FlameStop

SAFETY DATA SHEET

REVISED EDITION NO: **5**
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SUPERSEDES: **12/01/2022**

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SECTION 1 - IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

PRODUCT IDENTIFIER:

FLAMESTOP AFFF EXTINGUISHER

OTHER MEANS OF IDENTIFICATION:

FSZ900DR FLAMESTOP 9.0L AFFF PORTABLE EXTINGUISHER
M30LM FLAMESTOP 30L AFFF MOBILE EXTINGUISHER
M50LAFFF FLAMESTOP 50L AFFF MOBILE EXTINGUISHER
M70LAFFF FLAMESTOP 70L AFFF MOBILE EXTINGUISHER
M90LAFFF FLAMESTOP 90L AFFF MOBILE EXTINGUISHER

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:

Use of substance / mixture: fire extinguishing agent

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:

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PREPARED IN ACCORDANCE WITH THE NATIONAL CODE OF PRACTICE FOR THE PREPARATION OF MATERIAL SAFETY DATA SHEETS 2ND EDITION [NOHSC:2011(2003)]

SECTION 2 - HAZARD(S) IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

Classification according to the the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia

Classidied as dangerous - Gases under Pressure - Compressed Gas

Classification according to the the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th Edition)

Classified as Dangerous Goods

LABEL ELEMENTS:

Hazard pictograms	
Pictogram code	GHS04 Gas Cylinder
Signal word	**WARNING**
Hazard statements	
Physical Hazards	**H280** Contains gas under pressure; may explode if heated.
Health Hazards	
Environmental Hazards	
Combinations	
Precautionary statements	
General	
Prevention	
Response	
Storage	**P410+P403** Protect from sunlight. Store in a well ventilated space.

OTHER HAZARDS:

None.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

MIXTURE INGREDIENTS

Ingredient (Designation)	CAS No.	Percentage of Ingredients
1,2 Ethandiol	107-21-1	<4%
2-(2-Butoxyethoxy) Ethanol	112-34-5	<2%
Fluorosurfactant		<1%
Nitrogen UN1066	7727-37-9	Not known, gas
Water (H_2O)	7732-18-5	<94%

SECTION 4: FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:

General information

Remove contaminated, saturated clothing immediately. Wash thoroughly the body (shower or bath). Observe risk of aspiration if vomiting occurs. When in doubt or if symptoms are observed, get medical advice.

Following inhalation

Provide fresh air. Consult a doctor immediately in the case of inhaling spray mist and show him packing or label.

In case of skin contact

Wash immediately with: Water

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Do NOT induce vomiting.

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE, DELAYED AND AGGREVATED

Drowsiness

Nausea

Gastrointestinal complaints

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

If unconscious place in recovery position and seek medical advice.

IF SWALLOWED: Immediately call a POISON CENTER/doctor/....

SECTION 5: FIREFIGHTING MEASURES

EXTINGUISHING MEDIA

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

The product itself does not burn.

ADVICE FOR FIREFIGHTERS

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Appropriate personal protective equipment for fire fighters:

Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) and full protective clothing to prevent exposure to vapours, fumes or products of combustion. Avoid eye and skin contact.

Hazchem code:

No Hazchem Code issued to these articles. No HIN issued under RID and ADR.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Provide adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Cover drains. Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Take up mechanically, placing in appropriate containers for disposal.

Treat the recovered material as prescribed in the section on waste disposal.

Suitable material for taking up:

- Sand
- Sawdust
- Chemical binding agents, containing acids

REFERENCES TO OTHER SECTIONS

Safe handling: see section 7

Personal protection equipment: see section 8

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Avoid

- Skin contact
- Eye contact

Wear personal protection equipment (see chapter 8).

Measures to prevent fire

The product is not

- Oxidising
- Combustible
- Flammable
- Explosive
- Highly flammable

No special fire protection measures are necessary

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Technical measures and storage conditions

Do not store at temperatures above: +50°C

Requirements for storage rooms and vessels

Suitable container/equipment material

- Refined steel
- Polyethylene (PE)
- Unsuitable container/equipment material
- Aluminium
- Light metal
- Copper
- Zinc
- Alloy, containing copper
- Alloy, contains light metal
- Iron.
- Steel

Hints on joint storage

Storage class

12: Non-combustible liquids

SPECIFIC END USE(S)

Fire-extinguishing foams based on synthetic surfactants

Do not use for cleaning purposes.

