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

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

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%
   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
HURRISAFE 9010 ALL PURPOSE CLEANER

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

http://www.gsalibrary.gsa.gov/ElibMain/searchResults.do;jsessionid=2B11350A68331CBF76FBC84E1120BEE.n

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/de-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.
**HURRISAFE 9010**

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

**HURRISAFE 9010**

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

**HURRISAFE 9010** is certified as per US EPA 796.1200 “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
- Low of Haken, D-Limonene and caustic
- Non-Flammable, Non-Toxic, No VOC's

**Ready To Use For:**

- SHOPS
- OFFICES
- WAREHOUSES
- KITCHENS
- RESTAURANTS
- BAR / DISCRIBERS
- OUTDOOR FURNITURE
- AUTO SHOP
- HAND TOOLS
- EQUIPMENT / MACHINERY

**Specifications:**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Flashpoint</td>
<td>210°F</td>
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<tr>
<td>Viscosity</td>
<td>1000 cP</td>
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<tr>
<td>Specific Gravity</td>
<td>1.0020</td>
</tr>
<tr>
<td>pH</td>
<td>7.0 - 8.5</td>
</tr>
<tr>
<td>Density</td>
<td>0.90 L/SG</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>32°F</td>
</tr>
<tr>
<td>Viscosity</td>
<td>280 cP</td>
</tr>
<tr>
<td>Combustion damage</td>
<td>No</td>
</tr>
</tbody>
</table>

**Safety:**

Rubber gloves are recommended to prevent any skin contact or splashing when using.

**Technical Assistance:**

CALL: BOB PETER
(804) 222-1455
(804) 648-1200
FAX: (804) 648-1244
www.hurrisafe.com

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**Hurrisafe 9010 Ready-To-Use All Purpose Cleaner**

- **Go Green with Hurrisafe 9010 All Purpose Cleaner**
  - Compatible with Oil Water Separators
  - Compatible with Wastewater Treatment
  - Residue-Free Cleaning
  - Non-Flammable Non-Toxic
  - Non-Carcinogenic 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:

<table>
<thead>
<tr>
<th>Size</th>
<th>Code</th>
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<tbody>
<tr>
<td>Case of 12-32 oz Trigger-Spray Bottles</td>
<td>7930-01-398-0891</td>
</tr>
<tr>
<td>Case of 6-1 Gallon Bottles</td>
<td>7930-01-398-0892</td>
</tr>
<tr>
<td>55 - Gallon Drums</td>
<td>7930-01-398-0893</td>
</tr>
<tr>
<td>275 - Gallon Totes</td>
<td>7930-01-398-0894</td>
</tr>
<tr>
<td>330 - Gallon Totes</td>
<td>7930-01-398-0895</td>
</tr>
</tbody>
</table>

**AVAILABE ON GSA ADVANTAGE: HTTPS://WWW.GSAADVANTAGE.GOV**

Available in a Variety of Sizes:

- Case 12-32 oz Trigger Spray Bottles
- Cases 6-1 Gallons, 55-Gallon Drums, 275 Gallon Totes, 330-Gallon Totes

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http://www.hurrisafe.com/gs07f0131hdegreasers/9010readytouse.html
Safe Soap™
Environmentally Friendly

GSA Contract Holder
Contract GS-27F-0008V

MILSPRAY
Military Technologies
Safe Soap™
Environmentally friendly detergent technology

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 disposal, 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.

Safe Soap™ Highlights
- Safe for wash decks
- Safe for oil/water separators
- Safe for environment
- Safe for personnel

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!

<table>
<thead>
<tr>
<th>pH Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>Battery Acid</td>
</tr>
<tr>
<td>1.0</td>
<td>Vinegar</td>
</tr>
<tr>
<td>2.0</td>
<td>Baking Soda</td>
</tr>
<tr>
<td>3.0</td>
<td>Ammonia</td>
</tr>
<tr>
<td>4.0</td>
<td>Distilled Water</td>
</tr>
<tr>
<td>5.0</td>
<td>Sea Water</td>
</tr>
<tr>
<td>6.0</td>
<td>LPS Precision Clean</td>
</tr>
<tr>
<td>7.0</td>
<td>Neutral</td>
</tr>
<tr>
<td>8.0</td>
<td>CRC Complex Blue</td>
</tr>
<tr>
<td>9.0</td>
<td>Castrol Super Clean</td>
</tr>
<tr>
<td>10.0</td>
<td>MILSPRAY SAFE SOAP™</td>
</tr>
<tr>
<td>11.0</td>
<td>LPS Precision Clean</td>
</tr>
<tr>
<td>12.0</td>
<td>Bleach</td>
</tr>
<tr>
<td>13.0</td>
<td>Alkaline</td>
</tr>
</tbody>
</table>

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 a wide range of 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 beyond to none. Surfaces cleaned with Safe Soap™ have exceptional rinsability, a common measure of vehicle soap effectiveness. Vehicles rinse off residue free and have up to 24 months of corrosion protection.

MILSPRAY Safe Soap™ is:
- Self-de-emulsifying
- Quick split
- First split
- Quick break

Environmentally Friendly

MILSPRAY Safe Soap™ is environmentally friendly detergent technology.
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

<table>
<thead>
<tr>
<th>MILSPRAY Part #</th>
<th>Size</th>
<th>Price / Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MILSASO6SG</td>
<td>6 Single Gallon Containers</td>
<td>$149.70 (case of six)</td>
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<tr>
<td>MILSASO5GC</td>
<td>5 Gallon Container</td>
<td>$109.85</td>
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<tr>
<td>MILSASO55G</td>
<td>55 Gallon Drum</td>
<td>$895.00</td>
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</tbody>
</table>

### Contact Information

**Point of Contact**

Kathleen Ferry  
Business Development Manager

**Contact Information**

Phone: 732-886-2223 ext. 106  
Email: Kathleenferry@milspray.com