

**USAG Yongsan
Approved Environmentally Friendly
Detergents for Vehicle/Equipment
Wash
(available for purchase through GSA)**

The following are currently the only approved detergents for use on USAG Yongsan/Area II wash racks/wash pads for vehicle/equipment wash:

- 1) Hurrisafe 9060
- 2) Hurrisafe 9010
- 3) Safe Soap

For additional information or to seek approval of another product, please contact Mr. Yi, Yong Hun, Environmental Engineer-DPW Environmental Division at 724-6498.



HURRISAFE 9060

**Non Foam Hot Immersion
Degreaser with Rust Inhibitor**
*Aqueous Cleaning Agent
Used in Cold Parts Washers
and Heated Spray Cabinet
Cleaners*

NSN 6850-01-426-6677 5-Gallon Pail
NSN 6850-01-426-6676 55-Gallon Drum

HURRISAFE 9060 is an excellent water based cleaning agent for use in cold parts washers and heated spray cabinets washers for cleaning of aviation weapons systems, engine support equipment components and automotive components.

HURRISAFE 9060 is a direct replacement for solvents; especially 140° to 150° F flash point naphtha's typically used in cold parts washer units.

HURRISAFE ADVANTAGES

1. Low VOC content.
2. Highly concentrated aqueous degreaser that removes typical oil/grease and other soils more effectively and dries much more rapidly than the high flash solvents (140-150 F).
3. Improved worker safety due to reduced inhalation and skin exposure effects - *contains no sodium hydroxide or potassium hydroxide.*
4. Readily Biodegradable per EPA 40CFR796.3200 (>60% degradation in ten day BOD test).
5. Non-flammable, non-combustible, no flash point

6. Contains special corrosion inhibitors which provide protection for nearly all metals including Aluminum, copper, brass, titanium, Magnesium, nickel, cadmium plated, aluminum-Anodized metals and even those metals susceptible to corrosion including hardened tool steel and cast iron
7. Excellent oil splitter and provides for residue free cleaning. Compatible with ultra filtration.
8. **HURRISAFE 9060** ships as a Class 55 non-hazardous material.

DIRECTIONS FOR USE IN COLD PARTS WASHERS:

For most industrial parts cleaning applications, **HURRISAFE 9060** is diluted with water for use in parts cleaners as shown below, and is then used in parts cleaners in the same manner and procedures as solvents.. These procedures are specified by the equipment manufacturers.

Heat is not required. In typical use, one drum of **HURRISAFE 9060** replaces approximately four drums of solvent. The oil-splitting properties of **HURRISAFE 9060** provides for a much extended bath life compared to solvents.

<u>Soil</u> (type)	<u>Dilution</u> (water: cleaner)
Light soils - finger prints, dust, light oil	5:1
Heavy Soils - grease, heavy oil, lapping compound	3:1

DIRECTIONS FOR USE IN HEATED SPRAY CABINET WASHERS:

1. Follow equipment manufacturer's specified procedures:
2. Dilute **HURRISAFE** as follows:
Light soils.....3%
Heavy soils.....5%
3. Set temperature 140 to 190 F.

4. Set Timer for cleaning cycle:
Light oils and greases 5-10 Min.
Medium oils and greases 10-20 Min
Heavy oils and Greases 20-45 Min
For intricate parts add an additional 10 minutes minimal to the cleaning cycle.
5. The oil skimmer should be set to come on in the evening after the machine has cooled down.
6. A daily pH reading is recorded to determine the life of the bath. A pH of 8.5 or below is considered spent
7. As new water is added as make up additional **HURRISAFE** is added (1) gallon at a time to make up for loss due to drag out and evaporation.

PHYSICAL PROPERTIES

FLAMMABILITY.....Non Flammable
WATER SOLUBILITY.....100%
BIODEGRADABILITY.....100%
SPECIFIC GRAVITY.....1.01
pH OF (1:10 Dilution).....11.1-11.4
DENSITY.....8.35 lb/gal
BOILING POINT.....212° F
VAPOR PRESSURE.....14.2mm Hg
VOC CONCENTRATE...80 g/l
VOC AT 25%.....20 g/l
CLOUD POINT.....100° F
SURFACE TENSION.....32 dynes/cm

SAFETY

Rubber gloves are recommended to prevent drying of the skin and goggles if splashing is expected. When heated above 125 F. mechanical or local ventilation is required.

