



HMIS CODE	
Health	1
Flammability	0
Reactivity	0
Personal Protection	X

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : **ECO7[®]**

Intended Use : Fire Fighting Extinguishing Agent

Manufacturer/Supplier Name and Address

Company's Name : LUKE ALEXANDER PTE. LTD.
Address : 29 Loyang Drive
Singapore 508944

Date of Issue : January 4, 2017

Information Contact : +65 6385 7311

Emergency Contact : +65 6385 7311

2. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS NUMBER	Weight Percent (%)
Sodium Dodecylbenzenesulfonate	25155-30-0	10 – 15%
Polyethylene Glycol (PEG)	25322-68-3	5%
O-Phenylphenol (OPP)	90-43-7	0.5%
EDTA-2Na	60-00-4	1%
Fluoroalkyl Surfactants Mixture	No Single CAS # applicable	2 – 5%
Water	7732-18-5	73.5 – 81.5%

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

Skin Contact : Contact with undiluted liquid may cause moderate irritation or dermatitis due to allergy.



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Eye Contact	:	Product is an eye irritant when contact with undiluted liquid.
Inhalation	:	Vapors are minimal at an enclosed space temperature. If product is sprayed as an aerosol, airborne material may cause respiratory irritation.
Ingestion	:	Not a hazard in normal industrial use. Small amounts swallowed during normal handling operations are not likely to cause injury; swallowing large amounts may cause injury or irritation.
ADDITIONAL HEALTH EFFECTS	:	Existing eye or skin sensitivity may be aggravated by exposure.
CARCINOGENIC STATUS	:	Not available

4. FIRST AID MEASURES

EYE CONTACT	:	Flush the eyes with plenty of fresh water for 15 minutes while holding eyelids open. Get medical attention if irritation persists.
SKIN CONTACT	:	Wash off in flowing water or shower. Launder clothing before use.
INHALATION	:	No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of airborne aerosol mists, get fresh air. Seek for medical attention if feeling unwell.
INGESTION	:	Swallowing less than an ounce is not expected to cause significant harm. For larger amounts, do not induce vomiting. Drink milk or water. Never administer anything by mouth to an unconscious person. Seek for medical attention if feeling unwell.



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5. FIRE FIGHTING MEASURES

FLASH POINT	:	>200°F (93°C)
FLAMMABLE LIMIT (in air, % by volume)	:	Not applicable
AUTO – IGNITION TEMPERATURE	:	Not applicable
FIRE AND EXPLOSION HAZARDS	:	Avoid contact with water reactive materials, burning metals and electrically energized equipment.
EXTINGUISHING MEDIA	:	Product is an extinguishing media. Use media appropriate for surrounding materials.
SPECIAL FIRE FIGHTING INSTRUCTION	:	This product mixed ratio with water.

6. ACCIDENTAL RELEASE MEASURES

SAFEGUARDS (PERSONNEL)

NOTE: Review Sections 5 (Fire Fighting Measures) and 7 (Handling) before proceeding with the clean-up. Use appropriate Personal Protective Equipment during the clean-up.

ACCIDENTAL RELEASE MEASURES

Concentrate

Stop flow if possible. Use appropriate protective equipment during the clean-up. For small volume releases, collect spilled concentrate with absorbent material; place in approved container. For large volume releases, contain and collect for use where possible. Prevent discharge of concentrate to waterways. Disposal should be made in accordance with federal, state and local regulations.

Solution

See concentration section above. Flush with water. Exercise caution, surfaces may be slippery. Do not discharge into biological sewer treatment systems without prior approval. Disposal should be made in accordance with federal, state and local regulations.



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7. HANDLING AND STORAGE

- HANDLING (PERSONNEL)** : Avoid contact with eyes, skin or clothing. Avoid ingestion or inhalation. Rinse skin and eyes thoroughly in case of contact. Review Sections 3 (Hazard Identification) and 4 (First Aid Measures).
- STORAGE** : Recommended storage environment is between 32°F (0°C) and 122°F (50°C). Store product in original shipping containers or tanks designed for product storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- ENGINEERING CONTROLS** : Special ventilation is not required.
- PERSONAL PROTECTIVE EQUIPMENT**
- RESPIRATORY PROTECTION** : Recommended exposure limits (OSHA-PEL and ACGIH-TLV) have not been determined for this material. The need for respiratory protection should be evaluated by a qualified health specialist.
- PROTECTIVE CLOTHING** : Rubber or PVC glove is recommended.
- EYE PROTECTION** : Safety glasses face shield or chemical splash goggles must be worn when possibility exists for eye contact. Contact lenses should not be worn. Eye wash facilities are recommended.
- OTHER HYGIENIC PRACTICES** : Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before re-use.



