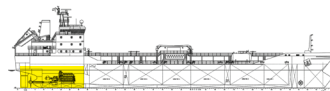


# LIQUIVAP



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## PREVENTION OF SCALE FORMATION AND FOAMING IN EVAPORATORS

### PHYSICAL DATA

Appearance: Yellow liquid  
Specific gravity: 1,15 at 20°C  
pH in 1% solution in water: 7,8  
Flash Point: Non flammable product  
Corrosive action:  
    Ferrous metals: none  
    Light metal alloys: none  
    Plastic: none

### ADVANTAGES

- Safe to use with evaporators where distillate is used for drinking purposes.
- Maintains evaporator efficiency and production at maximum levels.
- Controls scale formation and helps prevent the need for acid descaling.
- Reduces formation and carryover of foam into the distillate.
- Contains no phosphates.
- Non detrimental to distillate purity.
- Concentrated product
- Economical in use.

### DESCRIPTION

Liquid compound containing synthetic polymers, sequestering agents and de-foaming agents.

### APPLICATIONS

For use with both high and low pressure evaporators to help:

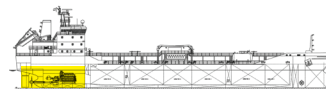
- Prevent scale formation
- Prevent foaming

### DIRECTION FOR USE - PRODUCT DOSE

LIQUIVAP should be diluted in freshwater and fed continuously to the evaporator feed water line, or directly to the evaporator shell using a recommended dosing system consisting of dosing tank with flowmeter and suitable eductor, or a metering pump system.

- Normal dosage rate is recommended to be 25 ml. LIQUIVAP per tonn. of distillate production, based on evaporator rated capacity e.g. For a 40 tonn. per day evaporator, 1 ltr. of LIQUIVAP should be used daily.
- Solution strength and feed rates should be calculated to give required dosage through continuous feeding.

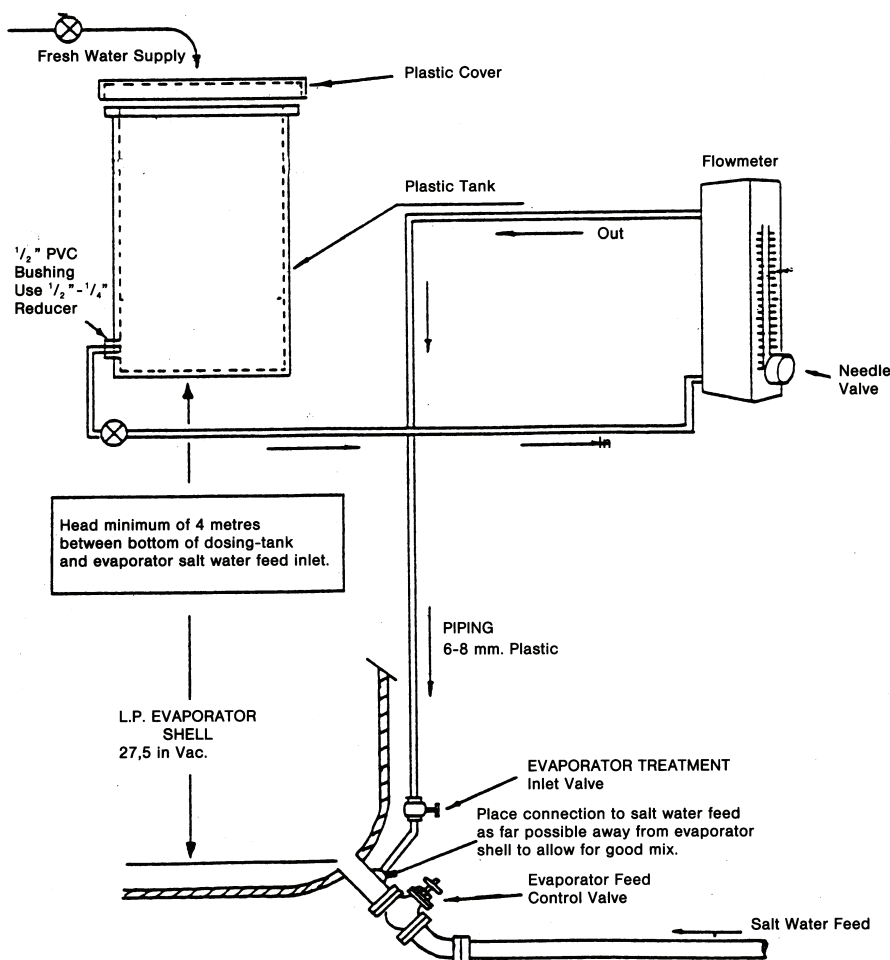
# LIQUIVAP



**Note:**

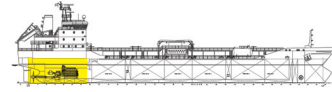
1. Brine density should not exceed 1.5/32 (specific gravity: 1.038). Scaling potential rapidly increases at higher brine densities.
2. Prior to starting treatment it is recommended to remove any existing evaporator scale. DESCALING POWDER or LIQUID is recommended for this use.

## DOSING EQUIPMENT FOR EVAPORATOR TREATMENT & OTHER SPECIFIED PRODUCTS



**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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## Safety Data Sheet

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

#### 1.1 Identification of the substance or preparation

Product name LIQUIVAP

#### 1.2 Use of the substance / preparation

Intended use Prevention of scale formation and foaming in evaporators

#### 1.3 Company identification

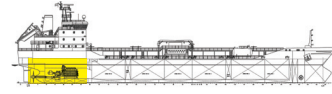
Name Urruty gg Niego S.r.l.  
Full address Via al Santuario di N.S. Guardia 58 a  
District and Country 16162 Genova Bolzaneto (GE)  
Italia  
Tel. + 39 010 711395  
Fax + 39 010 713120

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  
Informazioni di primo soccorso/First Aid  
Information: Centro Antiveleni Milano - Niguarda  
Tel./Phone: 02 - 66101029  
(specializzato in intossicazioni di prodotti chimici / 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.

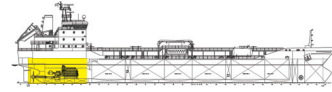
### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

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.

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## 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.

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## 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.

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## 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.

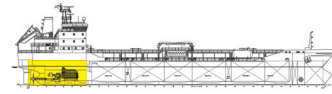
#### HAND PROTECTION

None required.

#### SKIN PROTECTION

None required.

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## 9. Physical and chemical properties

|  |               |
|--|---------------|
| Colour                                 | Not available |
| Odour                                  | odour less    |
| Appearance                             | liquid        |
| Solubility                             | soluble       |
| 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.

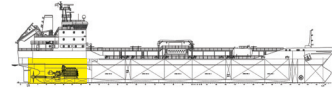
## 11. Toxicological information

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.

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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.

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### 15. Regulatory information

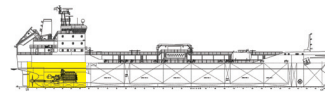
Warning symbols: None

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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## 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