

Do The Math:

The SMARTWASHER® *versus* Solvent Parts Washers

The SMARTWASHER® *versus* NON-Bioremediating, Water-Based Parts Washers

SMARTWASHER versus SOLVENT

The patented, SmartWasher bioremediating system allows users to eliminate or dramatically reduce waste streams, eliminating the expense of hazardous waste removal contracts and associated liabilities.

ONE SOLVENT PARTS WASHER holding 16 gallons of solvent that is changed every 6 weeks **will generate 832 pounds of waste annually:**

(16 gallons X 6.5 pounds per gallon of solvent X 8 changes annually = 832 pounds)

ONE TYPICAL AQUEOUS (WATER) – BASED PARTS WASHER holding 25 gallons of cleaning fluid and is changed out every 8 weeks

will generate 1300 pounds of waste annually:

(25 gallons X 8 pounds per gallon of cleaning fluid X 6.5 changes annually = 1,300 pounds)

ONE SMARTWASHER BIOREMEDIATING PARTS WASHER, changing one OzzyMat filter per month **will generate 7.2 pounds annually.**

(0.6 pound OzzyMat x 12 = 7.2 pounds annually)

Before true, working bioremediating technology, as embodied in the SmartWasher proprietary parts washing system, parts washers generated and continue to generate large and measurable quantities of often hazardous waste. These wastes require manifesting before transportation off-site and incur cradle-to-grave liabilities to the generator associated with RCRA and other federal, state and local regulations.

It is simple to calculate the impact of changing to the SmartWasher bioremediating parts washer system.

ONE SOLVENT PARTS WASHER holding 16 gallons of solvent that is changed every 6 weeks **will generate 832 pounds of potentially hazardous waste annually.**

Solvent weighs approximately 6.5 pounds per gallon, and a standard sink-on-a-drum solvent washer will hold about 16 gallons of fluid. Conservatively estimating changing out or hauling away spent solvent every 6 weeks, you, as the generator, would be required to annually manifest 832 pounds of potentially hazardous waste calculated as follows: *16 gallons X 6.5 pounds per gallon of solvent X 8 changes annually = 832 pounds.*

So, faced with the requirement to manifest over 800 pounds of potentially hazardous waste for every solvent parts washer in the generator's location, the idea of changing to water-based parts cleaners has some appeal. But on examination, unless the water-based cleaner bioremediates, the volume of liquid waste actually INCREASES as measured by weight.

ONE TYPICAL AQUEOUS (WATER) – BASED, NON-BIOREMEDIATING PARTS WASHER holding 25 gallons of cleaning fluid that is changed out every 8 weeks **will generate 1300 pounds of potentially hazardous waste annually.**

Water based cleaning fluid of all types weighs approximately 8.5 pounds per gallon, and a typical water-based parts washer will hold about 25 gallons of fluid. So if the water-based fluid is changed out every 8 weeks you, as the generator, will be required to be responsible for the disposal of 1300 pounds of contaminated water-based parts cleaning fluid calculated as follows: *25 gallons X 8 pounds per gallon of cleaning fluid X 6.5 changes annually = 1,300 pounds.*

By comparison, **ONE SMARTWASHER BIOREMEDIATING PARTS WASHER** requires the disposal of only **7.2 pounds of typically non-hazardous solid waste annually** (one OzzyMat filter every month). The fluid in a properly serviced and operating SmartWasher is continuously cleaned by the microbes introduced regularly to the system via the OzzyMat; liquid waste is not generated or removed from a SmartWasher. Therefore, changing one OzzyMat filter per month will generate 7.2 pounds annually calculated as follows: *0.6 pound OzzyMat X 12 = 7.2 pounds annually.*

Simple Math = A Simple Choice

The patented SmartWasher® is a non-hazardous, bioremediating parts washing system. Through the proprietary technology embodied in the system which harnesses the power of bioremediation coupled with proper maintenance, our customers should never need to haul away spent or hazardous parts washing solvent.

PROCESS:

Three specific products make up the SmartWasher bioremediating parts washing system, which work in unison to deliver the benefits of bioremediation. The SmartWasher is the parts washing machine which incorporates a heater, thermostat, level-sensor probe and pump.

The second integral part of the proprietary ChemFree process is a degreasing solution called OzzyJuice®. This water-based solution is a pH neutral, non-flammable, non-hazardous degreasing agent. It does not cause dermatitis or skin irritations and is safe for both the user and the environment.

The third and final key ingredient in the ChemFree system is the OzzyMat™ This is a particulate filter and a vehicle for introducing new colonies of our microbes into the parts washer. These natural occurring microbes break down the carbon based products being cleaned off the parts (grease, oil and other contaminants) leaving behind by-products of harmless carbon dioxide and water. The volume of carbon dioxide generated by a single SmartWasher is negligible; the water by-product combines with the OzzyJuice in the system to make up for any liquid lost to evaporation, keeping OzzyJuice at the same effective cleaning level for as long as the system is maintained.

OzzyJuice cleans the dirty parts and the Ozzy microbes clean the OzzyJuice.

MAINTENANCE:

Approximately every 6-8 weeks the SmartWasher will need to be topped off with OzzyJuice due to normal fluid loss, which occurs through bioremediation, evaporation and carry-off (rags, parts, etc.). When the SmartWasher needs OzzyJuice a low fluid light on the unit illuminates to alert the user. The user simply pours (1) 5-gallon container of OzzyJuice directly into the sink to bring the fluid back up to a proper operating level. The OzzyMat, which introduces the microbes into the parts washer, needs to be changed every 30-days (once a month) to keep the OzzyJuice clean for each and every cleaning application.

OZZYJUICE DESCRIPTION:

Non-hazardous

Non-flammable

Non-Toxic/Caustic

pH Neutral

Biodegradable

Certification: NSF, AQMD, BOEING D6-17487 Revision n, DOUGLAS CSD No., ETL, US EPA
"Design for the Environment" recognition for SW-4 OzzyJuice

BENEFITS:

Eliminate/Reduce Liquid Hazardous Waste Stream

Eliminates VOC Emissions From Parts Washer Use

Environmentally Responsible

Lower Cost

Safe for Employees

Safe for Environment

Enhancement to all Corporate/Company "Green" programs

ChemFree Corporation is committed to developing and marketing safe, effective parts cleaning systems that reduce the release of VOCs and eliminate the generation of liquid hazardous wastes for automotive, industrial, government and commercial users. ChemFree Corporation was founded in 1993, and is a majority-owned subsidiary of Intelligent Systems Corporation, a publicly traded corporation (AMEX symbol: INS).