Recommendation

Observe technical data sheet.

CONTROL PARAMETERS / OCCUPATIONAL EXPOSURE LIMIT VALUES

Substance name: 2-(2-Butoxyethoxy)ethanol

CAS No.: 112-34-5

EC No.: 203-961-6

United Kingdom

long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin): TWA (EN)

short-term occupational exposure limit value: 15 ppm; Limit value type (country of origin): STEL (EN)

peak limitation: ---; Limit value type (country of origin): Ceil (EN)

European Union

long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin): TWA (EC)

short-term occupational exposure limit value: 15 ppm; Limit value type (country of origin): STEL (EC)

peak limitation: ---; Limit value type (country of origin): Ceil (EC)

Germany

long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin): AGW (DE)

short-term occupational exposure limit value: 15 ppm; Limit value type (country of origin): Peak (DE)

peak limitation: ---; Limit value type (country of origin): Ceil (DE)

Substance name: 1,2-Ethandiol

CAS No.: 107-21-1

EC No.: 203-473-3

United Kingdom

long-term occupational exposure limit value: 20 ppm; Limit value type (country of origin): TWA (EN)

short-term occupational exposure limit value: 40 ppm; Limit value type (country of origin): STEL (EN)

peak limitation: ---; Limit value type (country of origin): Ceil (EN)

European Union

long-term occupational exposure limit value: 20 ppm; Limit value type (country of origin): TWA (EC)

short-term occupational exposure limit value: 40 ppm; Limit value type (country of origin): STEL (EC)

peak limitation: ---; Limit value type (country of origin): Ceil (EC)

Germany

long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin): AGW (DE)

short-term occupational exposure limit value: 20 ppm; Limit value type (country of origin): Peak (DE)

peak limitation: ---; Limit value type (country of origin): Ceil (DE)

EXPOSURE CONTROLS

Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

Avoid contact with skin, eyes and clothes.

Remove contaminated, saturated clothing.

Wash contaminated clothing prior to re-use.

Wash hands before breaks and after work.

Apply skin care products after work.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION (CONTINUED)

Eye/face protection

Suitable eye protection

- Eye glasses with side protection
- goggles
- Face protection shield

Recommended eye protection articles

- DIN EN 166

Hand protection

Suitable gloves type

- Gloves with long cuffs

Suitable material

- NBR (Nitrile rubber)
- Butyl caoutchouc (butyl rubber)

Breakthrough time (maximum wearing time)

- 120 min.

Recommended glove articles

- DIN EN 374

Body protection

Body protection: not required.

Respiratory protection

Usually no personal respirative protection necessary.

Environmetnal exposure controls

Store concentrate according to national regulations (VAwS).

Do not let the concentrate get into the environment.

If possible, hold back the application solution and dispose of after use.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance **- Physical state:** **- Colour:**	 Liquid Yellow / Brown	
pH (at 20°C):	6.5 - 8.5	DIN 19268
Density (at 20°C)	1,010 - 1,050 g/ml	DIN 12791
Kinematic viscosity (at 20°C)	< 10 mm²/s	DIN 51562 Newton
Kinematic viscosity (at -15°C)	< 30 mm²/s	DIN 51562 Newton
Solidification point:	-15°C	DIN ISO 3016
Initial boiling point and boiling range	>100°C	DIN 51751
Water solubility (g/L)	completely miscible	OECD 105
Flash point	No flash point up to 100°C	

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES (CONTINUED)

PHYSICAL HAZARDS

Breathing is not possible whilst submerged in the foam. Take care when spraying people!

OTHER INFORMATION

No information available

SECTION 10 - STABILITY AND REACTIVITY

REACTIVITY

Materials to avoid

- Alkali (lye), concentrated
- Alkali metals
- Acid, concentrated
- Oxidising agent, strong
- Reducing agent, strong
- Acid halides

CHEMICAL STABILITY

No special measures are necessary. Stable under normal ambient storage and handling conditions.

