECD guideline 401
LD50 dermal Male rabbit	2764 mg/kg bw, Method: Equivalent to OECD guideline 401
Inhalation (IRT) Rat	> 29 ppm, 2h., Method: BASF test
Irritation/corrosion	Skin:- Species: rabbit, Result: Slightly irritating, Method: OECD guideline 404 Eye:- Species: rabbit, Result: Highly irritating, Method: OECD guideline 405
Respiratory or Skin sensitization	Species: guinea pig, Result: Non-sensitizing, Method: OECD guideline 406
Genetic Toxicity (in vitro)	Experimental/calculated data: OECD guideline 471 Ames-test Salmonella typhimurium: negative
Genetic Toxicity (in vivo)	Experimental/calculated data: OECD guideline 471 Test Rat: negative
Aspiration Hazard	No aspiration hazard expected
D-Glucopyranose, oligomers, glycosides (68515-73-1)	
LD50 oral rat	> 5.000 mg/kg, OECD Guideline 401
LD50 dermal rabbit	> 2.000 mg/kg, OECD Guideline 401
Irritation/corrosion	Skin:- Species: rabbit, Result: Slightly irritating, Method: OECD guideline 404 Eye:- Species: rabbit, Result: irreversible damage, Method: OECD guideline 405
Sensitization	Species: guinea pig, Result: Non-sensitizing, Method: OECD guideline 406
Genetic Toxicity	Exp./calculated data: OECD guideline 471 Ames-test Salmonella typhimurium: negative
Aspiration Hazard	No aspiration hazard expected
Ethane-1,2-diol (107-21-1)	
LD50 oral rat	4000-10200 mg/kg
LD50 dermal rat	10600 mg/kg
LD50 dermal rabbit	9530 mg/kg
ATE US (oral)	500.000 mg/kg bodyweight
ATE US (dermal)	10600.000 mg/kg bodyweight
Sulfuric acid, alkyl esters, sodium salts (85338-42-7)	
LD50 oral Male rat	>2000 mg/kg.
LD50 dermal Male rat	1200 mg/kg
Irritation/corrosion	Skin:- Species: rabbit, Result: irritant. Eye:- Species: rabbit, Result: severe irritant.
Sensitization	Species: mouse, Route: Skin, Result: Non-sensitizing.
Mutagenicity	Exp.: In Vitro, Subject: Bacteria, Result: Negative, Method: OECD 471 Bacterial reverse mutation test. Experiment: In Vitro, Subject: Mamalian-Animal, Result: Negative, Method: OECD 473 Mammalian Chromosomal Aberration test. Experiment: In Vitro, Subject: Mamalian-Animal, Result: Negative, Method: OECD 476 Mammalian Cell Gene Mutation test. Experiment: In Vivo, Subject: Mamalian-Animal, Result: Negative, Method: OECD 478 Genetic Toxicology, Rodent Dominant Lethal test.

Carcinogenicity	Subject: Male, Female Rat, Result: Negative - Oral TLo, Dose: 1125 mg/kg., Exposure: 2 years (7 days per week)
Teratogenicity	Subject: Rat, Result: Negative - Oral, Dose: 500 mg/kg., Exposure: 10 days (7 days per week)
Potential chronic health effects	Species: Male, Female Rat, Result: Sub-chronic NOAEL Oral, Dose: 488 mg/kg. Exposure 13 weeks (7 days per week)
	Species: Male, Female Rat, Result: Sub-chronic NOAEL Dermal, Dose: 400 mg/kg. Exposure 13 weeks (2 days per week)

