SAFETY DATA SHEET

CHUBB ECO FF FOAM FIRE EXTINGUISHER

Infosafe No.: LQ5XG
Issued Date: 08/09/2016
Issued by: CHUBB FIRE & SECURITY

1. IDENTIFICATION

GHS Product Identifier
CHUBB ECO FF FOAM FIRE EXTINGUISHER

Company Name
CHUBB FIRE & SECURITY

Address
314 Boundary Road Dingley
Vic 3172 Australia

Telephone/Fax Number
Tel: +61 (3) 9264 9813
Fax: +61 (03) 9264 9751

Emergency phone number
1300 369 309 (Business hours: 24/7)

Recommended use of the chemical and restrictions on use
Extinguishing fires

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture
Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia
Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)
Eye Damage/Irritation: Category 2A
Gases under Pressure: Compressed Gas
STOT Repeated Exposure: Category 2

Signal Word (s)
WARNING

Hazard Statement (s)
H280 Contains gas under pressure; may explode if heated.
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

Pictogram (s)
Gas cylinder,Exclamation mark,Health hazard

Precautionary statement – Prevention
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash contaminated skin thoroughly after handling

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314 Get medical advice/attention if you feel unwell.
P337+P313 If eye irritation persists: Get medical advice/attention.

Precautionary statement – Storage
P410+P403 Protect from sunlight. Store in a well-ventilated place.

Precautionary statement – Disposal
P501 Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Ethylene glycol	107-21-1	<15 %
Diethylene glycol monobutyl ether	112-34-5	<10 %
Nitrogen	7727-37-9	-
Sulfuric acid, mono-C8-14-alkyl esters, compounds with triethanolamine	85665-45-8	<10 %
Cocamidopropyl Betaine	147170-44-3	<5 %
Ingredients determined not to be hazardous		Balance

4. FIRST-AID MEASURES

Inhalation
If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

Ingestion
Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

Skin
Remove all contaminated clothing immediately. Wash affected area thoroughly with soap and water. Wash contaminated clothing before reuse or discard. Seek medical attention.

Eye contact
If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. Seek medical attention.

First Aid Facilities
Eye wash, safety shower and normal washroom facilities.

Advice to Doctor
Treat symptomatically.

Other Information
For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Product is an extinguishing media. Use appropriate fire extinguisher for surrounding environment.

Hazards from Combustion Products
Under fire conditions this product may emit toxic and/or irritating fumes including oxides of nitrogen, carbon monoxide and carbon dioxide.

Specific Hazards Arising From The Chemical
This product is non-combustible. Breathing is not possible whilst submerged in the foam. Take care when spraying people.

Decomposition Temperature
Not available

Precautions in connection with Fire
Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures
Wear appropriate personal protective equipment and clothing to minimise exposure. Increase ventilation. If possible contain the spill. Place inert absorbent material onto spillage. Collect the material and place into a suitable labelled container. Do not dilute material but contain. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Wear appropriately designed personal protective equipment designed for use in firefighting situations to prevent exposure when using product. Keep containers closed when not in use. Avoid inhalation of dusts/mists/vapours, and skin or eye contact. Practice good personal hygiene, that is, always wash hands after handling, and before eating, drinking, smoking or using the toilet facilities.

Conditions for safe storage, including any incompatibilities
Protect containers against physical damage. Store in a cool, dry, well-ventilated place, low fire risk area. Protect from extremes of temperature and weather. Do not allow any part of a cylinder to be exposed above 50°C. Storage areas should be kept clean and free from flammable materials. Ensure that containers are properly vented to prevent build up of pressure. Ensure that storage conditions comply with applicable local and national regulations. For information on the design of the storeroom, reference should be made to AS 4332 The storage and handling of gases in cylinders.

Recommended Materials
High-grade steel, Polyethylene (PE), Glass fibre reinforced polyester

Unsuitable Materials
Aluminium, Light metal, Copper, Zinc, Alloy containing copper, Alloy containing light metal, Iron, Steel

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values
No exposure standards have been established for this material. However, the available exposure limits for ingredients are listed below:
Ethylene glycol:
TWA: 20ppm, 52mg/m³
STEL: 40ppm, 104mg/m³
NOTE: Sk
TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.
STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.
'Sk' Notice: Absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

Biological Limit Values
No biological limit allocated.

Appropriate Engineering Controls
This substance is hazardous. Provide sufficient ventilation to keep airborne levels as low as possible. Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a local exhaust ventilation system is required drawing dusts/mists/vapours away from workers' breathing zone. If the engineering controls are not sufficient to maintain concentrations below the exposure standards, suitable respiratory protection must be worn.

