

The wash cycle that you can choose from is either cold, warm or hot. The cold water temperature that is coming into the washing machine in Florida is about 80 degrees F. Warm is a little over 100 degrees F and hot is well over 100 degrees F. The hotter the water temperature the more problems you can run into. You should primarily use only the cold and warm water cycles for economy, efficiently and safety.

HOT WATER PROBLEMS

- (1) Surfactants-**The surfactants in detergents do the actual cleaning. When the water temperature is too hot the surfactants become too soluble, losing some cleaning effectiveness.
- (2) Enzymes-**The enzymes in detergents are catalysts that clean many insoluble stains to soluble stains. When the enzymes are heated to a high temperature over 140 degrees F they are destroyed. The enzymes have great effectiveness at temperatures under 140 degrees F.
- (3) Setting Stains-**Hot water causes many stains to set or oxidize. This means that the stains become more difficult to remove. Stains that readily oxidize include cooking oil, coffee, tea, liquor, soft drinks, blood, mustard and countless others.
- (4) Color Safe Bleach-**Color safe bleaches can be either sodium perborate, sodium percarbonate or hydrogen peroxide. They are found in such products as Clorox 2, Oxyclean, and similar products. These bleaches become highly activated with heat. Each 18 degrees rise in temperature will actually double the chemical action. This means that these products may be safe to most colored fabrics at a cold temperature but at a hot temperature it can oxidize and color the fabric.
- (5) Household Bleach (sodium hypochlorite)-**A common product is Clorox. This is a very strong bleach and can weaken fabrics at a high temperature. Household bleach at high temperatures can also cause deterioration of many fabrics. Weakening of the fabrics due to bleach content is called oxycellulose.
- (6) Shrinkage-**Hot water increases the incidence of shrinkage in fabrics. Even pre-shrunk fabrics can shrink in hot water. The cold water rinse after washing in hot water also increases the possibility of shrinkage because the fabric is shocked. (Hot to cold) Fabrics are also stabilized with heat to prevent shrinkage. Hot water causes shrinkage because it overcomes the stabilization temperature.
- (7) Wrinkling-**Permanent press fabrics will not wrinkle when washed in low water temperatures. At high temperatures breaks and wrinkles can occur that may not be correctable in pressing.

