

## FEATURES

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A Division of  
Synthachem Technical Services (Pty) Ltd

# WATER TREATMENT SPECIALITY CHEMICALS AND EQUIPMENT

RESEARCHED SOLUTIONS  
TO PROCESS PROBLEMS®

**CHEMICALS**

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# “The philosophy of excellence is a professional way of life<sup>®</sup>”

**B**onchem and Vaportec are divisions of Synthachem Technical Services (Pty) Ltd (Ordrun Neumann – CEO), with a Level 2 Broad-Based BEE status level. Bonchem has been trading in the Southern African market since 1981. Vaportec supplies speciality corrosion protection and preservation programs for the petrochemical, military and aviation industry. These products can also be used for structural corrosion protection in the mining industry, more specifically in metallurgical plants where a highly corrosive environment exists.

The success of a treatment program is not only dictated by the performance and quality of the product alone. Technical service and laboratory support are key contributors to the success of a treatment program and satisfied customers. Bonchem has a young enthusiastic sales team offering support when needed to our existing and potential customers. The sales team receives continuous training to ensure they are in key with market trends and customer requirements.

of products excel over any other product currently available on the market. Thermoflow<sup>®</sup> is specifically used where poor quality water needs to be used as make-up source to cooling systems. Alternatively the product could be used where a higher concentration factor of the cooling water is required. Increasing the concentration factor of the cooling water is a direct water saving to the customer.

Thermoflow<sup>®</sup> is also used to protect reticulation systems against scale formation. Normally scale build-up reduces the inside diameter of the pipe work, thus a reduction in water flow and plant efficiency. Before the use of Thermoflow<sup>®</sup> pipelines had to be cleaned every three months due to excessive scale formation. Pipelines were cleaned and treated with Thermoflow<sup>®</sup>, and after three months, there was still no scale formation.

Thermoflow<sup>®</sup>'s unique chemical properties (sequestration, crystal modification and dispersion of scale forming molecules) gives Bonchem the ability to treat systems previously not treated or unsuccessfully treated.

Our products are formulated and manufactured in-house. This allows us to provide our customers with tailor-made solutions and the ability to adapt a treatment program within 24 hours, should plant conditions change. An integral part of cooling water treatment is microbial control. Steraque<sup>®</sup> is our range of oxidizing and non-oxidizing biocides to protect the cooling water system against microbiological activity.

## Boiler water Treatment

Thermocat<sup>®</sup> is our range of products to treat boiler feed water for industrial and food applications. The treatment programs offer scale inhibition, oxygen scavenging, foam and alkalinity control as well as condensate protection. The drive is to optimize boiler water chemistry in order to reduce boiler fuel costs.

## Vapour corrosion inhibition

Vaportec was started as a result of pooling resources in the field of vapour corrosion inhibitors (VCI), and their application, between Vaportec and the CSIR. Since 1987, Vaportec is the only producer and applicator

of VCI. The research technological tie-up with the CSIR is still maintained. VCIs are organic compounds which readily vaporize and migrate by sublimation. Sublimation means the change from a solid phase directly to a gaseous phase, with no liquid phase. The vapour deposits as a monomolecular film which, in the presence of moisture, develops a self-limiting-healing corrosion-inhibiting barrier. The initial process of absorption is rapid, typically less than three hours. This then tails off as all active sites are deactivated and an equilibrium is reached. The particular features of using a VCI-based product are:

- obviates the need for coating metal with grease, oil, etc;
- easy to use and therefore, labour- and time-efficient;
- extremely versatile, protecting ferrous and non-ferrous metals;
- neutralizes existing corrosion and no metal preparation is necessary;
- provides a protective film which is 'self-healing';
- ensures that protected parts are ready for immediate use and can be painted or welded with no pre-treatment;
- penetrates to remote areas;
- protects metals for up to three years;
- has no influence on dimensional tolerances, magnetic permeability and conductivity;
- considered non-toxic and are biodegradable under use conditions.

Bonchem prides itself in offering not only advanced chemical treatment programs, but professional technical service. Attention to detail is very important and Bonchem strives to maintain its high level of success in the industry.



Untreated pipeline



Thermoflow<sup>®</sup> treated pipeline

Bonchem's main focus has always been to offer customers cost-effective water treatment programs. Because of our independence, Bonchem has the ability to offer customers current technology, in terms of scale and corrosion inhibition.

## Cooling water treatment

Thermoflow<sup>®</sup> is such a product. The scale inhibition properties of our Thermoflow<sup>®</sup> range