Respiratory Protection
If engineering controls are not effective in controlling airborne exposure then respiratory protection should be used. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye Protection
Safety glasses with side shields, chemical goggles, or full face shield as appropriate required. Final choice of appropriate eye/face protection will vary according to individual circumstances ie. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform to Australian/New Zealand Standard AS/NZS 1337- Eye Protectors for Industrial Applications.

Hand Protection
Impervious gloves recommended such as Nitrile or butyl rubber with at least 0.4 mm thickness, breakthrough time 480 minutes. Final choice of appropriate gloves will vary according to individual circumstances ie. methods of handling or according to risk assessments undertaken. Reference should be made to AS/ NZS 2161 Occupational protective gloves- Selection, use and maintenance.

Body Protection
Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist, including chemical resistant apron where clothing is likely to be contaminated.

Other Information
Nitrogen is an asphyxiant gas which when present in an atmosphere in high concentration, leads to reduction of oxygen concentration by displacement or dilution. It is not appropriate to recommend an exposure standard for each simple asphyxiant, rather it should be required that a sufficient oxygen concentration be maintained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Properties	Description	Properties	Description
Form	Liquid	**Appearance**	Liquid with compressed nitrogen in fire extinguisher (foam)
Colour	Yellow to brown	**Odour**	Not available
Decomposition Temperature	Not available	**Boiling Point**	>100°C (DIN 51751)
Solubility in Water	Completely miscible (OECD 105)	**pH**	6.5 - 8.5 (at 20°C) (DIN EN 12 62:1996)
Vapour Pressure	Not available	**Vapour Density (Air=1)**	Not available
Evaporation Rate	Not available	**Odour Threshold**	Not available
Viscosity	< 800(400) mPa/s @ 75(375) 1/s (at 20°C) (structure: viscous) (DIN EN ISO 3219) < 1500(750) mPa/s @ 75(375) 1/s (at -5°C) (structure: viscous) (DIN EN ISO 3219)	**Partition Coefficient: n-octanol/water**	Not available
Density	1.020 - 1.060 g/ml (at 20°C) (DIN EN ISO 3675)	**Flash Point**	No flash point up to 100°C (DIN EN 22 719)
Flammability	Non-Combustible	**Auto-Ignition Temperature**	Not applicable
Flammable Limits - Lower	Not applicable	**Flammable Limits - Upper**	Not applicable
Melting/Freezing Point	-5°C (DIN ISO 3016)		

Other Information
Recommended induction rate
0,3% wetting agent solid materials
3% low expansion foam non-polar liquids
3% medium expansion foam non-polar liquids
3% high expansion foam non-polar liquids

6% low expansion foam polar liquids

Foam expansion* (according to EN 1568)
5-10 low expansion foam*
60-120 medium expansion foam*
400-800 high expansion foam*

* Foam expansion and drainage times may vary, depending on foam equipment and operating pressure

10. STABILITY AND REACTIVITY

Reactivity
Reacts with incompatible materials.

Chemical Stability
Stable under normal conditions of storage and handling.

Conditions to Avoid
Extremes of temperature. Temperatures above 50°C.

Incompatible materials
Concentrated alkali (lye), alkali metals, concentrated acid, strong oxidising agent, strong reducing agent, acid halides.

Hazardous Decomposition Products
Thermal decomposition may result in the release of toxic and/or irritating fumes including oxides of metals and sulphur, hydrogen fluoride, organic pyrolysis products, carbon monoxide and carbon dioxide.

Possibility of hazardous reactions
Not available

Hazardous Polymerization
Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information
Toxicity data are available for this product is given below

Acute Toxicity - Oral
LD50 (rat): >2000 mg/kg (OECD 420)

Ingestion
Ingestion of this product may cause irritation to the mouth, throat, oesophagus and stomach with symptoms of nausea, abdominal discomfort, vomiting and diarrhoea.

Inhalation
Inhalation of product vapours may cause irritation of the nose, throat and respiratory system.

Skin
May be irritating to skin. The symptoms may include redness, itching and swelling.
Skin corrosion/irritation
Albino rabbit (OECD 404): Not an irritant

Eye
Causes serious eye irritation. On eye contact this product will cause tearing, stinging, blurred vision, and redness.
Serious eye damage/irritation:
Albino rabbit (OECD 404): Irritant (Cat. 2A)

Respiratory sensitisation
Not expected to be a respiratory sensitiser.

