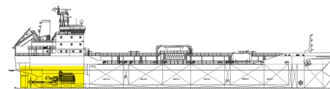


DIAPROSIM™ RD 25



Page
01 of 02

ANTICORROSION PHOSPHONATE BASED COOLING TREATMENT

PHYSICAL DATA

Appearance : colourless to yellowish liquid
Specific Gravity : 1,15-1,17 @ 20°C
pH (pure) : 8
pH (10% weight): 7,2 -7,6
Viscosity @ 20°C : less than 20 cps
Freezing point : less than 4°C

APPROVED BY



DESCRIPTION

DIAPROSIM™ RD 25 is a liquid formulation based on molybdates, phosphates, and other specific organic and inorganic inhibitors. RD 25 in addition contains a high efficiency synthetic dispersant polymer designed to overcome any scaling potential in the recirculating water.

All closed systems, specially central heating systems or closed cooling systems are subjected to corrosion due to galvanic action and the presence of dissolved oxygen and carbon dioxide in the water. The make-up water may itself be scale forming (particularly when leaks are present in the system as a result of earlier pitting corrosion). Modern technology is leading to the increased use of mixed metal systems, which may include copper, aluminium, brass, mild steel, cast iron solder etc.

When these various materials are in contact, they form electrochemical cells, which cause galvanic corrosions and pitting.

Corrosion is increased by:

- Vibration which are responsible for cavitation corrosions
- High temperatures

APPLICATION

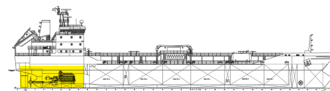
This DIAPROSIM™ RD 25 prevent corrosion on mild steel and cast iron, and builds up a passivating film of high stability on non ferrous metals, such as aluminium, other light alloys and solders. This product is particularly recommended to treat closed systems which means that the corrosion protection will last for many years.

ADVANTAGES

Regulation of the pH to the optimum level for corrosion protection because of stable buffer salts combination.

- Protection of the total systems (the boiler, the radiator, pumps, pipes, etc.).
- RD 25 has no adverse reactions with plastics, elastomeric gaskets, etc.
- RD 25 can be used in conjunction with good grade glycols.
- RD 25 does not contain any chromates or nitrites.

DIAPROSIM™ RD 25



Page
02 of 02

DIRECTION FOR USE - PRODUCT DOSE

Maintenance dose rate is 50 ml/liter of water. However, it is normal to apply initially a passivating dose at a level of 80 to 100 ml/liter. RD 25 can be added neat if required or previously diluted in make-up water.

SAFETY AND HANDLING

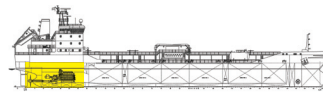
Designed to be used by non technically trained people, DIAPROSIM™ RD 25 is considered as non hazardous and does not need any particular precaution for handling. In case of contact with eye or skin, wash with water. In case of spillage, wash with water. It is advisable to store it in a frost free area.

For further information, please consult the material safety data sheet.

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.

this space intentionally left blank

DIAPROSIM™ RD 25



Rev.
006

Safety Data Sheet

1. Identification of the substance / preparation and the Company

1.1 Identification of the substance or preparation

Product name DIAPROSIM RD-25

1.2 Use of the substance / preparation

Intended use Water and process additives

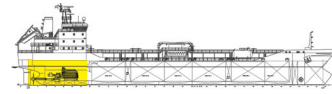
1.3 Company identification

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).

DIAPROSIM™ RD 25



Rev.
006

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: 43

2.2 Danger Identification

MAY CAUSE SENSITIZATION BY SKIN CONTACT.

3. Composition / Information on ingredients

Contains:

Name	Concentration % (C)	Classification
SODIUM MOLYBDATE	2,5 <= C < 3	Xi R36/37/38
CAS No 7631-95-0		
CE No 231-551-7		

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

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.

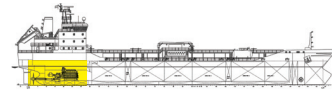
5. Fire-fighting measures

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

DIAPROSIM™ RD 25



Rev.
006

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.

7. Handling and storage

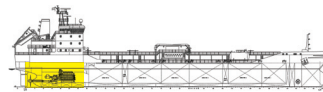
Make sure that equipment is available for cooling the vessels, to prevent the danger of overpressure and overheating in the event of fire in the vicinity. Refer to the other sections of this data sheet for information relating to health and environmental risks.

8. Exposure control / personal protection.

8.1 Exposure limit values

Not available

DIAPROSIM™ RD 25



Rev.
006

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 protective 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

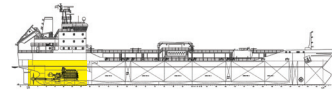
If the threshold value for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction established by the company's prevention and protection service is exceeded, wear a mask with an B or universal filter, the class (1, 2 or 3) of which must be chosen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

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.

DIAPROSIM™ RD 25



Rev.
006

9. Physical and chemical properties

Colour	pale yellow
Appearance	liquid
Solubility	complete
Specific gravity	0,95 - 1,35 Kg/lt
Melting Point	-4°C
Vapour density	Not available
Evaporation speed	Not available
Comburent properties	Not available
Partition coefficient: n-octanol/water	Not available
pH	7,90
Boiling point	98°C
Melting point	-4°C
Flash point	Not available
Explosive properties	Not available
Vapour pressure	17,00mmHg
Specific gravity	0,950Kg/l

10. Stability and reactivity

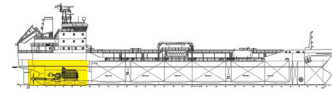
The product is stable in normal conditions of use and storage. In the event of thermal decomposition or fire, vapours potentially dangerous to health may be released.

11. Toxicological information

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled carefully according to good industrial practices. This product may have slight health effects on sensitive people, by inhalation and/or cutaneous absorption and/or contact with eyes and/or ingestion.

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. Scuffy skin, dryness, ulcerations and skin thickening prevail during the chronic phase.

DIAPROSIM™ RD 25



Rev.
006

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.

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.

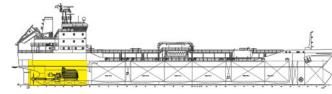
CONTAMINATED PACKAGING

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

14. Transport information

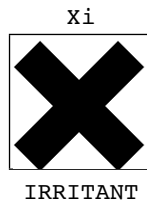
This product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

DIAPROSIM™ RD 25



Rev.
006

15. Regulatory information

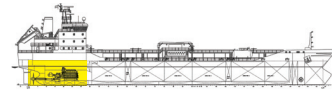


- R43 MAY CAUSE SENSITIZATION BY SKIN CONTACT.
S24 AVOID CONTACT WITH SKIN.
S37 WEAR SUITABLE GLOVES.
S60 THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF AS HAZARDOUS WASTE.

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.

DIAPROSIM™ RD 25



Rev.
006

16. Other information

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

R36/37/38 IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

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 / 08 / 09 / 13