

Common Dishwasher Glassware Problems

Etching

Etching is the removal of metal ions from glass by alkaline wash solutions. Generally, everyday glasses and inexpensive crystal are made of ingredients that will show signs of some etching over time.

Etching is aided by pre-rinsing the dishes, insufficient water volume, too soft water, too hot water and not using rinse-aid.

Once the etching process has begun, it can not be reversed.

Filming and Streaking

These problems usually precede or are seen in conjunction with etching. When water is softened, calcium and magnesium are removed and replaced with sodium ions. As part of this exchange process, the Dissolved Solids in the water increase and can cause streaks or filming. Filming will first appear as an iridescence when the glass is held up to light. As the film becomes heavier, it becomes opaque. Silica film cannot be removed.

Solution:

Due to the numerous variables involved, it may not always be possible to prevent filming or etching. It can be minimized, however, by reducing the amount or intensity of the contributing factors.

- A) Use a minimum amount of dishwashing detergent. One teaspoon of detergent in the detergent cup is usually sufficient. If the dishes are exceptionally dirty, add extra detergent by the half teaspoon.
- B) Use the maximum water level allowed by the dishwasher. More water allows for better rinsing and a higher dilution of the detergent.
- C) Use lower temperature wash programs. Higher temperatures lower the resistance of a glass to etching.
- D) Do not use over-soft water. Very soft water is extra reactive and will act to pull additional minerals from the glasses and dishware.
- E) Load the dishwasher correctly. Correct loading ensures thorough rinsing of the glasses and dishes.
- F) Use Rinse Aid. Rinse Aid conditions the surface of the water so that it will sheet off the glass thereby reducing the time available for chemical reactions with the glass.



Hard Water

Hard water contains minerals, predominantly calcium and magnesium, that form deposits (usually seen as spots) on glasses and flatware. Eventually, these minerals will also appear as a white or crusty film on surfaces inside of the dishwasher. These deposits can be removed by using a dishwasher cleaner specially formulated for removing calcium (lime) deposits. Once the dishwasher is cleaned, deposits on the dishware can be reduced or eliminated by:

- A) Using a slightly larger amount of detergent than recommended by the manufacturer. This allows the excess calcium and magnesium to be tied-up by the detergent and flushed from the machine.
- B) Using Rinse Aid. Rinse Aid conditions the surface of the water so that it will sheet off the glass and not cause spotting.
- C) Softening the water. Softening the water replaces the calcium and magnesium with less harmful sodium ions.