



保护您的家人和财产原远离火灾危险是我们的责任!
Protect your family and property far away from conflagration
is our responsibility!

MATERIAL SAFETY DATA SHEET AFFF Foam Fire Extinguisher (Foam Fire Extinguisher)

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	FIRE EXTINGUISHERS
Other Trade Names	Foam Fire Extinguisher
Application and Use	put out a fire
Manufacturer/Supplier	SHANGHAI TENGER MACHINERY CO., Ltd
Address	Room 605, BOTOP BUSINESS CENTER, No. 2369, East Rongle Rd, Songjiang District, Shanghai, 201612, China.
Phone Number	(+86) 21-37720469
Revision Date:	Dec 06, 2020
MSDS Date:	Dec 06, 2014
Product Description	Additive to Foam based fire extinguishers

This MSDS has been compiled in accordance with – GB:13532-92

2. COMPOSITION/INFORMATION ON THE COMPONENTS

Component Name	CAS#/Codes	Concentration	R Phrases	EU Classification
Water	7732-18-5 EC#2317912	94 %	None	None
2-(2-butoxyethoxy)ethanol Eye Irrit. 2, H319	112-34-5 EC#2039616	6%	None	None

3. HAZARD IDENTIFICATION

3.1 Classification of the substance or mixture Classification according to regulation (EC) 1272/2008:

GHS04 Gas cylinder

Press. Gas

H280 Contains gas under pressure; may explode if heated

Classification system:

The classification is according to the latest edition of Regulation 1272/2008, and extended by company and literature data.

3.2 Label elements-Labeling according to Regulation (EC) No 1272/2008: The product is labeled according to CLP regulation.

Hazard pictograms:

GHS04

Signalword: Warning

Hazard statements:

H280 Contains gas under pressure; may explode if heated

Precautionary statement:

P410 + P403 Protect from sunlight. Store in a well-ventilated place.

3.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

4. FIRST AID MEASURES

Eyes

Immediately flood the eye with plenty of water or warm water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.



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Skin

Wash affected area with soap and water. Obtain medical attention if irritation persists.

Ingestion

Dilute by drinking large quantities of water and obtain medical attention.

Inhalation

Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty.

Advice to Physicians

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing Media

This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a blaze. Use extinguishing agent appropriate to other materials involved. Keep pressurized extinguishers and surroundings cool with water spray as they may rupture or burst in the heat of a fire.

Unusual Fire and Explosion Hazards

Pressurized containers may explode in heat of fire.

Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Sweep up or vacuum. Prevent skin and eye contact. Wear appropriate protective equipment.

7. HANDLING AND STORAGE

Pressurized extinguishers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll extinguishers. Do not drop extinguishers or permit them to strike against each other.

Never apply flame or localized heat directly to any part of the extinguisher or plastic container. Store pressurized extinguishers and plastic containers away from high heat sources.

Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters - Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

DNELs: Data not available

PNECs: Data not available

Additional information: The lists valid during the marking were used as basis.

8.2 Exposure controls

Based on the composition shown in section 3, the following measures are suggested for occupational safety measure.

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice; Wash hands and face before breaks and at the end of work; See section 7 for information about design of technical facilities.

Personal protective equipment

Respiration protection: Gas filters may be used if all surrounding conditions e.g. type and concentration of the contaminant(s) and duration of use are known.

Protection of hands:



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Protective gloves Gloves made from butyl rubber Neoprene™ rubber, nitrile rubber (thickness > 0.11mm; breakthrough times up to 480 minutes).

Eye protection: Safety glasses

Protective goggles with side-shields.

