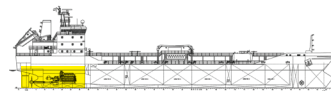


# ECOSPERSE PLUS



## ANTIFOULANT & CORROSION INHIBITOR FOR SEA WATER COOLING SYSTEM

### PHYSICAL DATA

Appearance: Clear, gold liquid  
Average specific gravity: 0.85 at 20°C.  
Flash Point: 80°C (PMCC)  
Corrosive action:  
None on metal platics;  
Rubber will swell slightly

### ADVANTAGES

- Prevents the fouling of filter boxes, sea water piping, heat exchangers, and condensers by marine growth.
- Protects against corrosion by leaving a protective film on all metal surfaces.
  - Ensures maximum thermal efficiency by keeping heat transfer surfaces free from deposits.
  - Provides long-lasting protection and therefore very economical. -Reduces maintenance and downtime.
  - Can be used for protection of sea water ballast tanks.
  - Non-toxic and non-pollutant.
  - Safe and easy to use.

### DESCRIPTION

Liquid containing a filming amine which leaves a protective water-repellent film on metal surfaces.

### APPLICATIONS

Complete protection against corrosion and fouling by marine growth (algae, moss shell-fish, micro-organisms) in sea water cooling systems.

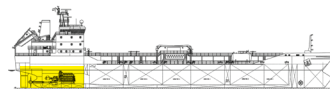
### DIRECTION FOR USE - PRODUCT DOSE

It is essential that systems and tanks are completely free from deposits, therefore where necessary, clean system with DESCALING LIQUID or POWDER before applying ECOSPERSE.

### SEA WATER COOLING SYSTEMS

- The product should be dosed once weekly for one hour, according to the flow rate of sea water in each particular system. See dosage curve, Figure 2.
- When vessel at anchor or in prolific zones of shellfish, the period or frequency of treatment should be increased. A schematic diagram of the recommended installation layout is shown in Figure 1A LAYOUT WITH ELECTRONIC DOSING PUMP, 1B LAYOUT BY GRAVITY.

# ECOSPERSE PLUS



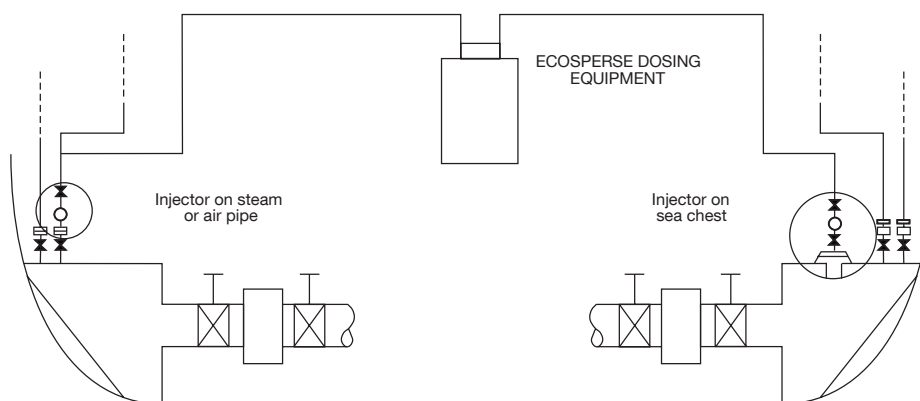
**Note:**

ECOSPERSE is also a recommended BIOCIDES to be used in conjunction with NCLT COOLING WATER TREATMENT in case of contamination of MICRO ORGANISM in a FRESH WATER COOLING SYSTEM. It is effective over a broad pH range and gives a wider spectrum of protection against MICRO ORGANISM GROWTHS in marine diesel engine cooling system. In this case the ECOSPERSE to be used is 100 PPM thus 1 ltr. for 10 tons of water added on WEEKLY basis. ECOSPERSE should be applied to the EXPANSION TANK and insure immediate circulation into the system.

