

Cooling water



Innovative solutions to prevent corrosion, deposits and microbiology.

An optimal heat transfer is the most important point in every water-cooled process. Scale, corrosion and biofouling negatively affect the heat transfer. Therefore Kurita develops customised solutions for cooling and process water systems, based on the combined treatments of scale & fouling prevention, corrosion inhibition, and biocides.

The proven Kurita treatment concepts include the delivery and the system specific dosing of chemicals as well as the continuous support of our satisfied customers. Thanks to Kurita's comprehensive research and development, our products comply with state-of-the-art technology. Besides the economic aspect, Kurita gives special attention to the environment-friendly treatment of cooling water systems: AOX-free biocides, ozone-technology as well as phosphate-free treatment concepts – Kurita supplies it all. For good reasons Kurita has already been for ten years one of only 30 enterprises which are listed in the „[NAI](#)“ (Natur-Aktien-Index / Nature-Stock-Index).

What kind of systems does Kurita take care of?

- Once-through systems
- Open cooling systems / Cooling towers

- Closed cooling circuits
- Air-conditioning systems
- Heating systems and sprinkler circuits
- Any type of process water

What kind of products does Kurita offer?

- **Scale and corrosion inhibitors** for open cooling systems: [Ferrofos®](#), [Aktiphos®](#)
- **Scale and corrosion inhibitors** for closed and semi-closed cooling systems: [Kurilex/Korrodex®](#)
- **Dispersing agents and biodispersants**: [Turbodispin®](#)
- **Biocides*** for an effective control of micro-organisms (bacteria, fungi and algae): [Ferrocid®](#)
- **Flocculants** for the conditioning of make-up water: [Kurifloc/Gilufloc®](#)

Why choose Kurita?

- To prevent blocking of pipes and pumps.
- For an optimal heat transfer.
- To avoid equipment failure.
- To prevent system shut-downs.
- To reduce the frequency of operational maintenance.
- To minimize costs.

Do you need support? Our qualified experts will be glad to advice you [personally and individually.](#)

Corrosion Inhibitors.

Corrosion in open and closed cooling water systems causes serious damage to the equipment and reduces its lifetime and efficiency. With Kurita's effective corrosion inhibitors you avoid such damage. Thus, you avoid enormous costs for new tubes and heat exchangers and you reduce the necessary repair and energy expenses.

Kurita provides corrosion inhibitors for open and closed cooling water systems. Depending on the type of cooling water we select the suitable corrosion inhibitor. A perfect corrosion inhibition not only includes the selection of the right corrosion inhibitor but also the control of all relevant water parameters. Kurita's precisely adjusted treatment concepts and efficient monitoring systems care for an optimized conditioning of your system.

Besides the traditional corrosion inhibition, we also provide products to control pitting corrosion, under deposit corrosion and micro-biologically influenced corrosion (MIC). These types of corrosion are prevented by our corrosion inhibitors together with our patented polymers, biocides and bio-dispersants.

We control the success of our treatment online with state-of-the-art technologies. Besides the use of conventional corrosion coupons Kurita is also able to determine continuously the corrosion rate and the pitting potential. This allows a rapid intervention in case of increasing corrosion rates. Furthermore, Kurita analyses corrosion damage to find and remedy its root cause.

Scale Inhibition.

Scaling of calcium carbonate, calcium phosphate, slime deposits and other materials reduce the efficiency of open and closed cooling water systems. Recovery of the cooling performance requires a time-consuming and costly cleaning. To prevent scaling and deposition of minerals and solids Kurita provides a wide range of scale inhibitors based on phosphonates, polyphosphates and special polymers.

One of the main benefits of the Kurita products is their extraordinary dispersion effect on iron and solids. Deposits and mineral scaling are prevented completely and an unhindered heat transfer to the heat exchanger is ensured. Our products further eliminate the risk of under-deposit corrosion. Complying with the often strict discharge regulations Kurita also provides phosphate-free products which completely inhibit scaling and deposits even in cooling waters with a high hardness, a high pH and high temperatures.

Besides the chemical cooling water treatment Kurita has the necessary know-how to design and efficiently use fresh water treatment and side-stream filtration.

Control of Microbiology.

Biofilm and biofouling jeopardize open and closed cooling water systems. By reducing the heat transfer, biofilm diminishes the cooling performance and thus increases the risk of microbologically influenced corrosion (MIC). This form of corrosion can quickly lead to critical damage and to drastically reduced plant availability.

Pathogenic microorganisms in the cooling water, in particular legionella, have become a major public concern in recent years. High concentrations of legionella in the cooling water constitute a hazard for humans and may seriously harm through legionellosis (Legionnaires Disease) and Pontiac fever. Equipment and whole plants with such a potential health risk must be shut down.

Kurita offers a large quantity of oxidizing and non-oxidizing biocides to prevent biofilm formation and biofouling from occurring. Besides the traditional products we emphasize in particular environmentally sound alternatives like ozone, hydrogen peroxide and chlorine dioxide. The additional use of biodispersants for biofilm removal and prevention of biological deposits is especially successful in systems with a high biofouling potential.

*Attention: Use biocides safely. Always read the label and product information before use.

Based on our experience and with the help of our experts, we develop tailored solutions to meet your individual requirements. [We gladly provide personal advice.](#)