



**SmartWasher® Specialty Metals  
Cleaning Solution**

**I. Product Description**

CRC's **SmartWasher® Specialty Metals Cleaning Solution** is an aqueous, low VOC, non-corrosive, non-flammable, biodegradable cleaning fluid for use in the SmartWasher® Parts Washing System. The Solution works in conjunction with the Parts Washing System when warmed to 105° by the SmartWasher® units. The maximum strength, low odor **Specialty Metals Cleaning Solution** handles the removal of tough industrial soils as well as heavy grease, oil, carbon, sludge, dust and varnishes safely from all types of substrates. Additionally, **Specialty Metals Cleaning Solution** is not corrosive to aircraft metal or weapons metals and is suitable for all painted and unpainted aircraft surfaces.

The SmartWasher® System is a timely alternative to conventional petroleum-based solvent parts washers. SmartWasher® is a self-contained, self-cleaning system that is completely safe, non-toxic and generates no hazardous waste - without compromising cleaning ability. SmartWasher® uses the process of bioremediation - the accelerated breakdown of organic compounds such as grease, grime, varnish, oil, carbon and other heavy industrial soils through the use of microbes. The microbes, suspended in the Specialty Metals Cleaning Solution that re-circulates through the unit, literally eat their way through soils, converting them into harmless water and Carbon Dioxide (CO<sub>2</sub>). The solution remains clean and usable, unlike traditional solvent-based systems where the solution becomes dirty and less effective over time. Disposal becomes a non-issue, as hazardous waste streams are eliminated. This process is non-hazardous, non-caustic, non-flammable, and does away with the need for regulatory paperwork.

**II. Applications**

Recommended for parts cleaning in preventative maintenance and repair facilities, industrial manufacturing plants, automotive repair shops, metal fabricators, and anywhere that dirty, greasy, grimy parts need to be cleaned without regulatory or disposal issues. **SmartWasher® Specialty Metals Cleaning Solution is not corrosive to a wide range of ferrous and non-ferrous metals such as copper, cobalt, silver, magnesium, nickel, aluminum, titanium, cadmium, iron and steel.**

Type of Soils	Specialty Metals Cleaning Ability
Motor Oil	Excellent
Bearing Grease	Excellent
Automotive Grease	Excellent
Impacted Grease	Good
Asphalt	Fair
Creosote	Good
Resin Products	Excellent
Hydraulic/Transmission Fluid	Excellent

Type of Soils	Specialty Metals Cleaning Ability
Fifth Wheel Grease	Good
Crude Oil	Excellent
Solder & Flux	Excellent
Automotive Varnish	Good
Burned-on Carbon	Good
Cutting Oils	Good
Ink/Toner	Good
Animal Fat	Fair

**III. Features & Benefits**

- **NSF A1 Registered**
- **Low Odor.** Creates a more user-friendly working environment.
- **Excellent Cleaning Ability.** Cleaning Solution contains wetting agents that literally lift soils off of parts to be rinsed away.
- **Reduces the Risk of Hazardous Waste Disposal.** SmartWasher® System generates no hazardous waste - eliminating reporting, disposal and regulatory paperwork in most cases.
- **Non-Corrosive.** Will not scratch or score equipment finish. Contains flash rust inhibitors.
- **Non-Flammable.** Aqueous formulation reduces risk of fire and provides increased user safety.
- **Non-Acidic and Non-Caustic.**
- **Contains Low VOCs.** Minimal volatile organic compounds, which cause ground smog.
- **No Class I or II Ozone Depleting Chemicals.** Provides an alternative to 1,1,1-Trichloroethane products while complying with the EPA regulations on the use of ozone depleting chemicals.

**IV. Physical Properties**

Flash Point (TCC)	None
Odor	Low, Pleasant
Appearance	Clear to light yellow liquid
Vapor Density	Not Determined
VOC Content (Fed)	10 g/L
Sara Title III, Sect. 313 Chemicals	None
Prop 65	None

Boiling Point	210°F
Freezing Point	ND
Solubility	Soluble in H <sub>2</sub> O
% Volatile	90%
Specific Gravity	1.0025
pH	8.74
Vapor Pressure	Not Determined

## V. Specifications and Approvals

- NSF Registration #143962, Category A1 for use in meat and poultry plants.
- When used as a system, **SmartWasher®** meets requirements for a Clean Air Solvent Certificate from the South Coast Air Quality Management District (SCAQMD).
- Boeing D6-17487 Exterior and General Cleaner and Liquid Waxes, Polishes and Polishing Compounds.
- Douglas Aircraft Company CSD #1 Type I: Materials and Procedures for General Exterior Cleaning of Painted and Unpainted Surfaces.
- Aircraft Maintenance Specification AMS 1526B.
- Material and Procedures for General Exterior Cleaning of Painted and Unpainted Surfaces.
- Pratt & Whitney PWA 36604 Approval of Cleaners used in Manufacture and Overhaul of Parts.
- MIL-C-29602 Cleaning Compounds for Parts Washers and Spray Cabinets
- Type I: Water Soluble Liquid Concentrates.

Test Performed	Method	Technical Analysis
Sandwich Corrosion	ASTM F1110	Conforms
Hydrogen Embrittlement	ASTM F519-93	Conforms
Total Immersion Corrosion	ASTM F483	Conforms
Cadmium Removal	ASTM F483	Conforms
Low-Embrittling Cadmium Plate	ASTM F1111	Conforms
Stress Corrosion	ASTM F945	Conforms
Hot Corrosion	PWA 36604 Revision B	Conforms
Stock Loss Corrosion	ARP 1755B	Conforms
Titanium Stress Corrosion	MIL-C29602	Conforms

## VI. Performance Characteristics

<b>Filtration*</b>	user changeable without hand tools or special equipment
	user disposable
	microbe impregnated
	filtration to 50 microns
<b>Microbe Treatment*</b>	environmental-shock resistant
	preserved for 18 month minimum shelf life
	suspended ion filter with water-soluble material for release at a predictable rate
	Nonpathogenic

\*Filtration and microbial properties indicative of total system use

## VII. Directions

- Read the Operating Manual included with each SmartWasher® unit for installation information.
- Initial start-up requires 25 gallons of fluid and one filter in addition to the unit.
- Fluid replenishment is one 5-gallon pail every 6 to 8 weeks or as needed; filter replacement is one per month.
- Once installed, the SmartWasher® should be left plugged in and turned on, even when not washing parts. In the Standby/Ready mode the fluid will be kept at the recommended operating temperature. If the temperature falls below the recommended minimum, the system will still clean, but the remediation of the hydrocarbons by the microbe colony will slow down. The microbes will reactivate when the fluid temperature reaches the appropriate level.

## VIII. Package Description

Part Number	Container Size
14158	5 Gallon Pail

## IX. Disposal

Disposal requirements vary by state and local jurisdiction. All used and unused product should be disposed of in conformance with local, state and federal regulations.

## X. Special Use Warnings

**General** - Avoid direct skin contact or inhalation. Allergic reactions to industrial products may occur in some individuals. It is recommended that safety glasses and rubber gloves be worn when handling industrial use products.

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**DISCLAIMER:** This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. All products should be tested for suitability on a particular application prior to actual use. CRC Industries, Inc. makes no representations or warranties of any kind concerning this data.

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