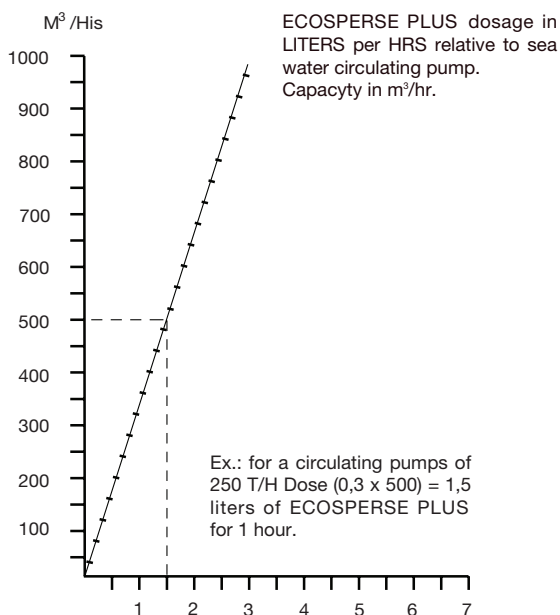
## ECOSPERSE PLUS

THE MOST ADVANCED AND ECOLOGICAL VERSION OF ANTIFOULANT  
 IT PREVENTS AND CONTROLS MARINE GROWTHS AND REDUCES CORROSION  
 IN SEA WATER COOLING SYSTEM DUE TO ITS EXCELLENT FILMING PROPERTY

Typical installation of ECOSPERSE PLUS dosing equipment



Injection point can be fitted also in the seachest strainer box



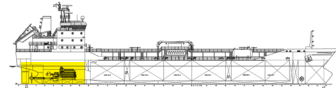
**DEEPSEA VESSEL**

ECOSPERSE PLUS should be metered into the suction box or strainers at the rate of 0,3 Liters every 100 Tons flow over a period of one hour every 48 hours.

**COASTAL VESSEL**

ECOSPERSE PLUS should be metered into the suction boxes or strainers at the rate of 0,3 liters every 100 tons of sea water flow over a period of 24 hours.

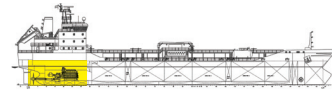
# ECOSPERSE PLUS



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# ECOSPERSE PLUS



Rev.  
008

## Safety Data Sheet

### 1. Identification of the substance / preparation and the Company

#### 1.1 Identification of the substance or preparation

Product name ECOSPERSE PLUS

#### 1.2 Use of the substance / preparation

Intended use Antifoulant & corrosion inhibitor for sea water cooling system

#### 1.3 Company identification

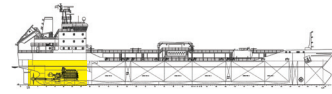
Name Urruty gg Niego S.r.l.  
Full address Via al Santuario di N.S. Guardia 58 a  
District and Country 16162 Genova Bolzaneto (GE)  
Italia  
Tel. + 39 010 711395  
Fax + 39 010 713120

e-mail address of the competent person responsible for the Safety Data Sheet info@uniservicemarine.com

#### 1.4 Emergency telephone

For urgent inquiries refer to First Aid Information: Centro Antiveleni Milano - Niguarda  
Phone: 02 - 66101029 (specialized in chemical products poisoning).

# ECOSPERSE PLUS



Rev.  
008

## 2. Hazards Identification

### 2.1 Substance/Preparation Classification

This product is dangerous under 67/548/EEC and 1999/45/EC directives and subsequent amendments. Therefore, this product requires a safety data sheet according to the Regulation (EC) 1907/2006 and subsequent amendments. Further information on health and/or environmental hazards can be found in sections 11 and 12 of this sheet.

Danger Symbols: Xi  
R phrases: 38-41-43

### 2.2 Danger Identification

IRRITATING TO SKIN.  
RISK OF SERIOUS DAMAGE TO EYES.  
MAY CAUSE SENSITIZATION BY SKIN CONTACT.

