



BIODEGRADABLE DESCALER & DESCALER KIT

Restores Efficiency to Water Appliances

Boilers
Condensers
Heat Exchangers
Ice Machines
Tanks
Vacuum Pumps

Chillers
Evaporators
Humidifiers
Potable Water Lines
Tankless Water Heaters
Water Heaters



www.flowaide.com

Scale, lime and rust are any water appliance's enemy. Over time, these mineral deposits build up and decrease the appliances efficiency. J.C. Whitlam Manufacturing Company, manufacturer of specialty chemicals for the plumbing industry since 1900, has developed a cost effective and environment-friendly solution for descaling. Whitlam's **FLOW-AIDE®** Biodegradable Descaler is the plumbing and heating contractor's choice when descaling; Tankless Water Heaters, Wall Hung Boilers, Ice Machines, Humidifiers, Heat Exchangers, Chillers, Vacuum Pumps, Condensers, Evaporators, Tanks, Potable Water Lines, Radiant Heating, and most all Water Operated Equipment. **FLOW-AIDE®** is a non-hazardous, non-corrosive, non-injurious, non-toxic, yet fully biodegradable descaler, heavily fortified with wetting and penetrating agents which actually dissolve water scale, lime, mud, rust, and other water formed deposits from water operated equipment. **FLOW-AIDE®** is certified to NSF/ANSI 60 for use as a cleaner in potable water systems.

An area of particular interest of **FLOW-AIDE®** is using the product to descale tankless water heaters. Historically most all tankless water heater manufacturers have recommended flushing their system using distilled vinegar. The benefit of **FLOW-AIDE®** is that it is as safe to use as vinegar and it is a much more effective method in dissolving scale with the ability to remove scale at 3 to 4 times the rate. Along with the descaling solution, Whitlam has developed the **FLOW-AIDE®** Tankless Water Heater Descaling Kit. The kit provides all the necessary equipment to service the water heaters. The kit includes a submersible electric pump with 25 foot cord, 1 quart of **FLOW-AIDE®**, 2 – 5 foot rubber hoses with adapters, all packed in a 3 ½ gallon plastic pail. Once the kit is assembled and attached to the service lines, a quart solution is diluted in the bucket with a gallon of water and cycled through the appliance. The process takes only 30-40 minutes to completely dissolve all scale buildup. Typically, tankless water heaters should be serviced yearly; however, in harsher water environments and commercial applications, systems may need to be descaled multiple times in a year. For ease of connecting to the water heater, it is recommended the system be installed with service valves.

FLOW-AIDE® Biodegradable Descaler has the ability to dissolve approximately one-half pound (226 grams) of calcium carbonate scale per quart while at 70°F / 21°C, in concentrated form. If the **FLOW-AIDE®** is diluted, it will still dissolve one half pound per quart but will require additional circulating time. Conversely, when used with the Descaler Kit, time to descale a tankless water heater can be achieved quicker with higher concentration of solution. The concentrated solution can be held, safely, in the open hand without harmful effects. A simple soap and water rinse is all that is required, if irritation occurs. As with any chemical, consult a physician if irritation persists.

FLOW-AIDE® Biodegradable Descaler should be used as directed and at any temperature within the operating limits of between 0°F / -18°C and 180°F / 82°C. If the solution does freeze, slush or thicken at the lower operating temperatures, and then thaws, there will be no performance reducing results. Please consult J. C. Whitlam Manufacturing Company when temperatures above 180°F / 82°C are encountered. **FLOW-AIDE®** Biodegradable Descaler does not deteriorate, oxidize, saponify, thicken or lose effectiveness for at least five years. Although almost any chemical reaction will react faster under elevated temperatures, **FLOW-AIDE®** should be applied at ambient temperature (65°F / 18°C to 95°F / 35°C) with full effectiveness and results obtainable. The solution is exothermic, but does not develop a substantial increase in temperature while dissolving water scale, lime, mud, rust or other water formed deposits. However, when **FLOW-AIDE®** comes in contact with strong caustics, a significant exothermic reaction could result with temperatures potentially exceeding 140°F (60°C).

The solution has a mild citric odor and does not exude any obnoxious or toxic vapors. **FLOW-AIDE®** does not corrode, erode, attack, oxidize or have other deterioration effects on virtually any metal or materials commonly found in water systems such as; copper, iron, rubber, steel, titanium, PVC, CPVC, ABS, glass or other materials found in heat exchangers, vacuum pumps, evaporators, condensers, and/or other water cooled, water heated, or water operated equipment when used as directed. The product is not recommended at 100% concentration (non-diluted) on magnesium, zinc, and/or aluminum; it could oxidize or pit. Furthermore, polished chrome and some alloys of stainless steel could become discolored if used with concentrated solutions. The rule of thumb is that if the alloy is designed for use in a water system (aluminum engine block, aluminum mold, etc.), the alloy should be compatible with the **FLOW-AIDE®** solution. Otherwise, it is recommended that the **FLOW-AIDE®** be diluted 50% or more with water when cleaning.

FLOW-AIDE® is an electrolyte, as are most cleaning agents. An electrolyte is any liquid that will transfer small electrical currents. Examples: salt water/vinegar. An electrolyte may cause plating in some types of equipment. This type of plating transfers small amounts of one metal onto another metal according to the galvanic corrosion chart. In some instances, a thin coating of copper may be plated onto a steel drum while circulating an electrolyte such as **FLOW-AIDE®**. The only time plating occurs is when two dissimilar metals are in an electrolytic solution. The solution does not require neutralizers and it is free rinsing with water.

The solution has the ability to dissolve deposits from some equipment while in operation and without shutdown, either through the cooling tower or if auxiliary coolers are incorporated. Do not circulate material for more than a six-hour period without consulting the manufacturer. Most **FLOW-AIDE®** cleaning applications can be accomplished within an average of 45 minutes to two hours. Please use material only as directed. **FLOW-AIDE®** is designed to be used by its own or diluted with water and water only. The solution is biodegradable with a BOD value of 16 mg/l. This normally allows the solution to be water flushed down plant sewers. Check with local ordinances and regulations in your area prior to disposal.

The solution is packaged and shipped in single quart containers, single gallon containers, 12 – 1 quart cases, 6 - 1 gallon cases, 5 gallon jugs, 30 and 55-gallon drums, 275 and 330 gallon totes, and 550 gallon mega containers with lifting lugs.

FLOW-AIDE® does NOT contain any VOC's and is non-reportable under SARA Title 3: Sections 311/312/313 Categorization. It does not contain any toxic phenols, creosols or other hazardous substances not listed in our current MSDS. **FLOW-AIDE®** is not reportable under CERCLA. The NSF designation is registered for use in beverage, pharmaceutical, bottling, poultry, and other food processing plants. For additional details regarding the specifications of **FLOW-AIDE®**, please contact the technical department of J.C. Whitlam Manufacturing at 330-334-2524 or visit www.flowaide.com.

