



Water Treatment Chemical Additives

For high performance, security and economy

Water Treatment **Chemical Additives** are necessary for **smooth operation** of cooling towers, boilers and reverse osmosis units.

In order to ensure that cooling towers, boilers and reverse osmosis units are properly maintained and operate at optimum efficiency, the required conditions should be maintained. This can

be achieved by choosing selected chemicals for the treatment of water that will be used in boilers, cooling towers and reverse osmosis units.

Chemicals for Boilers

The optimal operation of boilers requires chemicals that protect equipment from scaling and corrosion. These problems are solved by B-Fine chemical additives by TEMAK.

B-Fine 1001 is an antiscalant chemical additive which is used to prevent scaling in boilers and to remove the existing sludge. The components of B-Fine 1001 are FDA approved.

B-Fine 1120 is recommended for regulating alkalinity and pH of feed water. In some cases it is necessary to adjust alkalinity and pH to the required levels in order to avoid problems such as corrosion and scaling.

Scaling effects are occurred due to insoluble salts of calcium and magnesium. B-Fine 1150 is used as dispersant

chemical additive which reacts with the hardness of feed water and protects boiler from scaling.

B-Fine 2001 reacts with the remaining oxygen in feed water, in order to protect boiler, feed water tank and the lines, which return condensate, from corrosion. The components of B-Fine 2001 are FDA approved.

Steam condensation may lead to oxygen and carbon dioxide absorption, which will provoke corrosion in lines that return the condensates. B-Fine 2004 forms a protecting film on the piping.

B-Fine 2100 offers a complete solution for the protection of the equipment, as it is an antiscalant, dispersant and oxygen scavenger chemical additive.



« TEMAK, with respect to human and the environment, provides high quality chemicals, which protect your equipment, maximize its efficiency and reduce water consumption and energy. All these are factors that lead to economic benefit »

Chemicals for Cooling Towers

The main reasons for chemical treatment of water that enters in cooling towers are to maintain the efficiency of the units at high levels, as well as to protect equipment from problems such as scaling, subsidence of solids, corrosion and growth of microorganisms. These problems are solved by chemical additives C-Fine by TEMAK.

- Scaling is formed by minerals that have been dissolved in water and subside on heat transfer surfaces or on water flow lines. As water evaporates in cooling towers, the concentration of the dissolved solids increases.
- The use of soft water in cooling towers will cause corrosion on equipment, even if it is made of stainless steel. Therefore, it is necessary to cover metal surfaces, which come in direct contact with water, with a protective layer. C-Fine chemicals protect equipment keeping calcium dispersed and preventing its crystallization.
- When water comes into contact with air, various materials accumulate, such as dust, insects, leaves. Consequently, sediment are formed, which displace water. Therefore, chemicals which inhibit the formation of sediments are suggested.

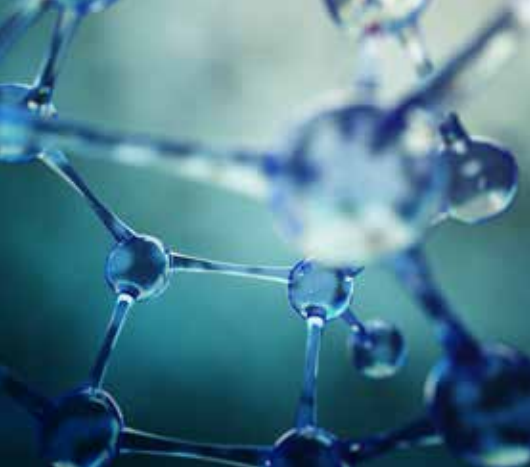
The solution to these problems is C-Fine 1009, which is recommended for use in open recirculation cooling systems. C-Fine 1009 has as main components phosphates salts and is based on "all organics" technology. C-Fine 2008 is also for a similar use in open or closed recirculation cooling system and is based on molybdenum salts.

C-Fine 2020 provides anticorrosive protection to closed refrigeration networks with recirculation and its consistency is based on nitrates.

- Hot water areas on cooling towers are potential place for growth of harmful microorganisms, such as legionella. Their growth prevents heat transfer and can also be harmful for human health. C-Fine 3001 and C-Fine 3003 are proposed to inhibit the growth of

microorganisms.





Chemicals for Reverse Osmosis

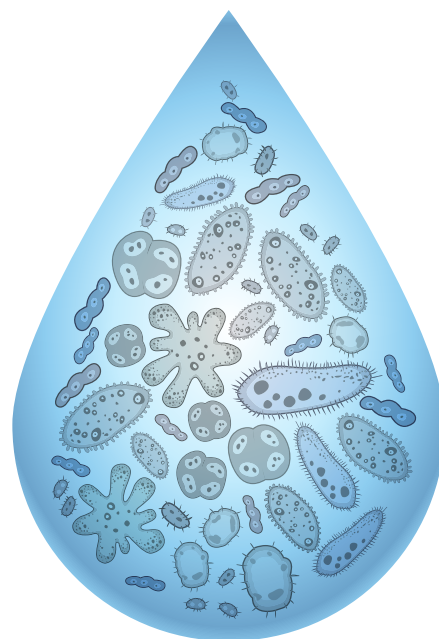
For proper operation of reverse osmosis and water production, the use of specific chemicals is necessary. Especially, chemicals for antiscaling protection of reverse osmosis membranes are extremely important.

TEMAK has a wide range of antiscalants, which are recommended depending on chemical analysis of feed water so that salts such as calcium carbonate, calcium sulfate, barium sulfate, silica do not cause problems to the system.

In this way, systems are designed and operate in optimal recovery and water and money are saved, as less water is discharged.

TEMAK has chemicals for chemical cleaning of membranes, which are suitable for the removal of inorganic and organic compounds and microbial load.

Lastly, chemicals that contribute to the smooth operation of reverse osmosis unit are available. These chemicals can adjust water pH at the desired levels, and are also suitable for chlorination and dechlorination of water.





Benefits from the cooperation with **TEMAK**

✓ **Quality to**

water suitable for every use, the operation of the systems at optimum point

✓ **Cost reduction due to**

prevention of scaling, corrosion and oxidation in equipment network, and protection against microorganisms (fungus, microbes, bacteria), which reduce water and energy consumption

✓ **Protection from damages to**

food/beverage/water bottling industries, pharmaceuticals and cosmetics industries, public electricity company, power plants, hospitals, shipyards and ships, industrial laundries, reverse osmosis units.

✓ **Additionally**

by finding the necessary dose of chemicals for the desired effect, extending equipment lifespan





TEMAK offers contemporary and integrated solutions to hydraulic and industrial products. Our reliability and consistency, through our long-term cooperation with leading suppliers, are the key assets of our products. Thus, they are selected and implement in fields such as industry, hospitals, marine industry, municipalities etc.



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