DISPOSAL

Spent **HURRISAFE** solution is disposed of through a waste water treatment company or through sewer discharge to a local POTW, depending on local water discharge limitations. **HURRISAFE** is a non-hazardous waste and is readily

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HURRISAFE 9010 ALL PURPOSE CLEANER

HURRISAFE 9010 ALL PURPOSE READY-TO-USE CLEANER "GREEN SEAL APPROVED"

<http://www.gsaelibrary.gsa.gov/ElibMain/searchResults.do?jsessionid=2B11350A68331CBF76FBCB84E1120BEE.nc>



FRONT AND CENTER.

With Hurrisafe 9010 all-purpose cleaner/degreaser, cleaning tasks are simplified and safe. Proudly manufactured in the United States by PCI of America, Hurrisafe's 100% aqueous cleaning agents are "Readily Biodegradable" per USEPA 796.3200 and USDA approved.

- Safe for all metals, brass, copper and painted surfaces
- GSA Environmentally Preferred
- Residue-Free—cleaning without oily residue
- Compatible with oil/water separators
- Chemically compatible for wastewater treatment
- Contains no caustics/terpenes/d-limonene
- GSA Advantage!™ Program

For more details about 9010 or other Hurrisafe products, call Bobbie Pettit at 1-800-222-1455 or visit us at www.hurrisafe.com.

(375-361-A) Hurrisafe 9010 all-purpose cleaner

NSN	Size	Pkg.
7930-01-398-0891	(12) 32 oz.	Box
7930-01-398-0893	(6) 1 gal.	Box
7930-01-398-0898	5 gallon	Pail
7930-01-398-0900	55 gallon	Drum



Hurrisafe 9010 Cleaner Degreaser

HURRISAFE 9010 ALL PURPOSE CLEANER

GSA 7930-01-398-0891	12-22 oz Case
GSA 7930-01-398-0893	6-1 Gallon Case
GSA 7930-01-398-0898	5-Gallon Pail
GSA 7930-01-398-0900	5-Gallon Drum

Exceptional Cleaner:

Safe To Use On:

ALL WASHABLE SURFACES

COUNTER TOPS	SINKS
FLOORS	WALLS
TILES	CARPETS
BASEBOARDS	WOODWORK

HURRISAFE 9010

Break the dirt barrier with this amazing multi-purpose industrial strength cleaner that cuts through dirt, grime and grease quickly and safely.

HURRISAFE 9010

Quickly removes a broad range of soils, dirt, petroleum animal or organic oils, greases using a wipe on wipe off with a clean cloth with no rinsing needed. Hurrifsafe leaves no residue behind after cleaning

HURRISAFE 9010

is certified as per US EPA 796.3200
 "Readily Biodegradable"

USDA Approved:

HURRISAFE 9010 is accepted by the USDA for use in official establishments operating under the Federal meat, poultry, shell egg grading and egg products inspection program.

Environmentally Compatible:

HURRISAFE 9010

- Compatible with oil water separators
- Compatible with wastewater treatment
- Residue Free Cleaning
- Void of terpenes, d-limonene and caustics
- Non- flammable Non-Toxic, No VOC's

Ready To Use For:

SHIPS	CAFETERIAS
OFFICES	EXERCISE AREAS
GARAGES	LIVING QUARTERS
BARRACKS	MAINTENANCE SHOPS
RESTROOMS	OUTDOOR FURNITURE
HAND TOOLS	EQUIPMENT-MACHINERY

APPLIANCES
 PORCELAIN
 FIBERGLASS
 CHROME
 ENAMEL
 STAINLESS STEEL
 VENETIAN BLINDS

MACHINERY
 FORMICA
 VINYL
 ALUMINUM
 FIBERGLASS
 UPHOLSTERY
 PLASTICS

General Guidelines For Use:

HURRISAFE 9010 is a ready-to-use, spray-on to soiled area, wipe-off using a clean cloth or paper towel. No rinsing needed.

