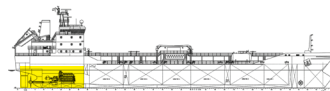


LIQUIVAP SUPEREIGHTY



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BRAND NEW FORMULA TO PROVIDE HIGH EFFICIENCY ON NEW MSF EVAPORATORS



CERTIFIED
NSF/ANSI 60

PHYSICAL DATA

Appearance : clear amber liquid
Specific gravity : 1.15 -1.18
pH (neat) : 8.5 -9.0
Solubility : complete in water
Flash point : none

ADVANTAGES

- Safe for use in evaporators when distilled water is used to produce potable water.
- Keeps efficiency of distilled water production at highest levels.
- Controls scale build up, reduces and prevents the need for frequent acid descaling operations
- Reduces foam formation and its transfer to distillate water
- Does not contain phosphates
- Not harmful to distillate purity
- Approved by standard NSF/ANSI 60
- Highly concentrated
- Very economical

DESCRIPTION

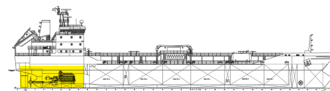
The continuous improvement of sea-water desalination technology in shipboard evaporators has lead to a new concept and the development of a new anti scale treatment product LIQUIVAP SUPEREIGHTY. Recent equipment operate at higher pressures and temperatures than previous ones; also, they run at higher and higher flow rates.

The use of current LIQUIVAP SUPEREIGHTY is limited to operating temperatures up to 74°C. The new formulation LIQUIVAP SUPEREIGHTY extends that limit to 120°C. The new product ensures that scaling salts are inhibited to adhere to heat exchange surfaces up to an operating temperature of 120°C.

APPLICATIONS

Liquivap Supereighty is suitable for preventing scale formation and foam production in evaporators operating at either low pressure or high pressure.

LIQUIVAP SUPEREIGHTY



DIRECTION FOR USE - PRODUCT DOSE

LIQUIVAP SUPEREIGHTY must be diluted in fresh water and fed continuously into the evaporator seawater feed, or directly in the evaporator shell by means of a suitable dosing system.

The dosing system is composed of a vessel and a flowmeter, alternatively a specific dosing pump can be used.

Normal dosage rate is 6 ml per ton of distilled water produced, i.e. 1 liter of LIQUIVAP SUPEREIGHTY is sufficient for 166 tons of distilled produced in 24 hours. The strength of the solution to be injected and the dosage should be adjusted to obtain a continuous feed in the system.

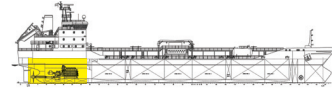
In case of foaming our specific Antifoam UCN can be added separately into the evaporator. Close monitoring of the condition of the treated evaporator can reduce sharply the quantity of LIQUIVAP SUPEREIGHTY to be used.

That depends on the skill of the operator who has to determine the dosage, depending on seawater quality, temperature, efficiency of the evaporator, scale free condition of the heat exchange surfaces, and other possible factors

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, THIS INFORMATION IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU DO A TEST TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION FURNISHED BY URRUTY GG NIEGO SRL HEREUNDER ARE GIVEN GRATIS, AND URRUTY GG NIEGO SRL ASSUMES NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

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LIQUIVAP SUPEREIGHTY



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003

Safety Data Sheet

1. Identification of the substance / preparation and the Company

1.1 Identification of the substance or preparation

Product name LIQUIVAP SUPEREIGHTY

1.2 Use of the substance / preparation

Intended use Prevention of scale formation and foaming in MSF evaporators

1.3 Company identification

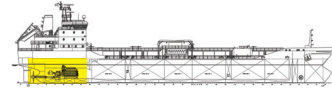
Name Urruty gg Niego S.r.l.
Full address Via al Santuario di N.S. Guardia 58 a
District and Country 16162 Genova Bolzaneto (GE)
Italia
Tel. + 39 010 711395
Fax + 39 010 713120

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).

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2. Hazards Identification

This product is not dangerous under 67/548/EEC and 1999/45/EC directives and subsequent amendments.

3. Composition / Information on ingredients

The product is not classified as hazardous pursuant to directives 67/548/EEC and 1999/45/EC and subsequent amendments and upgrades and does not contain substances classified as being hazardous to human health or the environment pursuant to 67/548/EEC and subsequent amendments.

4. First aid measures

No episodes of damage to health ascribable to the product have been reported. Nevertheless, observance of good industrial hygiene is recommended.

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

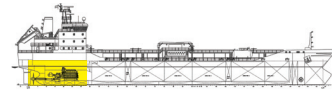
Do not breathe combustion products (carbon oxide, toxic pyrolysis products, etc).

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

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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.

7. Handling and storage

Make sure that equipment is available for cooling the vessels, to prevent the danger of overpressure and overheating in the event of fire in the vicinity. Refer to the other sections of this data sheet for information relating to health and environmental risks.

8. Exposure control / personal protection.

8.1 Exposure limit values

Not available

8.2 Exposure controls

Observance of safety measures used in handling chemical substances.

RESPIRATORY PROTECTION

None required.

EYE PROTECTION

None required.

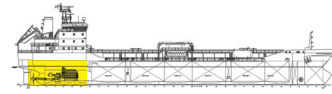
HAND PROTECTION

None required.

SKIN PROTECTION

None required.

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9. Physical and chemical properties

Colour	Not available
Odour	technical
Appearance	liquid
Solubility	soluble
Specific gravity	1,10 Kg/l
Vapour density	Not available
Evaporation speed	Not available
Comburent properties	Not available
Partition coefficient: n-octanol/water	Not available
pH	8,3
Boiling point	105°C
Melting point	-10°C
Flash point	Not available
Explosive properties	Not available
Vapour pressure	1800kPa
Specific gravity	1,100Kg/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.

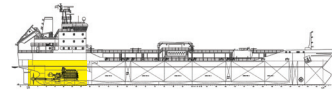
11. Toxicological information

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled according to good industrial practices.

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. Neat product residues should be considered special non-hazardous waste.

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.

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.

15. Regulatory information

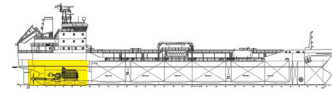
Warning symbols: None

Hazard sentences (R): None

Caution recommendations (S): None

This product is not subject to hazard labelling under the 67/548/EEC and 1999/45/EC directives and following amendments and adjustments.

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003

16. Other information

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:

01 / 02 / 08 / 09 / 13