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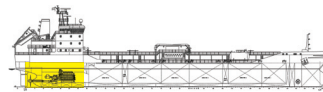
## 3. Composition / Information on ingredients

Contains:

Name	Concentration % (C)	Classification
LINAMIN DIA 25	86 <= C < 90	Xi R38
CAS No 61791-64-8		Xi R41
CE No 263-196-9		
5-CHLORO-2-METHYL-3 2H) -ISOTHIAZOLONE MIXT. with 2- METHYL-3 2H) -ISOTHIAZOLONE	0,06 <= C < 0,11	T R23/24/25
CAS No 55965-84-9		C R34
CE No -		Xi R43
Index No 613-167-00-5		N R50/53

The complete text of -R- phrases is specified in section 16.

# ECOSPERSE PLUS



Rev.  
008

## 4. First aid measures

**EYES:** Irrigate copiously with clean, fresh water for at least 15 minutes. Seek medical advice.

**SKIN:** Wash immediately with plenty of water. Remove contaminated clothing. If irritation persists, seek medical attention. Wash contaminated clothing before using them again.

**INHALATION:** Remove to open air. If breathing is irregular, seek medical advice.

**INGESTION:** Obtain immediate medical attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person.

## 5. Fire-fighting measures

### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

### SUITABLE EXTINGUISHING MEDIA

The extinction equipment should be of the conventional kind: carbon dioxide, foam, powder and nebulised water.

### EXTINGUISHING MEDIA WHICH SHALL NOT BE USED FOR SAFETY REASONS

None in particular.

### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products (carbon oxide, toxic pyrolysis products, etc).

### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Hardhat with visor, fireproof clothing (fireproof jacket and trousers with straps around arms, legs and waist), work gloves (fireproof, cut proof and dielectric), a depressurised mask with facemask covering the whole of the operator's face or a self-respirator (self-protector) in the event of large quantities of fume.

## 6. Accidental release measures

### PERSONAL PRECAUTIONS

Use breathing equipment if fumes or powders are released into the air.

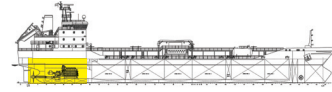
### ENVIRONMENTAL PRECAUTIONS

The product must not penetrate the sewers, surface water, ground water and neighbouring areas.

### METHODS FOR CLEANING UP

Confine using earth or inert material. Collect as much material as possible and eliminate the rest using jets of water. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

# ECOSPERSE PLUS



Rev.  
008

## 7. Handling and storage

Store in a well ventilated place, keeping the containers closed when not used. Do not smoke while handling. Keep far away from sources of heat, bright flames and sparks and other sources of ignition.

## 8. Exposure control / personal protection.

8.1 Exposure limit values  
Not available

### 8.2 Exposure controls

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration or bad air vent. If such operations do not make it possible to keep the concentration of the product below the permitted workplace exposure thresholds a suitable respiratory tract protection must be used. See product label for hazard details during use. Ask your chemical substance suppliers for advice when choosing personal protection equipment. Personal protection equipment must comply with the rules in force indicated below.

#### HAND PROTECTION

Protect hands with category II (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in PVC, neoprene, nitril or equivalent. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves' limit depends on the duration of exposure.

#### EYE PROTECTION

Wear hood visor or protective visor together with airtight goggles (ref. standard EN 166)

#### SKIN PROTECTION

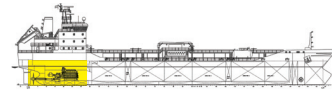
Wear category II professional long-sleeved overalls and safety footwear (ref. Directive 89/686/CEE and standard EN 344). Wash body with soap and water after removing overalls.

#### RESPIRATORY PROTECTION

If the threshold value for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction established by the company's prevention and protection service is exceeded, wear a mask with an B or universal filter, the class (1, 2 or 3) of which must be chosen according to the limit concentration of use (ref. standard EN 141).

The use of breathing protection equipment, such as masks with organic vapour and dust/mist cartridges, is necessary in the absence of technical measures limiting worker exposure. The protection provided by masks is in any case limited.

# ECOSPERSE PLUS



Rev.  
008

If the substance in question is odourless or its olfactory threshold is higher than the relative exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138).  
An emergency eye washing and shower system must be provided.

