

## HEALTH AND SAFETY DATA SHEET (HSDS) AND TECHNICAL DATA SHEET (TDS)

### PRODUCT NAME

ECOGUARD MO  
for Marine and Offshore

### PRODUCT LOGO



### BRAND LOGO



### PRODUCT DESCRIPTION

- **EcoGuard MO Marine & Offshore** is an innovation in carbon avoidance and reduction technology. **EcoGuard MO** is a cost-effective, clean solution which works by eliminating oil waste pollutants, reducing Scope 1 combustion emission and reducing Scope 3 waste generation in business operations.
- Use of **EcoGuard MO** enable marine and offshore asset owners and operators to decarbonize, in line with ESG requirements and IMO goal of reducing total annual GHG emissions by at least 50% by 2050.
- Highly effective hydrocarbon cleaning and air scrubbing solution suited for marine and offshore applications, to overcome oil waste pollution and emission challenges in ship bilges and ship exhaust systems. Usage includes for cleaning of grease and lubricant spills, tough oil stains, engine/equipment/filter cleaning, spills and leaks cleaning, fire response, OSD and air scrubber
- The recommended effectiveness is direct use or 1:1 subject to contamination.
- **EcoGuard MO** is a biosafe, environmentally friendly product and harmless to humans and marine life, and is 100% biodegradable.

## PRODUCT APPLICATION AREAS

**EcoGuard MO Marine & Offshore** can be used in operations as below :

- General Cleaning and Maintenance
- Equipment and parts degreasing
- Spills and leaks cleaning
- OSD for emergency ocean spills
- Galley/canteen grease traps cleaning
- Storage tank internal washing
- Preparation for hot works
- Well maintenance
- Drainage pipes cleaning
- Fire response
- Air scrubber
- Decommissioning

## GAS AND DUST ELIMINATOR

**EcoGuard MO Marine & Offshore** is effective against dust, volatile organic compounds (VOCs), gases and hydrocarbon odours. It will quickly neutralise and eliminate hydrocarbon and odor compounds, and reduce combustion emission including :

- Hydrogen Sulphide
- Mercaptans
- Carbon Oxides (CO<sub>x</sub>)
- Nitrogen Oxides (NO<sub>x</sub>)
- Sulphur Oxides (SO<sub>x</sub>)

The product is well suited to function as air scrubber solution.

## PRODUCT BENEFITS

**EcoGuard MO Marine & Offshore** rapidly neutralizes a large range of hydrocarbons

- 100% Biodegradable.
- Environmentally friendly.
- Safe under CHIP/COSHH.
- Non-corrosive
- No toxic fumes and vapours
- Non-acidic or caustic.
- Harmless to humans/animals.
- Recyclable

## PRODUCT PROPERTIES

<b>State</b>	: Liquid
<b>Colour</b>	: Green
<b>Odour</b>	: None
<b>Relative density</b>	: 1.015
<b>pH</b>	: 5.5 +/- 1
<b>Miscibility in water</b>	: Miscible in all proportions

*\*Full details of the product properties are available in the Safety Data Sheet. See below.*

## APPLICATION AND DOSAGE INFORMATION

Typical usage of **EcoGuard MO Marine & Offshore**

- **For Cleaning and Maintenance** : Spray of target oil waste using waterjet, or wipe/scrub engine or equipment. Repeat where necessary, rinse if required.
- **As Air Scrubber** : Mix 1:1 ratio with seawater, use to replace water in air scrubber system
- **As Oil Spill Dispersant (OSD)** : Replace use of chemical-based dispersants

## COMPANY DETAILS

### PRODUCT AND BRAND LOGO



### PRINCIPAL AND MANUFACTURER

**Kenanga Suria Sdn. Bhd. (1253557-T)**  
No. 38 Jalan Eco Perindustrian 1/3B  
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42300 Selangor, MALAYSIA  
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### ECOGUARD MO – Marine & Offshore