POSSIBILITY OF HAZARDOUS REACTIONS

None.

CONDITIONS TO AVOID

Do not store at temperatures above: +50°C

INCOMPATIBLE MATERIALS

See section 7. No additional measures necessary.

HAZARDOUS DECOMPOSITION PRODUCTS

Pyrolysis products, containing fluorine

Fluorinated hydrocarbons

Hydrofluoric acid

SECTION 11 - TOXILOGICAL INFORMATION

MIXTURE RELATED INFORMATION

Test was carried out with a similar preparation / mixture

Non-human toxicological data

Acute oral toxicity

LD50	>2000mg/kg	The acute oral toxicity is corresponding to GHS-category 5.
Species	Rat	
Method	OECD 420	Test was carried out with a similar formulation.

Acute dermal toxicity

The product has not been tested.

Acute inhalation toxicity

The product has not been tested.

Irritant and corrosive effects

Skin corrosion/irritation

Not an irritant.

The product has not been tested.

Test was carried out with a similar preparation/mixture.

Eye damage/irritation

The product has not been tested.

Test was carried out with a similar preparation/mixture.

Irritation to respiratory tract

The product has not been tested.

Respiratory or skin sensitisation

The product has not been tested.

Repeated dose toxicity

The product has not been tested.

Carcinogenicity

The product has not been tested.

In vivo mutagenicity/genotoxicity

The product has not been tested.

Reproductive toxicity

The product has not been tested.

SECTION 12 - ECOLOGICAL INFORMATION

TOXICITY

Acute (short-term fish toxicity)	
Effective dose - LC50 ~5100mg/L	
Exposure time	96h
Species	Leuciscus idus (golden orfe)
Method	OECD 203

Acute (short-term toxicity to crustacea)	
Effective dose - EC50 ~600mg/L	
Exposure time	48h
Species	Daphnia magna (Big water flea)
Method	OECD 202

Acute (short-term) toxicity to aquatic algae and cyanobacteria	
Effective dose - EC50 ~150mg/L	
Exposure time	72h
Species	Scenedesmus subspicatus
Method	OECD 201

Effects in sewage plants	
Method - Respiratory inhibition of municipal activated sludge.	
7500 mg/L	100% concentration, dilution >133
250000 mg/L	3% concentration, dilution >4
The product contains non-biodegradable fluorosurfactants. Some of the components are poorly biodegradable.	

Remark

Observe local regulations concerning effluent treatment.
Special pre-treatments are necessary.

PERSISTENCE AND DEGRADABILITY

Biodegration

Readily biodegradable (according to OECD criteria).

Additional information

The product contains non-biodegradable fluorosurfactants.

Degradation rate (%): ~ 97%

Test durarion: 28 d

Analytical method: BOD (% of COD).

Method: OECD 302B/ ISO 9888/ EEC 92/69/V, C.9

type: Aerobic biological treatment

Chemical Oxygen Demand (COD)	
~ 570000 mg*02/L	100% concentration, method: DIN EN 38409-H41-1
~ 17100 mg*02/L	3% concentration, method: DIN EN 38409-H41-1

Biochemical Oxygen Demand (BOD)	
~ 235000 mg*02/L	100% concentration, method: DIN EN 1899-1, duration 5 days
~ 7050 mg*02/L	3% concentration, method: DIN EN 1899-1, duration 5 days

BOD5/COD ratio

41%

SECTION 12 - ECOLOGICAL INFORMATION

BIOACCUMULATIVE POTENTIAL

1,2-ETHANDIOL: No indication of bioaccumulation potential.

2-(2-BUTOXYETHOXY)ETHANOL: No indication of bioaccumulation potential.

FLUOROSURFACTANT: No indication of bioaccumulation potential.

MOBILITY IN SOIL

If product enters soil, it will be mobile and may contaminate groundwater.

MOBILITY IN SOIL

1,2-ETHANDIOL: This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

2-(2-BUTOXYETHOXY)ETHANOL: This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

FLUOROSURFACTANT: This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

OTHER ADVERSE EFFECTS

The product contains non-biodegradable fluorosurfactants.

