

# ROCOR NB LIQUID 25 LTR

NALFLEET™ Rocor NB Liquid is a highly effective engine cooling water system treatment. Proprietary blend of active corrosion inhibitors offer optimum corrosion protection for the common ferrous and non-ferrous metals found in engine cooling water systems.



## Product information

The product can be used for corrosion inhibition in many types of closed recirculation systems such as:

- Diesel engine cooling water systems
- Compressor cooling water systems
- Centralised cooling systems
- Hot water heating systems
- Auxiliary machinery cooling systems

## Features

- Liquid product, easy to use
- By forming an oxide film on the metal surfaces electrolytic corrosion is prevented
- Effective against cavitation and erosion
- Compatible with hoses, gaskets and seals
- Compatible with glycols for frost protection

## Benefits

- Approved by major diesel engine manufacturers
- Simple control test

## Specification

### General

Invent Hazard Material (IMO/EU) classification	C-7
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### Technical data

Not Compatible	Avoid contact of neat product with zinc and aluminium.
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### Physical properties

Appearance	Red liquid
Density [g/ml]	1.1
Form	Liquid
pH	9.5 - 10.5

## Approvals

Approved by all major engine manufacturers

## Directions for use

NALFLEET™ Rocor NB Liquid is a highly effective corrosion inhibitor for the common ferrous and non-ferrous metals in cooling water systems. The stable oxide film that is formed prevents corrosion caused by electrolytic action between dissimilar metals used in the system. NALFLEET™ Rocor NB Liquid has been field tested and found to have no detrimental effects on non metallic substances such as seals, glands, packing, hoses, gaskets etc., normally used in these systems. The compound is alkaline and so will suppress acid corrosion, which would otherwise result in corrosion damage such as pitting. However, the alkalinity control is such that even if the product is accidentally overdosed, the pH of the water will remain within limits. The metals which would be affected by extremes of alkalinity or acidity are protected. In cases where systems are contaminated with oil and/or scale they should be cleaned before starting to apply NALFLEET™ Rocor NB Liquid. There are suitable WSS products to carry out the cleaning. Degreasing should be carried out using UNITOR™ Seaclean Plus and descaling by using UNITOR™ Descalex. Refer to Water Treatment handbook. Freeze protection can be required if the vessel is to be laid up in cold areas. NALFLEET™ Rocor NB Liquid can be used in conjunction with glycols to provide suitable freeze protection. If the system contains zinc galvanized parts, it is advisory to clean the system with Descalex prior to commencing the treatment.

NALFLEET™ Rocor NB is not suitable for use in cooling systems containing aluminium components.

### For general guidance where aluminium is present:

No aluminium present - Use Rocor NB Liquid or Engine Water Treatment 9-108

With aluminium - Use NALFLEET 2000 or Cooltreat AL

## Dosing method

NALFLEET™ Rocor NB Liquid should be dosed to a suitable point in the system. If the expansion tank is used then adequate circulation must be assured.

## Sampling and testing

The Spectrapak Test Kit provides the necessary equipment to carry out the control tests. Obtain a representative sample of the cooling water. Carry out the tests immediately after sampling (following the instructions given in the Test Kit) and log the results in Waterproof. The results should be sent to WSS as stated in the Waterproof instructions. Use the dosage chart overleaf to adjust treatment to obtain the optimum level. It is important that testing is carried out at least once per week, to ensure levels of treatment are correct.

## Dosage and Control

### Part A: Control Guideline and dosage

**Nitrite Control limits for Rocor NB:** 1,000-2,400 ppm nitrite (as NO<sub>2</sub>), **recommended routine maintenance nitrite residual** = 1,440 ppm ( as NO<sub>2</sub>) The nitrite (as NO<sub>2</sub>) control guideline and dosage for Rocor NB as below:

**Minimum** = 1,000 ppm and required dosage of Rocor NB = 9L/m<sup>3</sup>

**Maximum** = 2,400 ppm and required dosage of Rocor NB = 21L/m<sup>3</sup>

**Recommended (routine maintenance)** = 1,440 ppm, and required dosage of Rocor NB = 13L/m<sup>3</sup> Note: · To increase nitrite residual by 100 ppm, required dosage of Rocor

**NB** = 1L/m<sup>3</sup> of distilled or technical water · Above mentioned product dosage is estimation only system required dosage may varies due to water quality, system demand, and other variations.

**Part A1: Control Guideline and dosage (MAN Engine Only) Nitrite Control limits for Rocor NB:** > 2,400 ppm nitrite (as NO<sub>2</sub>), **recommended routine maintenance nitrite residual** = 2,600 ppm (as NO<sub>2</sub>) The nitrite (as NO<sub>2</sub>) control guideline and dosage for Rocor NB as below

**Minimum** = 2,400 ppm and required dosage of Rocor NB = 21.5 L/m<sup>3</sup>

**Maximum** = 3,000 ppm and required dosage of Rocor NB = 27 L/m<sup>3</sup>

**Recommended (routine maintenance)** = 2,600 ppm, and required dosage of Rocor NB = 23L/m<sup>3</sup> Note: · To increase nitrite (as NO<sub>2</sub>) residual by 100 ppm, required

dosage of **Rocor NB** = 1L/m<sup>3</sup> of distilled or technical water · Above mentioned product dosage is an estimation only, system required dosage may varies due to water

quality, system demand, and other variations.

### Part B: Working example of dosage estimation:

· **New cooling system ( e.g. Nitrite residual = 0 )** : Recommended dosage is 13 L/m<sup>3</sup> · **Existing operating cooling water system ( e.g. some nitrite residual presence but below recommended guideline)**: Assuming system measured nitrite residual at 1,000 ppm and to increase nitrite residual to 1,440 ppm, required nitrite = 440 ppm = 4.4L of Rocor NB is needed.

**Part B1: Working examples of dosage estimation (MAN Engine Only):** · **New cooling system ( e.g. Nitrite residual = 0 )** : Recommended dosage is 23 L/m<sup>3</sup>, app. 2,600 ppm nitrite. · **Existing operating cooling water system ( e.g. some nitrite residual presence but below recommended guideline)**: Assuming system measured nitrite residual at 2,200 ppm and to increase nitrite residual to 400 ppm, required nitrite = 400 ppm = 4.0L of Rocor NB is needed.

### Part C: General Application Notes

Buffering agents blended in NALFLEET™ Rocor NB Liquid helps to maintain pH values within suitable limits when the product is dosed as recommended. Normal pH

should be maintained between 8.0 and 11.0 by the treatment.

The engine manufacturer's recommendations for water quality should always be complied with.

Chloride levels should always be as low as possible. Most engine manufacturers recommend a maximum of 50 ppm chlorides.

For this reason, Wilhelmsen Ships Service recommends the use of distilled water as make-up.

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