Skin Sensitisation
Not expected to be a skin sensitiser.

Germ cell mutagenicity
Not considered to be a mutegenic hazard.

Carcinogenicity
Not considered to be a carcinogenic hazard.

Reproductive Toxicity
Not considered to be toxic to reproduction.

STOT-single exposure
Not considered to cause toxicity to a specific target organ.

STOT-repeated exposure
May cause damage to organs through prolonged or repeated exposure .

Aspiration Hazard
Not expected to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity
The available ecological data is given below.

Persistence and degradability
Readily biodegradable (according to OECD criteria).
Degradation rate (%): >99% in 28 days (DIN EN ISO 9888) (Analytical method: BOD (% of COD), OECD 302B/ ISO 9888/ EEC 92/69/V, C.9, Type Aerobic)

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

Bioaccumulative Potential
Not available

Other Adverse Effects
Not available

Environmental Protection
Do not allow product to enter drains, waterways or sewers.

Acute Toxicity - Fish
LC50 (Leuciscus idus (golden orfe): approximately 240mg/l/96h (OECD 203)

Acute Toxicity - Daphnia
EC50 (Daphnia magna): approximately 210mg/l/48h (OECD 202)

Acute Toxicity - Algae
EC50 : approximately 210mg/l/72h (OECD 201)

Other Information
Effects on sewage plants
Chemical oxygen demand (COD): approximately 488,000 mg O2/l (DIN EN 38409-H41-1)
Biochemical oxygen demand (BOD): approximately 170,000 mg O2/l (DIN EN 1899-1)
BOD/COD ratio: 34.8
Bacteria toxicity: approximately 500mg/l (DIN 38412 – L3)
Dilution: approximately 2000 x Dilution (DIN 38412 – L3)

Technically correct releases of minimal concentrations to adapted biological sewage plants, will not disturb the biodegradability of activated sludge. The product may lead to foaming in sewage plants.

13. DISPOSAL CONSIDERATIONS

Disposal considerations
The disposal of the waste material and the empty containers must be done in accordance with applicable local and national regulations.
'Empty' containers retain residue (liquid and/or vapour) and can be dangerous. Do not attempt to clean since residue is difficult to remove. Do not pressurise, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks and other sources of ignition. They may explode and cause injury or death. All containers should be returned to the supplier. Privately owned containers no longer required, should be disposed of in an environmentally safe manner, and in accordance with applicable regulations.

14. TRANSPORT INFORMATION

Transport Information
Road and Rail Transport (ADG Code):
This material is classified as Dangerous Goods Division 2.2 - Non-flammable Non-toxic Gases according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)
Division 2.2 Dangerous Goods are incompatible in a placard load with any of the following:
- Class 1, Explosives
Division 2.1 Flammable Gases when the Division 2,2 gas has a subsidiary risk 5.1 except when all are packed in cylinders or pressure drums not exceeding 500L capacity.
Division 2.3 Toxic Gases when the Division 2,2 gas has a subsidiary risk 5.1 except when all are packed in cylinders or pressure drums not exceeding 500L capacity.
- Division 4.2, Spontaneously Combustible Substances
- Division 5.2, Organic Peroxides

Marine Transport (IMO/IMDG):
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.
Division: 2.2
EmS: F-C,S-V
UN-No: 1044
Special Provisions: 225
Proper Shipping Name: Fire extinguishers

Air Transport (ICAO/IATA):
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.
Division: 2.2
Packaging Instructions (cargo only): 213
Packaging Instructions (passenger & cargo): 213
Special Provisions: A19
UN-No: 1044
Proper Shipping Name: Fire extinguishers

U.N. Number
1044

UN proper shipping name
FIRE EXTINGUISHERS

Transport hazard class(es)
2.2

Special Precautions for User
Not available

IERG Number
08

IMDG Marine pollutant
No

Transport in Bulk
Not available

15. REGULATORY INFORMATION

Regulatory information
Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.
Classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule
S6

16. OTHER INFORMATION

Date of preparation or last revision of SDS
SDS created: September 2016

References
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.
Standard for the Uniform Scheduling of Medicines and Poisons.
Australian Code for the Transport of Dangerous Goods by Road & Rail.
Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Workplace exposure standards for airborne contaminants, Safe work Australia.
American Conference of Industrial Hygienists (ACGIH).
Globally Harmonised System of classification and labelling of chemicals.

END OF SDS