

Guidelines for Cleaning and Sanitizing Food Hoses

The cleaning and sanitizing suggestions set forth below are guidelines only.

It is necessary that all applicable government regulations pertaining to the cleaning and sanitizing of the food hoses and food hose assemblies be followed and adhered to and which governmental regulations supersede the guideline contained herein.

The life of the hose is affected by the cleaning and sanitizing process due to the mechanical and chemical stresses which occur during the cleaning and sanitizing procedure. The service period of rubber hoses is dependent on their formulation and the environment of use which in turn is influenced by the product, process temperature, cleaning, bactericidal compounds, and time of exposure. Users should frequently monitor the physical condition of the rubber hose material product contact surfaces. Such observations are necessary to determine the actual sanitary service period of rubber hoses. It is further recommended that the rubber hose be replaced before surface imperfections or sloughing occurs. Routine replacement schedules should be established and followed.

Food hose users should be guided by their own, if applicable, or specific industry cleaning and sanitizing procedures and standards. For example, the wine industry may have different standards than the dairy industry and any standards applicable to a specific industry supersede the guideline contained herein.

The cleaning and sanitizing of food hoses and hose assemblies is intended to remove any food particles or residues including detergents and/or disinfectants that may be the source of harmful bacteria microorganisms or other sources of contamination. The effectiveness of the guidelines contained herein are dependent upon the practices and care taken by the users.

CLEANING AND SANITIZING STEPS

1. FREQUENCY

The frequency of the cleaning and sanitizing cycle is to be conducted based on the users internal and/or industry guidelines. Some food and beverage media may require more frequent cleaning and sterilization than others. Be sure to follow all applicable industry requirements. It is advisable that all Parker hoses are to be cleaned and or sanitized prior to initial use.

2. WASHING

First step in the process is to rinse the hoses with hot potable water. It is advisable to flush the hose as soon as possible after transference of the media and to drain the hoses completely for the next step. A potable water flush should be followed by utilizing the appropriate detergent for the media that was conveyed in the hose. Proper disinfection media should be utilized where necessary. The cleaners and sanitizers must be chemically compatible with the hose liner along with the appropriate temperature limits to maintain the integrity of the hose.

3. CLEANING/DISINFECTING

Select the appropriate detergent and disinfectant for the media. For an application such as with in-place cleaning, chemical compatibility of the hose should be verified. Please adhere to the detergent and disinfectant guidelines and recommendations per the manufacturer's instructions of the cleaning product along with applicable regulations and industry requirements. Following the cleaning product manufacture guideline as to concentrations, soak time, and temperature will aid in proper use of the cleaning chemical. Also, be mindful of any waste and disposal regulations and guidelines required for these procedures.

After cleaning the hose with detergent it is advisable to rinse the hose with potable water to prepare the hose for sterilization by either with steam or with chemical solution.

Steam can be categorized as a disinfectant, where its effectiveness in eliminating bacteria and other contaminants varies according to the material/products being conveyed and the procedure employed by the users.

Chemical disinfectant such as caustic soda, nitric acid, per-acetic, phosphoric acid, chloroacetic acid or other acids suitable for disinfecting food hoses must be carefully selected to ensure optimal effectiveness while also assuring maximum safety and health. When selecting a disinfectant, it is necessary to pay strict attention to concentration levels, temperature, cycle time, etc. The type of product/material being conveyed is to be taken into consideration when selecting a specific disinfectant.

After completion of the disinfecting treatment with a chemical solution, the hose must be flushed with potable water for a sufficient amount of time to eliminate any chemical residue from the disinfecting treatment. Refer to all chemical manufacturer's instructions.

4. PROCESS CONTROLS

The result of the cleaning and sanitizing process must be regularly checked to ensure that all contamination and residuals have been eliminated. It is advisable that any non-conformance to cleaning/sanitization procedures or industry guidelines is addressed in a corrective action.

Guidelines Chart for Cleaning and Sanitizing Food Hoses

	Medium	Hose Tube	Concentration	Temperature
RINSING	Hot Water	NR /NBR / SILICONE EPDM / BIIR / UPE / PTFE	-	Max 90° C
PHYSICAL DISINFECTANT	Steam	NR / NBR	-	Max 110° C Max 10 min
		EPDM / BIIR / UPE / PTFE	-	Max 130° C Max 30 min
		SILICONE	-	Max 135° C Max 18 min
CHEMICAL DISINFECTANT	Acid (i.e. Nitric Acid)	NR /NBR / SILICONE	0.1%	Max 65° C
			2%	Max 25° C
		EPDM / BIIR / UPE / PTFE	0.1%	Max 85° C
			3%	Max 25° C
	Alkaline Solution (i.e. Caustic Soda)	NR /NBR / SILICONE	2%	Max 65° C
			4%	Max 25° C
		EPDM / BIIR / UPE / PTFE	2%	Max 85° C
			5%	Max 25° C
	Disinfectant (i.e. Peracetic Acid)	NR /NBR / SILICONE	1%	Max 25° C
		EPDM / BIIR / UPE / PTFE		Max 40° C

The life of the hose is affected by the cleaning and sanitizing process due to the mechanical and chemical stresses which occur during the cleaning and sanitizing procedure. The service life of rubber hoses is directly dependent on frequency and time of exposure to PHYSICAL and CHEMICAL disinfectants. Users should frequently monitor the physical condition of the rubber hose material product contact surfaces. Such observations are necessary to determinate the actual sanitary service period of rubber hoses.

The present tabulation is based on tests and on generally available sources, and believed to be reliable. However, must be used as a guidance only since it does not take in consideration all variable that may be encountered in actual use such as and not limited to duration of exposure and stability of the fluid and possible contamination.