

## **WATER CLARITY PROBLEMS**

<b>PROBLEM</b>	<b>POSSIBLE CAUSES</b>	<b>SOLUTIONS</b>
Cloudy water	<ul style="list-style-type: none"> <li>• Early algae growth</li> <li>• Insufficient filtration or short filter cycles</li> <li>• Inadequate levels of Free Chlorine</li> <li>• High bather loads</li> <li>• Chlorine stabilizer levels over 150 ppm</li> <li>• Unbalanced water:                             <ol style="list-style-type: none"> <li>a) High pH – which can cause minerals to precipitate out into very small solid particles</li> <li>b) High Total Alkalinity</li> <li>c) High Calcium Hardness</li> </ol> </li> </ul>	Test the water using a reliable test kit or have your water tested at your professional SUN dealer. If the Free Chlorine is below 1 ppm or the Combined Chlorine is more than 1 ppm above the Free Chlorine reading, shock using <b>SUN-Brite</b> . Make sure the filter is clean and functioning properly. If calcium hardness is above 400 ppm, use <b>SUN Stain &amp; Scale Inhibitor</b> and avoid the use of calcium products. Use <b>SUN Tru-Blue</b> to increase filter efficiency. Inspect for algae and treat as necessary (see Algae Problems).
Colored water	<ul style="list-style-type: none"> <li>• Green, hazy – indicative of algae</li> <li>• Metals in the water:                             <ol style="list-style-type: none"> <li>a) Green, clear – indicative of copper</li> <li>b) Amber, red, brown – indicative of iron</li> <li>c) Purple, black – indicative of manganese</li> </ol> </li> </ul>	Colorless, hazy water is probably early algae. Treat as green algae. Have your water tested at your professional SUN dealer for copper, iron and manganese. If present, add the recommended dose of <b>SUN Super-Quest</b> for each 0.5 ppm of metals present. Very high levels of metals may require even higher doses to react with all of the metals present. If color persists, consult your SUN dealer.
Cloudy, green water	<ul style="list-style-type: none"> <li>• Trace metals</li> <li>• Organo-metallic colloids</li> <li>• Converting from biguanide to chlorine</li> <li>• Early algae growth</li> </ul>	Test the water for metals such as iron and copper. If present, treat with <b>SUN Super-Quest</b> as directed. Make sure that the pool is shocked enough that a Free Chlorine level of at least 3 ppm is maintained overnight. Retest and shock repeatedly, as necessary. Inspect filter and operate continuously until clear. Add <b>SUN Tru-Blue</b> to help remove fine particles, dead algae and organic debris. See Algae Problems for more detailed remedy.
Foaming	<ul style="list-style-type: none"> <li>• Reaction of body oils and cosmetic residues with the natural alkalinity of the water, which can form a soap</li> <li>• Use of “quat” algaecides, which have a tendency to foam</li> <li>• Air leak in the return line</li> <li>• Use of foaming cleaning products</li> </ul>	An air leak in the return line can lead to sever foaming; inspect and tighten all fittings. Agitation of the water can also lead to foaming. Add <b>SUN Defoamer</b> as directed. Body oils and cosmetic residues can be controlled by the use of <b>SUN Natural Enzyme Treatment</b> .
<b>Hints/Preventive Maintenance:</b>	Proper filtration is important in order to control the quality and clarity of the pool water. Make sure that the filter is cleaned and inspected at least once a year. Use <b>SUN Filter Cleaner</b> for excellent results. Do not backwash sand filters more often than needed – only when the pressure rises too high (10 psi over starting pressure with clean filter). Regular water testing can help avoid problems that are caused by the presence of dissolved minerals. If minerals such as iron, copper and manganese are present, an addition of <b>SUN Super-Quest</b> should be made prior to adding fresh water.	

**PROPER RANGES FOR POOL/SPA WATER**

pH:	<b>7.2 - 7.8 (ideal 7.2 - 7.6)</b>
Total Alkalinity:	<b>80 - 150 ppm</b>
Free Chlorine:	<b>1.0 - 3.0 ppm</b>
Combined Chlorine:	<b>less than 1.0 ppm above Free Chlorine</b>
Bromine:	<b>3 - 5 ppm</b>
Calcium Hardness:	<b>200 - 400 ppm</b>
Cyanuric Acid (Stabilizer):	<b>20 - 40 ppm in northern areas; 40 - 60 in sunbelt areas</b>
Total Dissolved Solids:	<b>maximum level 3,000 ppm</b>
Iron:	<b>0 ppm</b>
Copper:	<b>0 ppm</b>