Specifications:

FLAMMABILITY	Non Flammable
WATER SOLUBILITY.....	100%
BIODEGRADABILITY.....	100%
SPECIFIC GRAVITY	1.002
pH	10.0-10.7
DENSITY	8.9 LBS/PER Gal.
BOILING POINT	212 (F)
VOC's.....	0.005%
CLOUD POINT.....	100 (F)
SURFACE TENSION	32dynes/cm

Safety:

Rubber gloves are recommended to prevent drying of the skin and goggles if splashing is expected.

Technical Assistance:

CALL : **BOBBIE PETTIT**
 (800) 222-1455
 (301) 468-1700
 FAX (301) 468-1744
 www.hurrifsafe.com



MAKERS OF HURRISAFE 9010
 800.222.1455 phone
 301.468.1744 fax
 www.hurrifsafe.com

Hurrifsafe 9010 Ready-To-Use All Purpose Cleaner

Go Green with Hurrifsafe 9010 All Purpose Cleaner

- Compatible with Oil Water Separators
- Compatible with Wastewater Treatment
- Residue-Free Cleaning
- Non-Flammable Non-Toxic
- Not Terpenes and No VOC's

HURRISAFE 9010 ALL PURPOSE CLEANER

Contract : GS-07F-0131H
 Valid through June 30, 2013
 SIN Item Number 375-361

Available In:

Case of 12-32 oz Trigger-Spray Bottles	7930-01-398-0891
Case of 6-1 Gallon Bottles	7930-01-398-0893
Pail: 5 - Gallon Pail	7930-01-398-0898
55 - Gallon Drums	7930-01-398-0900
275 - Gallon Totes	
330 - Gallon Totes	

AVAILABE ON GSA ADVANTAGE : [HTTPS://WWW.GSAADVANTAGE.GOV](https://www.gsaadvantage.gov)

First Name

Last Name

Company Name

Address Line 1

Address Line 2

State

Zip Code

Country

Daytime Phone ()

Fax ()

E-mail Address

Comments

Shipping Instructions



Available in a Variety of Sizes:
 Case 12-32 oz Trigger Spray Bottles, Cases 6-1 Gallons, 5-Gallon Pails, 55- Gallon Drums, 275 Gallon Totes, 330-Gallon Totes



275 & 330 Gallon Totes

Safe Soap™

Environmentally Friendly

GSA Contract Holder
Contract GS-21F-0020V



MILSPRAY

Military Technologies

Safe Soap™

Environmentally friendly detergent technology



Safe Soap™ Highlights

- ▶ Safe for wash decks
- ▶ Safe for oil / water separators
- ▶ Safe for environment
- ▶ Safe for personnel

MILSPRAY Safe Soap™ offers the latest in detergent technology for cleaning today's military vehicles and protecting against corrosion. While it is very effective, it is also very environmentally friendly.

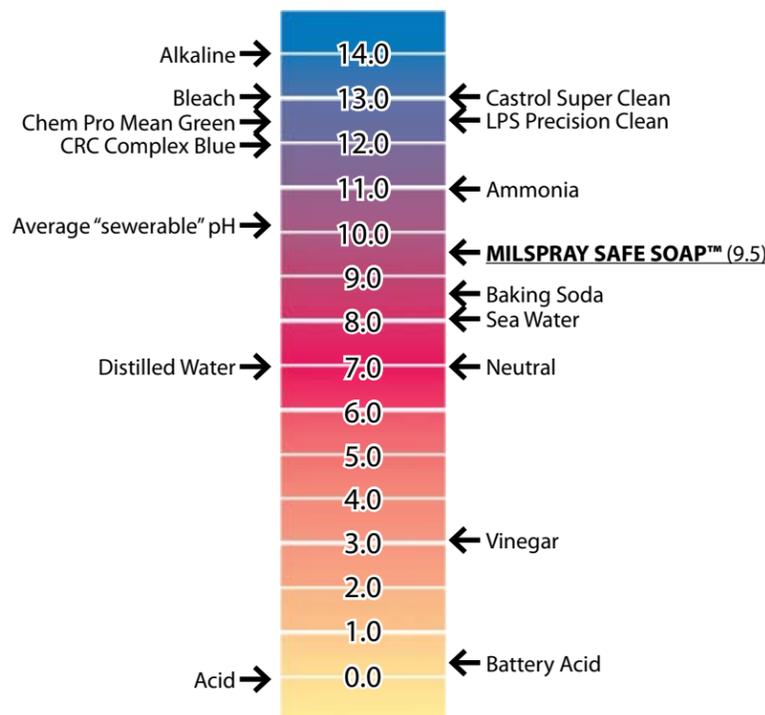
Soaps and detergents can create serious problems for both wash rack equipment and the environment. Detergents and soaps create an emulsion, or one fluid, out of two. The soapy water "absorbs" oils and grease on a vehicle, which then gets rinsed down a drain. This drain, which is part of a wash rack system, typically leads to an oil/water separator. Since the oil and soapy water are now one fluid (emulsion) there is no oil to skim and the emulsion is allowed to pass through the system and into a main drain that leads to a treatment facility or even a waterway. For this reason, many military environmental representatives prohibit the use of soaps and detergents on wash racks.