SECTION 13 - DISPOSABLE CONSIDERATIONS

DISPOSABLE METHODS

Dispose of waste according to applicable legislation.

LIST OF PROPOSED WASTE CODES/WASTE DESIGNATIONS IN ACCORDANCE WITH EWC

Waste code product

16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
1603	off-specification batches and unused products
160305*	organic wastes containing dangerous substances

Waste code packaging

15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
1501	Packaging (including separately collected municipal packaging waste)
150110*	packaging containing residues of or contaminated by dangerous substances

REMARK

Delivery to an approved waste disposal company.

Send to a hazardous waste incinerator facility under observation of official regulations.

Dispose according to legislation.

SECTION 14 - TRANSPORT INFORMATION

Labelling ADG, IMO/IMDG, ICAO/IATA	 2.2 Non flammable, non toxic gas
Road and Rail Transport (ADG Code)	
Classification:	Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road & Rail (Seventh edition, 7.4, 2015)
UN number	1044
Proper shipping name:	FIRE EXTINGUISHERS with compressed or liquefied gas
Transport hazard class/division:	2.2
Packing group:	N/A
HAZCHEM - Emergency Action Code	No Hazchem Code issued to these articles. No HIN issued under RID and ADR.
Special Provisions:	225
Limited Quantities:	120mL
Packing Instruction:	P003
Special Packing Provisions:	PP91
Marine transport (IMO/IMDG)	
Classification:	Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.
UN number:	1044
Proper shipping name:	FIRE EXTINGUISHERS with compressed or liquefied gas
Division:	2.2
Environmental hazards for Transport Purposes:	Not a known pollutant according to the International Maritime Dangerous Goods (IMDG) Code. Substance is not classified as having an acute aquatic toxicity hazard.
Emergency Schedule (EmS) - Fire:	F-C
Emergency Schedule (EmS) - Spillage:	S-V
Special provisions:	225
Air transport (ICAO/IATA)	
Classification:	Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.
UN number:	1044
Proper shipping name:	FIRE EXTINGUISHERS with compressed or liquefied gas
Division:	2.2
Packing instruction (Cargo Aircraft only):	213
Packing instruction (Passanger and Cargo Aircraft):	Restricted.
Special Provisions:	A19

SECTION 14 - TRANSPORT INFORMATION (CONTINUED)

SPECIAL PRECAUTIONS FOR USER

Not available.

ENVIRONMENTAL HAZARDS

None. Not a marine pollutant

SECTION 15 - REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia. Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

EU legislation

Regulation (EC) No. 2037/2000 concerning materials, which cause damage to the ozone layer.

not applicable

Regulation (EC) No. 304/2003 of the European parliament and of the council concerning the export and import of dangerous chemicals

not applicable

Directive 96/59/EC (PCB-guideline)

not applicable

Regulation (EC) No. 648/2004 (Detergents regulation)

The surfactants contained in this preparation comply with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.

Information according to 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline).

Volatile organic compounds (VOC) content in percent by weight: max. 10

Regulation (EC) No. 842/2006 on certain fluorinated greenhouse gases

not applicable

National regulations

Störfallverordnung

Not subject to StörfallVO.

Water hazard class (WGK)

slightly hazardous to water (WGK 1)

Classification according to VwVwS, Annex 4.

annex Chemikalien-Verbotsverordnung (ChemVerbotsV)

not applicable

SECTION 16 - OTHER INFORMATION

KEY LITERATURE REFERENCES AND SOURCES

Classification in accordance with the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011(2003)].

This Safety Data Sheet where necessary has been established in accordance with the applicable European Union legislation and has used calculation methods of regulation (EC) 1272/2008 CLP / (EC) 1999/45 DPD.

Standard for the Uniform Scheduling of Medicines and Poisons. (SUSMP)

Australian Inventory of Chemical Substances (AICS)

Australian Code for the Transport of Dangerous Goods by Road & Rail (2015, 7th Edition, 7.4)

Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Workplace exposure standards for airborne contaminants, Safe work Australia.

International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

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Please refer to our internet website for more information: www.flamestop.com.au

SDS sheets are available to download in the downloads section of our website.

For contact information please go to page 1 of this SDS.

END OF SDS.