

# Boiler Treat Combi

**Advanced organic boiler water treatment to control pH, corrosion, scale and sludge.**

- One of the "QUADCHEM" program products
- Advanced polymer technology
- Organic corrosion control
- Operates effectively with low free caustic levels
- Low "Totally Dissolved Solids"
- Effective scavenging of nominal oxygen presence

## Introduction

BOILER TREAT COMBI has been developed to meet the demand for a modern, practical boiler water treatment. BOILER TREAT COMBI is a dark brown liquid based on neutralized organic acids, pH, corrosion, scale and sludge conditioners.

The neutralized organic acids remove nominal oxygen presence and inhibit the boiler from corrosion forming an organic iron compound. The correct pH is maintained by a unique blend of low molecular weight compounds which avoid pitting corrosion caused by chlorides. Use of these compounds also avoids "under deposit" corrosion which is caused by excess alkalinity in conventional treatment. A blend of advanced polymers stops the formation of scale and maintains clean surfaces in the boiler. These conditions are maintained with a low total solids level, avoiding heavy sludges, making blow down of the boiler more efficient.

## Application

### Quadchem program

Suitable for all auxiliary boiler plants on motorships including dual pressure boiler primary systems.

Please refer to the QUADCHEM Engineers Manual for more details.

### Standard water treatment

This program is suitable for boilers up to 20 bar, for best results we strongly recommend continuous dosage into the feed system, via a dosing pump and tank unit.

### High pressure boilers

A special program is available, please contact us for details.

**V-COM CHEMICALS Your chemical and industrial cleaning expert**

The details of our products are given completely free of undertaking. Since their application lies outside our control we cannot accept any liability for the results. Contact details: [sales@v-comchemicals.nl](mailto:sales@v-comchemicals.nl) / +31 (0) 10 593 0203

[www.v-comchemicals.com](http://www.v-comchemicals.com)

## Directions for use

### Quadchem program

If the product is used as part of the QUADCHEM program, it must be continuously dosed in conjunction with CONDENSATE TREAT, using the QUADCHEM dosing pump/tank unit. For further details on dosing equipment refer to the equipment information sheet.

### Standard water treatment

BOILER TREAT COMBI can be added directly to the feed water. We strongly recommend this is achieved by using a dosing pump.

### Control limits

### Standard water treatment

The boiler water must meet the following conditions:

p-Alkalinity	: 100-200 ppm CaCO <sub>3</sub>
Chloride content	: max. 200 ppm Cl
pH	: 10.5 to 11.0
Conductivity	: 400 to 1000

### Initial dosage

BOILER TREAT COMBI is dosed at 0.4 litres per metric ton boiler water. Allow the boiler water to be conditioned for 24 hours and then carry out a p-Alkalinity test. Adjust product dosage as necessary to obtain a p-Alkalinity of 100-200 ppm. At the same time determine the chloride content. If the chlorides are too high, give the boiler a top and bottom blow down.

### Daily dosage

Recheck p-Alkalinity and increase dosage of BOILER TREAT COMBI if necessary to maintain pH or p-Alkalinity level. A minimum of 0.2 litre/day should be dosed to maintain correct treatment levels in conjunction with regular top and bottom blow down. This dosage can vary according to conditions e.g. size of the boiler system, make up water quality etc.

### Quadchem program

If BOILER TREAT COMBI is used as part of the QUADCHEM program, refer to the "QUADCHEM engineers manual" for dosing instructions and values.

## Properties

BOILER TREAT COMBI is a brown liquid containing neutralized organic acids, pH, corrosion, scale and sludge conditioners. After using the treatment the boiler water will be clear and straw coloured.

Specific Gravity (20 °C)	: 1.13 g/cm <sup>3</sup>
Flash point (PMCC)	: none
pH (1% solution)	: 12.5

## Nature of special risks and safety advice

See our Safety Material Data Sheet.

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