The other problem caused by soaps is a result of the typical pH of most detergents. Most are alkaline, which are in the 12.0 pH range. This is rather caustic and not considered "sewerable" by most treatment facilities in the country. The average acceptable pH for sewer disposable, for all municipalities nationwide, is 10.3 pH.

It is this same alkalinity that also poses a serious problem for the wash rack equipment itself and another subsequent problem for the environment. Many oil/water separators contain a "pond" or holding tank where the oil, or other hydrocarbons, and the water are held until discharge. Enzymes and bacteria are added into these ponds to assist with the breakdown of hydrocarbons and oils. These micro organisms actually eat or digest the hydrocarbons and convert them to pure carbon, a natural and biodegradable by-product. The enzymes or bacteria cannot survive in the ponds and holding tanks if the pH is above 10. Since most soaps are above this pH level they will "kill off" the helpful bacteria and the stagnant pond retains the oil and creates an offensive odor.

The pH Scale

A pH scale of 7 is neutral, while 0 is the most acidic pH rating. 14 is the most basic (alkaline / caustic) pH rating. The pH scale is a logarithmic scale. Each unit of change equals a "Power of Ten". A pH of 3 is actually 10 times more acidic than a pH of 4. Conversely, a pH of 13 is actually 10 times more alkaline than a pH of 12. Therefore, a pH of 13 is 10,000 times more alkaline / caustic than a pH of 9!



The issue of emulsions and the potential environmental impact is completely and thoroughly addressed by MILSPRAY Safe Soap™. Safe Soap™ has been specifically engineered to work with all oil/water separators.

MILSPRAY's Safe Soap™ has been formulated using the latest surfactant technology. This technology allows for the soap to remain extremely effective by creating an emulsion that will absorb oils and other hydrocarbons. However, MILSPRAY Safe Soap™ will "de-emulsify" within seconds of performing the required cleaning. This means that within seconds of being used to clean a surface, the emulsion will "break" and the one solution will become two. One of oil and the other of soapy water. The oil-water separator can now function as designed and intended and no adverse impact on the environment or waterways will occur.

The pictures to the right illustrate exactly how this technology works.

The first photo shows, from left to right, a leading vehicle wash soap and motor oil before agitation next to MILSPRAY Safe Soap™ and motor oil.

The second photo shows both immediately after mixing. Both are effective detergents as is shown by the thorough emulsion of motor oil and soapy water. If a detergent is ineffective, the result would be more like homemade salad dressing with the salad oil and vinegar never fully emulsifying.

The next photo shows an elapsed time of 10 seconds. Notice how the leading detergent is still in a state of emulsion and would pass through an oil/water separator and onto a treatment facility or waterway. The MILSPRAY Safe Soap™ is completely "de-emulsified" and could be separated by the wash rack oil and water separator. The next photo shows several minutes later, and the leading detergent is still not completely separated.

What makes MILSPRAY Safe Soap™ so different?

MILSPRAY Safe Soap™ is manufactured using deionized water (DI). Deionized water is pH neutral and is less likely to cause corrosion in cracks and crevices of vehicles where soapy water sometimes sits as a residue after washing. Deionized water is subjected to reverse osmosis and all minerals and impurities are filtered out. This is significant since many water sources contain iron...iron that when in contact with the vehicle metal will turn to rust. Most detergents are diluted with local tap water and this tap water usually contains some level of iron. So, the very detergent used to clean your military vehicle may be facilitating corrosion.