SECTION 12: Ecological information
12.1. Toxicity

2-(2-butoxyethoxy) ethanol (112-34-5)	Parameter	Method	Value	Duration	Species
Acute toxicity fishes	LC50 fresh water	Equivalent OECD 203	1300 mg/l	96 h	Lepomis Macrochirus
Acute toxicity fishes	LC50 salt water	Equivalent OECD 203	2000 mg/l	96 h	Menidia sp.
Acute toxicity invertebrates	EC50 fresh water	Equivalent OECD 202	4950 mg/l	48 h	Daphnia Magna
Acute toxicity invertebrates	LC50 salt water		13415 mg/l	96 h	Americam ysis Bahia
Toxicity algae & other aquatic plants	EC50 fresh water	Equivalent OECD 201	>100 mg/l	96 h	Desmodesmus subspicatus
Toxicity aquatic micro-organisms	EC10 fresh water	Equivalent OECD 209	>1995 mg/l	30 min.	Activated Sludge
D-Glucopyranose, oligomers, glycosides (68515-73-1)	Parameter	Method	Value	Duration	Species
Acute toxicity fish	LC50	DIN EN ISO 7346-2	> 100 mg/l	96 h	Brachydanio rerio
Chronic toxicity fish	LC50	OECD guideline 204	>1-10 mg/l	96 h	Brachydanio rerio
Aquatic invertebrates	EC50	OECD guideline 202, part 1	> 100 mg/l	48 h	Daphnia Magna
Chronic toxicity aquatic invertebrates		OECD guideline 202, part 2	>1-10 mg/l		Daphnia Magna
Aquatic plants		Directive 88/302/EEC, part C, p.89	>10-100 mg/l		Scenedesmus subspicatus
Micro-organisms/Effect on activated sludge		OECD guideline 209	EC0>100 mg/l		Pseudomonas putida
Micro-organisms/Effect on activated sludge		DIN 38412 part 8	EC0>100 mg/l		Pseudomonas putida
Degradability/persistence/Biological/Apiological	Readily biodegradable (according to OECD criteria)				
Ethane-1,2-diol (107-21-1)	Parameter	Method	Value	Duration	Species
Fish 1	LC50	Equivalent OECD 203	41000 mg/l	96 h	Oncorhynchus mykiss
Daphnia 1	EC50	Equivalent OECD 202	46300 mg/l	48 h	Daphnia Magna
Fish 2	LC50	Equivalent OECD 203	14-18 mg/l	96 h	Oncorhynchus mykiss (static)
Sulfuric acid, alkyl esters, sodium salts (85338-42-7)	Parameter	Method	Value	Duration	Species
Acute Toxicity algae	EC10 fresh water		1.12 mg/l	72 h	Pseudokirchinella subcapitata
Acute Toxicity algae	EC50 fresh water		49.4 mg/l	72 h	Pseudokirchinella subcapitata
Chronic toxicity aquatic invertebrates	EC50 fresh water		>100 mg/l	48 h	Daphnia Magna
Micro-organisms	EC50 fresh water	OECD guideline 209	>135 mg/l	3 h	Micro-organism
Acute toxicity fishes	LC50 fresh water	Equivalent OECD 203	13 mg/l	48 h	Cyprinus carpio
Chronic toxicity invertebrates	EC50 fresh water	Equivalent OECD 202	1.4 mg/l	21 days	Daphnia Magna

Chronic NOEC Fish		Equivalent OECD 209	≥ 1.357 mg/l	42 days	Pimephales promelas
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12.2. Persistence and degradability
HD AR-AFFF 3x3% - C6

Biochemical oxygen demand (BOD)	2666 mg/lit @20°C (5 days)
Biochemical oxygen demand (BOD)	14666 mg/lit @20°C (20 days)
Chemical oxygen demand (COD)	7000 mg/lit
Biodegradability (BOD)/(COD)	2.09 (20 days)
2-(2-butoxyethoxy) ethanol (112-34-5)	> 80% (28 days) OECD 301C method, modified MITI test (I) (biodegradation water), Conclusion: Readily biodegradable in water.
D-Glucopyranose, oligomers, glycosides (68515-73-1)	Readily biodegradable (according to OECD criteria)
Ethane-1,2-diol (107-21-1)	Biodegradable in the soil, Readily biodegradable in water.
Sulfuric acid, alkyl esters, sodium salts (85338-42-7)	99% (15 days) OECD 301D method, Ready Biodegradability Closed Bottle Test.

