

## **Diesel Engine Coolant Treatment**

Written by PT. Chemical Mandiri Jaya

Friday, 06 November 2009 10:37 - Last Updated Sunday, 11 April 2010 02:03

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### **BUSOL DIESEL ENGINE COOLANT TREATMENT**

#### **Product Description**

Busol Diesel Engine Coolant Treatment (Rocor NB Liquid) is a liquid, nitrite/borate based compound with organic corrosion inhibitors for use in closed cooling water systems.

#### **Directions for use and dose rates**

Busol Diesel Engine Coolant Treatment 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.

Busol Diesel Engine Coolant Treatment 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 system are contaminated with oil and/or scale they should be cleaned before starting to apply Busol Diesel Engine Coolant Treatment. There are suitable Busol products to carry out the cleaning. Degreasing should be carried out using Tankleen Plus and descaling by using Descalex. Ref. Busol Water Treatment handbook.

The use of antifreeze is sometimes required if the vessel is to be laid up in cold areas and so Busol Diesel Engine Coolant Treatment can be used in conjunction with antifreeze products.

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If the system contains galvanized parts, it is advisory to clean the system with Descalex prior to commencing the treatment.

**Note: The product should not be used in systems containing aluminium.**

### Dosing Method

Busol Diesel Engine Coolant Treatment should be dosed to 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 on the log sheets provided by Test Kit producer.

Use the dosage chart overleaf to adjust the treatment to obtain the optimum level. It is important that at least weekly testing is carried out to ensure levels of treatment are correct.

For further Dosage and Control Limits See Overleaf.

### Dosing Control

Initial dosage for an untreated system is 9 litres of Busol Diesel Engine Coolant Treatment/1000 litres of untreated distilled water. This will bring the treatment up to the minimum level of 1000 ppm nitrite.

The dosage chart given below is for convenience in calculating the amount of Busol Diesel Engine Coolant Treatment required to bring the treatment level to the suitable point between the minimum and maximum – this being 1440 ppm nitrite.

Normal nitrite limits: 1000-2400 ppm nitrite (NO<sub>2</sub>)

Nitrite			
(as ppm NO	2	)	0

180

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Rocor NB				
(kg/1000L)	13	11.3	9.7	8.1

**N.B.** Buffering agents in Busol Diesel Engine Coolant Treatment maintain pH values within suitable limits when the product is dosed as recommended. Normal pH should be maintained between 8.3 and 10 by the treatment.

The engine manufacturer's recommendations for water quality should always be complied with. Chloride levels should be as low as possible. Most engine manufacturers recommended a maximum of 50 ppm chlorides.

For this reason, Busol recommends the use of distilled water as make up.

### Product Properties

#### Appearance

Density, g/cm<sup>3</sup> at 15 °C  
pH (1 Vol%)

#### Compatibility

- Metal
- Rubber

#### Packaging

- Size (in litres)
- Container : Red liquid

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: 1.1

: 9

: Avoid contact with zinc and aluminium

: No known effect

: 25

: Plastic