

## GLASSWARE ETCHING

Automatic dishwashers have been in use for many years. With the advancement of the industry we have seen many changes. Along with the changes we have seen many problems come and go. The most evident problem that continues to plague the automatic dishwashing industry is etching of glassware. This etching may appear as a cloudy coating or as a rainbow coloring or film that appears to be deposited on the glassware. Unfortunately the surface of the glassware is permanently damaged as a result of etching.

Occasionally we see etching effect certain grades of silverware also. Generally the finer the glass or crystal or silverware the softer the material is, thus the more susceptible it is to being damaged by etching.

The various dishwashing detergents on the market today contain compounds which are generally alkaline in nature. Water itself will vary from region to region. Water may be naturally acidic or it may be naturally alkaline. Either case may influence the etching process. In naturally soft or softened water, detergents, being alkaline in nature, will tend to be more aggressive and may remove metal ions from the surface of the glassware.

Higher temperatures of water supplies also accelerate the corrosive tendencies of any alkali solution. Some dishwashers provide a preheater to increase the temperature of the hot water being supplied. Many dishwashers use a drying cycle which applies extreme heat to evaporate the water. This, in turn, may leave an alkali or caustic residue which etches the glassware.

Any one of these factors or a combination of factors, along with your water supply may contribute to etching. Etching may be minimized by trying a few simple steps:

- 1) Use the least amount of detergent necessary to adequately clean your dishes. Most detergents are formulated to work with hard water. If you have softened water you may only require one half to one quarter of the recommended dosage. (You may need to experiment for a few cycles.)
- 2) Lower the water temperature, either at your water heater or, if possible, bypass the preheater. Remember, the higher the temperature, the faster the etching will occur! Check with your appliance dealer for manufacturer recommendations.
- 3) Follow the manufacture's instructions on proper loading of the dishwasher. Overloading or improper placement of glasses and/or dishware may lead to poor rinsing. Detergent residue left behind may also accelerate an etching problem.
- 4) Use a rinsing agent or wetting agent along with your detergent. This will minimize any residue which may cause water spotting or aid the etching process.

→ sodium silicate