



Foaming can occur for these reasons:

- Improper Solution Temperature
 - Chemical Quality and Type
 - Chemical Concentration
 - Type of Soils Being Removed
 - Water Hardness
1. The washer operating temperature is too low – Most chemicals will foam below 150 degree F. For Power Kleen Chemicals make sure the washer is 180-190 degrees before starting the washing cycle. Read the chemical makers information for the operating temperature range and choose the highest temperature to prevent foaming. Remember all chemical reactions double for every 10-15 degree F temperature rise.
 2. Bump start washer a couple of times to mix washer solution for even heating and to thoroughly mix your chemistry before you begin washing.
 3. The type(s) of soils can react adversely with the chemical during cleaning to cause a foaming problem. Select a chemical that is appropriate for the soils to be removed. It is also a good idea to check with your MART representative to be certain that the type and amount of chemical are appropriate for the following:
 - Type of Metal
 - Makeup of part(s)
 - Operating Temperature of the Power Washer
 4. Chemical - Be sure to use the appropriate type of chemical for your application. Different types of chemicals foam worse than others with certain kinds of soils. Chemical concentration may be too much or too little - a measurement of the chemical concentration level in your washer can dramatically cut chemical usage and minimize foaming. Ask your chemical supplier how to measure the concentration of chemical in your washer. Power Kleen concentration can be measured with a simple titration kit purchased from MART Tech Services; it is very similar to a pool testing kit.
 5. Be sure the chemical is specifically formulated for high velocity and high impact Power Washing. Chemicals that don't normally foam can foam like crazy if they are not made for Power Washing. MART Power Kleen Chemicals are specifically formulated to reduce the tendency to foam in our Power Washers.
 6. Defoamant - Be sure to have the proper amount of defoamant in the washer. The de-foaming component in a chemical compound represents only a small percentage of the total compound. De-foaming component percentages will vary from compound to compound. Since the Power Washer requires only a light chemical charge, you may need to add a "booster charge" of defoamant, if foaming is a problem. Consider adding a de-foaming agent rather than more chemical, given the following conditions:
 - Your cleaning needs are being met
 - You have determined that the type and amount of chemical are appropriate for the soils being removed
 - You have determined that the operating temperature of the Power Washer is appropriate for the type of soils, and the type and amount of chemical
 7. Oil Skimming may be removing defoamant instead of oil and greases. Adjust skimmer to operate when the solution cools and oils have floated to the surface and defoamants have returned to solution. MART Power Washers have a 7 day programmable clock that can be adjusted to operate the skimmer during these periods of non-operation. Note: If you are cleaning synthetic oils and greases you should run your oil skimmer continuously. The build up of synthetic oils on the surface will cause foam. Continuous removal of these compounds throughout the wash and rinse cycles will remove the synthetics.
 8. Greases or other contaminants that contain animal fat can cause foaming with alkaline chemicals. Sodium Hydroxide (Lye) and animal fat is the basic formula for soap making. Try using Power Kleen III or Power Kleen II for situations where animal fat may be present as a lubricant.

For more trouble shooting information visit MART's chemical technology information at http://www.martwash.com/html/technology/chemical_and_cleaning_technology.htm#2.6.1

MART Tech Services at www.marttechservices.com

As always you may call MART Tech Services for Free consultation and advice from our service technicians at 1-800-543-6278 or email marct@martwash.com

MART TECH SERVICES Troubleshooting Document

Foaming in the Power Washer

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