

Magic Aire Water Quality Guidelines

For Heat Exchanger Coils with Copper Tubes

Condition	Acceptable Level	
pH	7 to 9	
Total Hardness	Calcium and magnesium carbonate should not exceed 20 grains per gallon (350 ppm).	
Iron Oxides	< 1 ppm.	
Iron Bacteria	No level allowable.	
Brackish	Calcium or sodium chloride concentrations < 125 ppm. (Seawater is approximately 25,000 ppm)	
Corrosion ¹		
	Ammonia, Ammonium Hydroxide	0.5 ppm
	Ammonium Chloride, Ammonium Nitrate	0.5 ppm
	Ammonium Sulfate	0.5 ppm
	Chlorine/Chlorides	0.5 ppm
	Hydrogen Sulfide ²	None Allowable

NOTES:

1. If the concentration of these corrosives exceeds the maximum allowable level, then the potential for serious corrosion problems exists.
2. Sulfides in the water quickly oxidize when exposed to air, requiring that no agitation occur as the sample is taken. Unless tested immediately at the site, the sample will require stabilization with a few drops of one Molar zinc acetate solution, allowing accurate sulfide determination up to 24 hours after sampling. A low pH and high alkalinity cause system problems, even when both values are within ranges shown. The term pH refers to the acidity, basicity, or neutrality of the water supply. Below 7.0, the water is considered to be acidic. Above 7.0, water is considered to be basic. Neutral water contains a pH of 7.0.
3. To convert ppm to grains per gallon, divide by 17. Hardness in mg/l is equivalent to ppm.