

Are “Solid” Chemicals Cost Effective for Treatment of Cooling Towers?

Short Answer – No!



Various types of “solid” cooling water treatment chemicals have been heavily marketed in the past few years as being both “greener” than conventional liquid products and more cost effective. While the “green” claims are open to debate, the cost effectiveness can be easily checked by application of a little basic math.

For application of our mathematics, we have selected two products for comparison that are recommended for use in the LSI range of 2.0 to 3.0. Product “A” is from a well known solid chemical manufacturer while the second Product “B” is manufactured by ProChemTech. Specifications for these two products are shown and the \$/lb actives is easily calculated.

Product	\$/lb	Feed Rate mg/l product	Control Limits mg/l phosphonate	% active phosphonate	\$/lb actives
A	6.57	25 to 40	5 to 7	20	32.85
B	1.70	100 to 150	6.5 to 10	6.7	25.38

What this table clearly shows is that “solid” products are considerably more expensive than liquid products as far as \$/lb actives delivered are concerned. So, in addition to a complex, expensive feed system, replacement of liquid treatment products will also increase the cost of chemical treatment, in this case by approximately 29.4%.

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