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9. PHYSICAL AND CHEMICAL PROPERTIES

GENERAL CHARACTERISTIC	:	Light yellow liquid, bland
BOILING POINT	:	-
MELTING POINT	:	-
FREEZING POINT	:	21°F(-6°C)
VAPOR PRESSURE @ 21°C/70°F	:	-
VAPOR DENSITY	:	-
SPECIFIC GRAVITY @ 25°C/77°F	:	1.015
EVAPORATION RATE (Butyl acetate = 1)	:	<1
WATER SOLUBILITY	:	100% Soluble
pH	:	between 7 and 8

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY	:	Stable
MATERIAL INCOMPATIBILITY	:	(Materials to Avoid) Avoid use of product on burning metals, electrically-energized equipment and contact with water reactive materials
HAZARDOUS POLYMERIZATION	:	Will not occur

11. TOXICOLOGICAL INFORMATION

MAMMALIAN TOXICITY

This product has not been tested as a whole for acute oral and inhalation toxicity, primary eye irritation or primary skin irritation.

12. ECOLOGICAL INFORMATION

ECO TOXICOLOGICAL INFORMATION AQUATIC TOXICITY: None



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13. DISPOSAL CONSIDERATIONS

Eco7® is not a hazardous waste. However, state and local requirements for waste disposal may be restrictive or otherwise different from regulations. Therefore, applicable local and state regulatory agencies should be contacted regarding disposal of waste liquid concentrate or liquid solution.

Concentrate

Do not discharge into biological sewer treatment systems without prior approval. Specific concerns may be high BOD load and foaming tendency. Dilution will reduce BOD and COD factors proportionately. Low dosage flow rate or antifoaming agents acceptable to the treatment plant may be helpful. Do not flush to waterways. Disposal should be made in accordance to the state and local regulations.

Solution

Eco7® solution can be treated by wastewater treatment facilities. Discharge into biological sewer treatment facilities may be done with prior approval. Specific concerns are high BOD load. Dilution will reduce BOD and COD factors proportionately. Low dosage flow rate or antifoaming agents acceptable to the treatment plant may be helpful. Do not flush to waterways. Disposal should be made in accordance to the state and local regulations.

14. TRANSPORTATION INFORMATION

SHIPPING INFORMATION

Proper Shipping Name : Eco7® (Water-Based Fire Extinguishing Agent)
Hazard Class : None
UN Number : None

15. REGULATORY INFORMATION

155 Substances of Very High Concern (SVHC) screening - SVHC candidate list based on the publication by European Chemicals Agency (ECHA) on December 17, 2012 regarding regulation (EC) No. 1907/2006 concerning the REACH.



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Summary: According to the interpretation of ECHA and the majority of EU member states on the definition of an article as well as the specified scope and analytical technique, concentrations of SVHC are <0.1 in the submitted Eco7® sample.

Note: Eco7® to meet market demand session does not contain ingredients of PFOS.

16. OTHER INFORMATION

NFPA HAZARD CLASSIFICATION

Health : 1 Reactivity : 0
Flammability : 0 Special Hazard : None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to materials under conditions of fire, spill or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS HAZARD CLASSIFICATION

Health : 1 Reactivity : 0
Flammability : 0 PPE : X (*Section 8*)

Hazardous Material Identification System (HMIS) hazard ratings are designed to inform employees of chemical hazard in the workplace. The provided ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS ratings are to be used with a fully implemented HMIS program.

NFPA/HMIS HAZARD DEFINITION

- 4 - Severe Hazard
- 3 - Serious Hazard
- 2 - Moderate Hazard
- 1 - Slight Hazard
- 0 - Minimal Hazard

The data in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process.

To the best of our knowledge, the information contained herein is accurate. However, the above named manufacturer, supplier or any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.