<b>MARKET PLACE</b>	:	As an alternative to alkaline, solvents and petroleum cleaning products and gas suppression products when dealing with hydrocarbon pollution, waste contamination and spills.
<b>INDUSTRY</b>	:	For Marine and Offshore operations
<b>PRODUCT</b>	:	ECOGUARD MO is a non-toxic hydrocarbon cleaning and treatment product suitable for ocean-based operations
<b>DESCRIPTION</b>	:	It contains natural bio-acceleration properties. ECOGUARD MO has been formulated to have a high degree of hydrocarbon treatment, cleaning properties and excellent removal of toxic fumes whilst still being totally biodegradable.
<b>TYPICAL USES</b>	:	ECOGUARD MO has 2 major uses in Marine and Offshore operations – firstly to ensure oil-waste cleaning activities above deck is controlled at source, ensuring that oily water entering into bilge is within limits of below 5ppm, easing treatment process by OWS system for release. Secondly as air scrubber solution to ensure minimal release of gaseous Cox, NOx and Sox compounds from combustion.
<b>BENEFITS</b>	:	Totally safe for use on human and environment. It is non-toxic, non-hazardous, non-corrosive and biodegradable. It prevents recurring of odour as it eliminates from source and prevents build-up of contamination and decomposition. It aids biodegradation and bio-accelerating process immediately for complete breakdown of hydrocarbon and odour chemical chains.
<b>DILUTION RATES</b>	:	Effective use direct use or 1:1 with water during usage
<b>PACKAGING</b>	:	450mL trigger spray, 20L Canister, 200L Drum, 1000L IBC ; non-returnable containers.

## TECHNICAL INFORMATION DATA

### PRODUCT AND BRAND LOGO



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### ECOGUARD MO – Marine and Offshore

<b>PHYSICAL FORM</b>	:	LIQUID
<b>COMPOSITION OF PRODUCT</b>	:	AN AQUEOUS BLEND OF FULLY BIODEGRADABLE PROPRIETARY BLENDS OF SURFACTANTS, ORGANIC CITRIC ACID AND PINE EXTRACTS
<b>APPEARANCE</b>	:	GREEN
<b>ODOUR</b>	:	NONE
<b>MISCIBILITY WITH WATER</b>	:	COMPLETE
<b>SPECIFIC GRAVITY @ 20 DEG C</b>	:	1.005-1.010
<b>pH</b>	:	6.0 +/- 0.5
<b>BOILING POINT</b>	:	100 DEG. C
<b>FREEZING POINT</b>	:	0 DEG. C
<b>FLASH POINT</b>	:	> 65 DEG. C NON-FLAMMABLE
<b>FLASH POINT METHOD</b>	:	TCC (TAG CLOSED CUP)
<b>DEGRADABILITY</b>	:	> 97% GERMAN LAW
<b>TRANSPORT INFORMATION</b>	:	THIS PRODUCT IS NOT CONSIDERED HAZARDOUS FOR TRANSPORT
<b>STORAGE REQUIREMENTS</b>	:	STORE IN PLASTIC CONTAINERS ABOVE 0 DEG.C
<b>SAFETY REQUIREMENTS</b>	:	THIS PRODUCT IS CLASSIFIED NON-HAZARDOUS

## SAFETY DATA SHEET

### SECTION 1 : IDENTIFICATION OF THE PREPARATION

**SUBSTANCE NAME** : EcoGuard Hydrocarbon for Marine and Offshore

**COMPANY NAME** : **Kenanga Suria Sdn. Bhd. (1253557-T)**  
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### SECTION 2 : COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT NAME	CONTENTS	HEALTH (Class)	RISK (R No.)
EcoGuard Hydrocarbon Advanced PhytoTechnology (APT) Plant Extract	An aqueous blend of fully biodegradable proprietary blend of surfactants, organic citric acid and pine extracts	None	None

### SECTION 3 : HAZARDS IDENTIFICATION

Not regarded as a health hazard under current legislation

### SECTION 4 : FIRST AID MEASURES

EcoGuard MO is totally safe for use and is harmless upon contact with on human. It is non-toxic, non-hazardous and non-corrosive.

**EYES** : Direct contact may cause mild irritation. Rinse eyes with water if irritation occurs.

**SKIN** : Not expected to be irritating when used as intended. If irritation occurs following intended use or prolonged contact, it is expected to be mild and transient.

**INHALATION** : Not expected to be irritating to the respiratory system. Product is non-volatile therefore limited inhalation exposure anticipated.

**INGESTION** : Product used as intended is not expected to cause gastrointestinal irritation. Accidental ingestion may cause mild gastrointestinal irritation.

## SECTION 5 : FIRE FIGHTING MEASURES

EcoGuard MO is non-flammable and would NOT cause problems under extreme conditions

- EXTINGUISHING MEDIA** : Foam carbon dioxide (CO<sub>2</sub>), dry chemicals, sand, dolomite, etc. are unaffected by presence of EcoGuard MO
- SPECIAL FIRE FIGHTING PROCEDURES** : None required. EcoGuard MO is non-flammable and is in fact an effective fire retardant
- HAZARDOUS DECOMPOSITION PRODUCTS** : None. No toxic gases/vapors/fumes of carbon monoxide (CO)

## SECTION 6 : ACCIDENTAL RELEASE MEASURES

- SPILL CLEANUP METHODS** : General clean-up procedures for liquid spill.
- SMALL SPILLS** : General clean-up procedures for liquid spill. Wash surface thoroughly with water after dealing with spillage. Ensure adequate rinsing to remove residual solution from surface. Dry affected surface.
- LARGE SPILLS** : Product is eco-friendly and 100% biodegradable. Poses no risk to environment. Flush spillage into municipality drains based on local regulation and approval. Ensure adequate rinsing to remove residual solution from surface. Dry affected surface.