Environmental exposure controls:

Control measures must be made in accordance with Community environmental protection legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid
Color White
Odor Odorless
Specific Gravity 1.06
Boiling Range/Point (°C/F) Not Determined
Flash Point (PMCC) (°C/F) Not Flammable
Solubility in Water 100% by Volume
Vapor Density (Air = 1) Not Determined
Vapor Pressure Not Determined
Evaporation Rate
 (Butyl Acetate = 1)

Foam Agent Appearance:

Form	Foam
Color	White
Odor	Odorless
Odor threshold	Not applicable
· pH-value	6.8
· Change in condition	
Melting point/melting range	Not determined
Boiling point and boiling range	Not determined
· Freezing point	Not determined
· Flash point	Not applicable
· Flammability(solid, gas)	Not flammable gas
· Decomposition temperature	Not determined
· Self-ignition	Product is not self-igniting.
· Danger of explosion	Product does not present explosive hazard.
· Explosion limits	
Lower:	Not determined
Upper:	Not determined
· Oxidizing properties	No oxidation
· Vapor pressure	Not determined
· Density	Not determined
· Relative density	Not determined
· Vapor density	Not determined
· Evaporation rate	Not determined
· Solubility in/Miscibility with	
Water	Soluble in water
· Partition coefficient (n-octanol/water)	Not determined



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· Viscosity	
Dynamic	Not determined
Kinematic	Not determined
· 9.2 Other information	Data not available

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions.

Conditions to Avoid

- Heat - High temperatures - Exposure to direct sunlight

Materials to Avoid

- Strong oxidizing agents - strong acids - sodium hypochlorite

Hazardous Polymerization

Will not occur.

Hazardous Decomposition Products

- oxides of carbon - ammonia – oxides of phosphorus – nitrogen oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Low order of acute toxicity.

Ethylene Glycol: LD50 Rat Oral 4700 mg/kg, LD50 Rabbit Dermal 9530 mg/kg

Chronic Toxicity/Carcinogenicity

This product is not expected to cause long term adverse health effects.

Genotoxicity

This product is not expected to cause any mutagenic effects.

Reproductive/Developmental Toxicity

Oral administration of ethylene glycol to pregnant experimental animals has been shown to cause birth defects in the offspring. These effects were not seen when administered by dermal application or inhalation.

12. ECOLOGICAL INFORMATION

Mobility

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bio-accumulation

No relevant studies identified.

Ecotoxicity

No relevant studies identified.

13. DISPOSAL

Dispose of container in accordance with all applicable local and national regulations. Do not cut, puncture or weld on or near to the container. Dispose of contents/container in according to the local regulation. Must not be disposed together with household garbage.

No harm to the environment is expected from this preparation.

14. TRANSPORT INFORMATION

Label for conveyance: Non-flammable & Innoxious gas
Sea Transport Class No: Class 2.2
Un NO:1044



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Air Transport Class No: Class 2.2
Un NO:1044

15. REGULATORY INFORMATION

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

MAK (German Maximum Workplace Concentration): None of the ingredients is listed.

Directive 2012/18/EU

Named dangerous substances-ANNEX I: None of the ingredients is listed.

National regulations

Water hazard class: Water hazard class 1 (German Regulation) (self-assessment): Slightly hazardous for water.

Other regulations, limitations and prohibitive regulations

SVHC Candidate list of REACH Regulation Annex XIV Authorization: None of the ingredients is listed.

REACH Regulation Annex XVII Restriction: None of the ingredients is listed.

REACH Regulation Annex XIV Authorization List: None of the ingredients is listed.

15.2 Chemical safety assessment: A Chemical Safe Assessment has not been carried out.

16. OTHER INFORMATION

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level(REACH)

PNEC: Predicted No-Effect Concentration (REACH)

PBT: Persistent Bio accumulative and Toxic

SVHC: Substance of Very High Concern

LD50: Lethaldose,50percent

LC50: Lethalconcentration,50percent

EyeIrrit.2: Eye damage/irritation,hazardcategory2

-Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).

IMDG: International Maritime Code for Dangerous Goods.

IATA: International Air Transport Association.

The information contained herein is based on data believed to be accurate. However, no representation, warranty, or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for its own particular use. TENER Fire Protection assumes no responsibility for personal injury or property damage resulting from use, handling or from contact with this product.

END