## 9. Physical and chemical properties

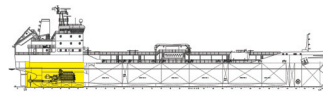
Colour	Not available
Odour	technical
Appearance	liquid
Solubility	in water completely soluble
Specific gravity	0,94 Kg/l
Vapour density	Not available
Evaporation speed	Not available
Comburent properties	Not available
Partition coefficient: n-octanol/water	Not available
pH	7
Boiling point	100°C
Melting point	-2°C
Flash point	>100°C
Explosive properties	Not available
Vapour pressure	2000kPa
Specific gravity	0,940Kg/l

## 10. Stability and reactivity

The product is stable in normal conditions of use and storage. In the event of thermal decomposition or fire, vapours potentially dangerous to health may be released.



# ECOSPERSE PLUS



Rev.  
008

## 11. Toxicological information

Acute effects: contact with skin may cause: irritation, erythema, edema, dryness and chapped skin. Vapour inhalation may slightly irritate the upper respiratory tract. Ingestion may cause health disorders, including stomach pain and sting, nausea and sickness.

This product may cause serious ocular lesions, cornea opacity, iris lesions, irreversible eye coloration.

Upon contact with skin, this product causes sensitization (dermatitis). Dermatitis derives from skin irritation on the areas which repeatedly come into contact with the sensitizing agent. Cutaneous lesions may include: erythemas, edemas, papules, vesicles, pustules, scurvies, ulcerations and exudative phenomena, whose intensity varies according to illness seriousness and affected areas. Erythemas, edemas and exudative phenomena prevail during the acute phase. Scurfy skin, dryness, ulcerations and skin thickening prevail during the chronic phase.

---

## 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or sewers or contaminate soil or vegetation.

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## 13. Disposal consideration

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

### CONTAMINATED PACKAGING

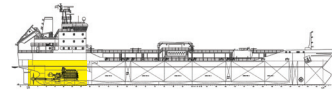
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

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## 14. Transport information

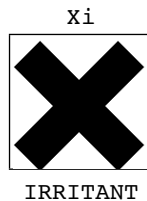
This product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

# ECOSPERSE PLUS



Rev.  
008

## 15. Regulatory information



- R38 IRRITATING TO SKIN.  
R41 RISK OF SERIOUS DAMAGE TO EYES.  
R43 MAY CAUSE SENSITIZATION BY SKIN CONTACT.  
S24/25 AVOID CONTACT WITH SKIN AND EYES.  
S26 IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.  
S37/39 WEAR SUITABLE GLOVES AND EYE/FACE PROTECTION.

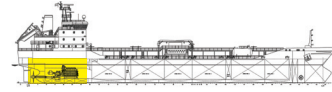
### Contains:

5-CHLORO-2-METHYL-3 2H) -ISOTHIAZOLONE MIXT. with 2- METHYL-3 2H) -ISOTHIAZOLONE

Danger labelling under directives 67/548/EEC and 1999/45/EC and following amendments and adjustments.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

# ECOSPERSE PLUS



Rev.  
008

## 16. Other information

Text of (R) phrases quoted in section 3 of the sheet.

R23/24/25	TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
R34	CAUSES BURNS.
R38	IRRITATING TO SKIN.
R41	RISK OF SERIOUS DAMAGE TO EYES.
R43	MAY CAUSE SENSITIZATION BY SKIN CONTACT.
R50/53	VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

### GENERAL BIBLIOGRAPHY

1. Directive 1999/45/EC and following amendments;
2. Directive 67/548/EEC and following amendments and adjustments (technical adjustment XXIX);
3. Regulation (EC) 1272/2008 (CLP) of the European Parliament;
4. Regulation (EC) 1907/2006 (REACH) of the European Parliament;
5. The Merck Index. - 10th Edition;
6. Handling Chemical Safety;
7. Niosh - Registry of Toxic Effects of Chemical Substances;
8. INRS - Fiche Toxicologique (toxicological sheet);
9. Patty - Industrial Hygiene and Toxicology;
10. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition;

### Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product .

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

### Changes to previous review

The following sections were modified:

08