To further address the issue of corrosion, Safe Soap™ contains a biodegradable, non hazardous, corrosion inhibitor. This corrosion inhibitor represents the latest in rust prevention and works on both steel and aluminum. Vehicles washed with Safe Soap™ will have up to 24 months of continuous protection. This is accomplished by the creation of a monomolecular inhibiting layer that works both on contact and vapor. The vapor phase protects inaccessible and recessed vehicle surfaces, cavities, and voids.

Performance. In addition to the environmentally friendly formula and ability to work flawlessly with wash racks and oil/water separators, Safe Soap™ is a highly effective cleaner and corrosion preventative. The proprietary blend of surfactants used in Safe Soap™ has been specifically tested for military use. In the MILSPRAY lab, Safe Soap™ was thoroughly tested against motor oils, transmission fluids, and other oils and greases typically found on U.S. military gear. Effectiveness of the soap and cleanliness of the vehicle surface were second to none. Surfaces cleaned with Safe Soap™ have exceptional rinseability, a common measure of vehicle soap effectiveness. Vehicles rinse off residue free and have up to 24 months of corrosion protection.

Leading Vehicle Wash Soap VS. MILSPRAY Safe Soap™



Prior To Agitation



Immediately After Mixing Soap With Motor Oil



10 Seconds Later



Several Minutes Later

MILSPRAY Safe Soap™ is:

- ▶ Self de-emulsifying
- ▶ Quick split
- ▶ First split
- ▶ Quick break

Compatibility. MILSPRAY Safe Soap™ is not a multi purpose soap or detergent. It was designed with one purpose in mind... to be a safe and effective means of washing military vehicles on military wash racks. Many problems with CARC paint and the associated primers result from incompatibility with materials and surface contamination. Surface contamination occurs when there are oils, moisture, or other hydrocarbons present, even in small quantity. Safe Soap™ was developed to rinse clean and to leave no surface contaminants behind. It is a very effective cleaner for use prior to CARC painting and is compatible with all approved CARC primers.

Environmental and Safety Information

- ▶ Readily Biodegradable
- ▶ Non-toxic
- ▶ No Hazardous Ingredients
- ▶ Non-flammable
- ▶ Contains No VOCs
- ▶ Low pH For Detergent - Only 9.5 pH
- ▶ Non-foaming



Safe Soap™ Ordering Information

MILSPRAY Part #	Size	Price / Quantity
MILSASO6SG	6 Single Gallon Containers	\$149.70 (case of six)
MILSASO5GC	5 Gallon Container	\$109.85
MILSASO55G	55 Gallon Drum	\$895.00

Contact Information

Point of Contact	Contact Information
Kathleen Ferry Business Development Manager	Phone: 732-886-2223 ext. 106 Email: Kathleenferry@milspRAY.com

Services	Systems	Products	Tools & Equipment
<ul style="list-style-type: none"> ▶ On-Site/Deployable Preventive Maintenance ▶ On-Site/Deployable Corrosion Repair & CARC Painting ▶ Weapons Maintenance & Repair ▶ Government Facilities Operation ▶ Blast Resistance Coating Applications ▶ Static Display Restoration 	<ul style="list-style-type: none"> ▶ Wash Decks ▶ Deployable Maintenance Shelters ▶ Deployable Painting Shelters ▶ Custom Engineered Truck Systems 	<ul style="list-style-type: none"> ▶ Military Touch-Up Paint ▶ Blast Coatings ▶ Thermal Suppressive & Solar Reflective Coatings ▶ Tactical Vehicle Bedliners ▶ Wash Rack Safe Soap™ ▶ Vehicle Masking Kits ▶ Restoration Paint for Classic Military Vehicles ▶ Mobile Maintenance Cart ▶ Specialty Coatings 	<ul style="list-style-type: none"> ▶ Military Bedliner Application Equipment ▶ Vacuum & Primer Touch-Up Guns ▶ Mobile Maintenance Cart

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 Email: customerservice@milspRAY.com . Website: www.milspRAY.com . Cage Code: 3NXK3