

AGMIN NEWSLETTER No. 206

Cupricide® Efficiency vs. Copper Sulphate

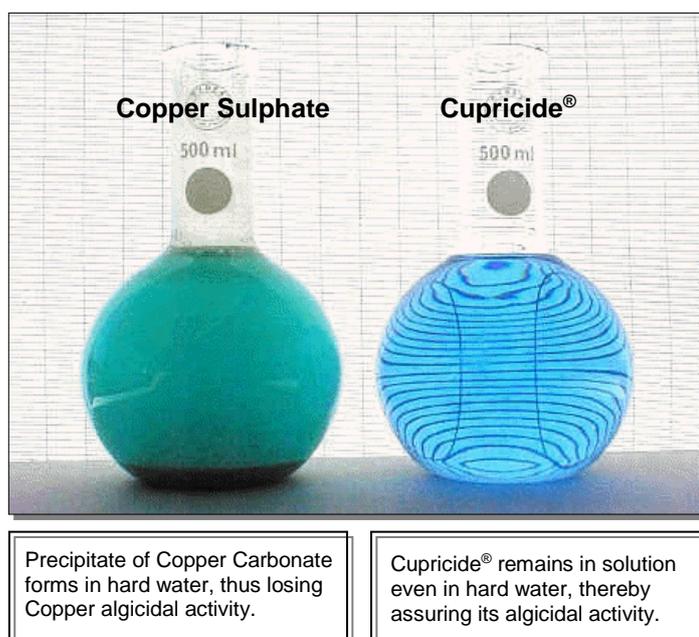
The Benefits Of A Complex Copper Algicide

Agmin's Cupricide® is supplied as a mixed copper alkanolamine complex. In this form, Cupricide® provides maximum algicidal efficiency but with low toxicity to fish. The organic complexing agents used in Cupricide® ensure that the key active ingredient (Copper), remains in solution and does not precipitate out like some other copper algicides, namely copper sulphate. Although copper sulphate has been used extensively throughout Australia as an algicide, it has several drawbacks associated with its use.

Firstly, copper sulphate is not algal specific - in fact it can be quite toxic to other aquatic life, e.g. fish when used at high concentrations. Secondly, if the water contains a high concentration of carbonate ions, the copper ions will preferentially combine with the carbonate ions and form an insoluble precipitate of copper carbonate. This precipitate sinks to the bottom of the water body where it forms a toxic slime. The formation of this precipitate also renders the copper essentially unavailable for the control of algae. To compensate, higher levels of copper sulphate are used which as stated above may seriously threaten other aquatic life. Finally, sulphate-containing algicides also have the disadvantage that they combine with hydrogen ions in aqueous solution to form sulphuric acid, which is highly corrosive. For these reasons Cupricide® is a much more cost effective and efficient product for algae control than copper sulphate.

Figure 1

The effect of adding copper sulphate and Cupricide® to hard water. Note the addition of Cupricide® results in a clear solution (right) as evidenced by the visibility of the background in the figure. The addition of copper sulphate (left) however results in a murky solution and the background is no longer visible.



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