## SECTION 7 : HANDLING AND STORAGE

- USAGE PRECAUTION** : None
- STORAGE PRECAUTION** : Store in plastic containers at temperatures above 0°C. Keep containers closed during storage.

**SECTION 8 : EXPOSURE CONTROLS AND PERSONAL PROTECTION**

INGREDIENT NAME	STD	LT EXP (8 hrs) Does not apply	ST EXP (10 min.)
<b>PROTECTIVE EQUIPMENT</b>	:	No requirements specific for EcoGuard MO product handling. Protective equipment is recommended based on target pollutant being handled.	
<b>RESPIRATORS</b>	:	No requirements specific for EcoGuard MO product handling. Use suitable respirators if operating in confined space with potential risk of toxic gas exposure before treatment.	
<b>PROTECTIVE GLOVES</b>	:	No requirements specific for EcoGuard MO product handling. Wearing gloves is recommended if target pollutant is acidic or caustic in nature.	
<b>EYE PROTECTION</b>	:	No requirements specific for EcoGuard MO product handling. Wear splash-proof eye goggles to prevent any possibility of eye contact.	

**SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE</b>	:	Green
<b>ODOUR/TASTE</b>	:	None
<b>SOLUBILITY DESCRIPTION</b>	:	Miscible with water
<b>SPECIFIC GRAVITY (water = 1)</b>	:	1.005 @ 20C
<b>FLASH POINT (C)</b>	:	No Flash point. This product is non-flammable
<b>FLASH POINT METHOD</b>	:	TCC (Tag closed cup)
<b>pH</b>	:	6.0 +/- 0.5

**SECTION 10 : STABILITY AND REACTIVITY**

<b>STABILITY</b>	:	None
<b>MATERIALS TO AVOID</b>	:	None
<b>HAZARDOUS DECOMPOSITION</b>	:	None

**SECTION 11 : TOXICOLOGICAL INFORMATION**

<b>TOXIC DOSE 1 (LD 50)</b>	:	Non toxic
<b>TOXIC CONS. (LC 50)</b>	:	Non toxic
<b>HEALTH WARNINGS</b>	:	None
<b>HEALTH SYMPTOMS</b>	:	None
<b>ACUTE AND CHRONIC HEALTH HAZARDS</b>	:	No known chronic or acute health risks

**SECTION 12 : ECOLOGICAL INFORMATION**

<b>DEGRADABILITY</b>	:	>97% (German Law)
<b>ACUTE FISH TOXICITY</b>	:	Non toxic
<b>WATER HAZARD CLASSIFICATION</b>	:	Non toxic

**SECTION 13 : DISPOSAL CONDITION**

<b>DISPOSAL METHODS</b>	:	Disposal procedures in compliance with environmental and local regulations
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**SECTION 14 : TRANSPORT INFORMATION**

<b>UD No.</b>	:	This product is not considered hazardous for transport
<b>PRODUCT COMMODITY CODE (HS CODE)</b>	:	3402 9010

**SECTION 15 : REGULATORY INFORMATION**

<b>LABEL FOR SUPPLY</b>	:	Non-hazardous classification
<b>RISK PHRASES</b>	:	Not classified
<b>SAFETY PHRASES</b>	:	Wear suitable gloves and eye protection (recommended safety practises)
<b>UK REGULATORY REFERENCES</b>	:	Health and Safety at Work Act 1974. The Control of Substances Hazardous to Health Regulations 1988 Chemical (Hazard Information and Packaging) Regulations
<b>MALAYSIA REGULATORY REFERENCES</b>	:	GESAMP (2014, 2 <sup>nd</sup> ed.). Revised GESAMP Hazard Evaluation Procedure for Chemical Substances Carried in Ships (IMO/ FAO/ UNESCO - IOC/ WMO/ IAEA/ UN/ UNEP/ UNIDO/ UNDP) Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection, Rep. Stud. GESAMP No.64.



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## SECTION 16 : OTHER INFORMATION

### USER NOTES

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<b>REVISION DATE</b>	:	01.09.2022
<b>REVISION NO. / REPLACES SDS ISSUED</b>	:	1 / All previous health and safety data sheets

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