12.3. Bioaccumulative potential
HD AR-AFFF 3x3% - C6

Bioaccumulative potential	The product is not expected to bioaccumulate.
2-(2-butoxyethoxy) ethanol (112-34-5)	Low potential for bioaccumulation (Log Kow <4), Method Equivalent to OECD 107
D-Glucopyranose, oligomers, glycosides (68515-73-1)	Significant accumulation in organisms is not to be expected
Ethane-1,2-diol (107-21-1)	Log pow -1.93, Not bioaccumulate
Sulfuric acid, alkyl esters, sodium salts (85338-42-7)	Log pow -2.31 to 1.72, Potential: Low.

12.4. Mobility in soil
HD AR-AFFF 3x3% - C6

Mobility in soil	No data available.
2-(2-butoxyethoxy) ethanol (112-34-5)	Surface tension: 27mN/m (25°C, 0.00212 mol/g) Low potential for adsorption in soil.
D-Glucopyranose, oligomers, glycosides (68515-73-1)	Adsorption to solid soil phase is not expected
Ethane-1,2-diol (107-21-1)	Surface tension: 48 mN/m (20°C) No (test) data on mobility of the substance available.

12.5. Results of PBT and vPvB assessment
HD AR-AFFF 3x3% - C6

PBT & vPvB: not relevant	No registration required.
2-(2-butoxyethoxy) ethanol (112-34-5)	Substance does not meet the screening criteria for persistency nor bioaccumulation so is neither PBT nor vPvB.
Ethane-1,2-diol (107-21-1)	This substance contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
D-Glucopyranose, oligomers, glycosides (68515-73-1)	According to Annex XIV of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

12.6. Other adverse effects

Other adverse effects Environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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 waste containing dangerous substances.

SECTION 14 – Transport information

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

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

No supplementary information available

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-(2-butoxyethoxy) ethanol (112-34-5)	Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
D-Glucopyranose, oligomers, glycosides (68515-73-1)	Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Ethane-1,2-diol (107-21-1)	Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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

Refer to the next page.

Abbreviations

These terms are hazard classifications and hazard statements used in chemical safety regulations and labeling systems to communicate the potential risks associated with chemical substances or products. Here's an explanation of each term:

- Acute Toxicity 4 (Inhalation: dust, mist): Indicates that the substance has low acute toxicity when inhaled as dust or mist. Acute toxicity refers to harmful effects that occur shortly after exposure.
- Acute Toxicity 4 (Oral): Indicates that the substance has low acute toxicity when ingested orally.
- Acute Toxicity 3 (Inhalation: dust, mist): Indicates that the substance has moderate acute toxicity when inhaled as dust or mist.
- Acute Toxicity 3 (Dermal): Indicates that the substance has moderate acute toxicity when it comes into contact with the skin.
- Eye Damage 1: Indicates that the substance can cause serious eye damage.
- Eye Irritation 2: Indicates that the substance can cause eye irritation.
- Flam. Liq. 2: Indicates that the substance is a flammable liquid with moderate flammability.
- Skin Irrit. 2: Indicates that the substance can cause skin irritation.
- STOT RE 2: Indicates specific target organ toxicity from repeated exposure, category 2. This means the substance may cause toxicity with repeated exposure.
- STOT SE 1: Indicates specific target organ toxicity from single exposure, category 1. This statement warns of acute toxicity upon single exposure to the substance.
- Hazard Statements (H-codes): These are standardized codes used to convey specific hazards associated with chemicals. Each H-code corresponds to a particular hazard.
 - H225: Highly flammable liquid and vapor.
 - 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.
 - H332: Harmful if inhaled.
 - H370: Causes damage to organs.
 - H373: May cause damage to organs through prolonged or repeated exposure.
 - H400: Very toxic to aquatic life.
 - H401: Toxic to aquatic life.
 - H410: Very toxic to aquatic life with long-lasting effects.
 - H412: Harmful to aquatic life with long-lasting effects.
- 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
- IATA = International Air Transport Association
- 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 / UN = United Nations vPvB = Very Persistent and Very Bioaccumulative

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Disclaimer:

The information provided herein is based on our current understanding and is intended solely for the purpose of describing the product about health, safety, and environmental requirements. It should not be interpreted as a guarantee of any specific property of the product. Users are responsible for ensuring the suitability of the product for its intended use, compliance with regulations, and for its safe handling and disposal. HD FIRE PROTECT PVT. LTD shall not be held accountable or liable for any injury or accident resulting from the use of the product.