

Int. Cl.: 3

Prior U.S. Cls.: 1, 4, 6, 50, 51 and 52

Reg. No. 2,154,802

**United States Patent and Trademark Office**

Registered May 5, 1998

**TRADEMARK  
PRINCIPAL REGISTER**

**TERRA-KLEEN**

ENVIRO-SAFE PRODUCTS (NEVADA SOLE  
PROPRIETORSHIP)  
7415 HAWK SHADOW AVE.  
LAS VEGAS, NV 891130744

FURNITURE POLISH, IN CLASS 3 (U.S. CLS. 1,  
4, 6, 50, 51 AND 52).

FIRST USE 12-0-1996; IN COMMERCE  
12-0-1996.

SER. NO. 75-250,293, FILED 3-3-1997.

FOR: LIQUID LAUNDRY DETERGENT, ALL  
PURPOSE CLEANING PREPARATIONS, AND

TINA L. SNAPP, EXAMINING ATTORNEY

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention relates to a cleaning, sanitizing, soil reclamation, waste and water treatment composition. However, the composition is intended to function primarily as a detergent or cleaner for removing from many kinds of surfaces what is generically referred to as dirt, namely: synthetic and natural oil residues, grease, fat residues, the partial thermal decomposition products thereof and other

5,837,667

3

organic and inorganic residues, deposits or coatings and mixtures thereof.

A few of the surfaces upon which my composition is effective, for example, include: wood, fine fabrics, polymethyl methacrylate polymer and plastic, stainless steel, gold, silver, brass, copper aluminum and glass. Depending upon the dilution ratio with water from the concentrated formula, other applications for cleaning or removing unwanted residues, for example, include: fruits and vegetables, automobile exteriors and interiors, bowling alley lanes, carpets, showers, tubs, slot machine surfaces, cooling tower scale removal, swimming pools, tile, mirrors, clothing, canvas, leather, rust removal, white walled tires, machinery and woodwork. With respect to fine fabrics, or colored or dyed cloth, however, it is to be noted that the use of my composition at full strength, the concentrate, that is, without dilution with water, to clean these materials, may result in some of the dye or color in the fabric either being removed or chemically altered.

More specifically, my invention composition may comprise any of three different forms. In this disclosure the expression "active ingredient" means an ingredient other than water which functions as an emulsifying agent, surface active agent, wetting agent, detergent, base, chelating agent, coupling agent or water solubility or miscibility enhancing agent. The term "base" refers to compounds classified as such in the ordinary chemical sense.

One form of my invention is a composition comprising only the active ingredients, or raw mixture. Another form is a composition comprising the active ingredients, an amount of water to make a concentrate or concentrated mixture of active ingredients in solution with water, and optionally a preservative. The third form of my invention is a diluted composition, wherein the concentrated solution is further mixed with up to ten times or more of water. In the form of a diluted composition, it is particularly desirable to include a preservative in order to prevent microbial activity against the composition.

Int. Cl.: 3

Prior U.S. Cls.: 1, 4, 6, 50, 51 and 52

**United States Patent and Trademark Office**

Reg. No. 2,313,418

Registered Feb. 1, 2000

**TRADEMARK  
PRINCIPAL REGISTER**

**DCP**

STABLEY, GARTH (UNITED STATES CITIZEN)  
7415 HAWK SHADOW AVENUE  
LAS VEGAS, NV 89113

FIRST USE 1-0-1998; IN COMMERCE 1-0-1998.

SER. NO. 75-515,121, FILED 7-8-1998.

FOR: PROFESSIONAL DRY-CLEANING DETER-  
GENT, IN CLASS 3 (U.S. CLS. 1, 4, 6, 50, 51 AND  
52).

KARLA PERKINS, EXAMINING ATTORNEY



## OFFICIAL LISTING

NSF International Certifies that the products appearing on this Listing conform to the requirements of the NSF Nonfood Compounds Registration Program

This is the Official Listing recorded on July 26, 2007.

TERRA-KLEEN SOLUTIONS, LLC  
531 VIA RIPAGRANDE AVENUE  
HENDERSON, NV 89011-0816  
702-873-0594

Product Designation	Registration Number	Category Code
TERRA-KLEEN™ CONCENTRATED	139680	A1, A4, A8, C1, E1
TERRA-KLEEN™ LIGHT DUTY	139682	A1, A4, A8, C1, E1
TERRA-KLEEN™ MEDIUM DUTY	139681	A1, A4, A8, C1, E1

A1 Compounds for use as a general cleaner.

A4 Floor and wall cleaners for use in all departments.

A8 Degreasers or carbon removers for food cooking or smoking equipment, utensils, or other associated surfaces.

C1 Compound for use on all surfaces in inedible product areas, nonprocessing areas, and/or exterior areas.

E1 Handwashing products.

Note: Additions shall not be made to this document without prior evaluation and acceptance by NSF International.

1 of 1

789 N. Dixboro Rd. / Ann Arbor, MI 48105-9723 USA  
(734) 769-8010 / (888) NSF-FOOD / Fax: (734) 827-7179  
[www.nsfwhitebook.org](http://www.nsfwhitebook.org) / E-mail: [nonfood@nsf.org](mailto:nonfood@nsf.org)

4H590



United States  
Department of  
Agriculture

Food Safety  
and Inspection  
Service

Regulatory Programs  
Building 306, BARC-East  
Beltsville, MD 20705

June 05, 1995

Mr. Garth E. Stabley  
Enviro-Safe Products  
5055 S. Lindell Road, #1104  
Las Vegas, NV 89118

Dear Mr. Stabley:

This is in reply to your request for compound authorization received on April 27, 1995 for your product Enviro Kleen.

This product is acceptable for use in inedible product processing areas, nonprocessing areas, and/or exterior areas of official establishments operating under the Federal meat, poultry, shell egg grading, and egg products inspection programs provided that it is not used to mask odors resulting from insanitary conditions, and that any characteristic odor or fragrance does not penetrate into an edible product area.

Permission for the use of this compound on loading docks and other similar areas is left to the discretion of the inspector in charge of the establishment.

Acceptance of compounds by this Department is in no way to be construed as an endorsement of the compounds or of any claims made for them.

If any change is made in the labeling information or formulation, the authorization for use in official plants becomes void immediately.

Sincerely,

John M. Damaré, Chief  
Compounds and Packaging Branch  
Product Assessment Division



# BFGoodrich

## Aerospace

FAX COVER SHEET  
101 WACO STREET  
P.O. BOX 340  
TROY, OHIO 45373

Fax No: 937-440-2023  
Phone No: 937-339-3811

DATE: February 11, 1998	COVER SHEET + 0 PAGE(S)
TO: MSgt Tom Rogers	FROM: Greg Meyer
COMPANY: USAF Thunderbirds	PHONE: 937-440-2319
FAX #: 702-652-9925	
PHONE #: 702-652-4035	

Subject: Feedback on Cleaning Compound Analysis

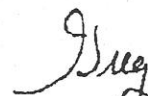
Tom,

As we discussed yesterday, we sent the sample of the solvent you provided to our chemical lab for analysis of its content. Last week we finally received their results which concluded that, surprisingly enough, the solvent would not pose a significant threat as a catalyst for accelerating the oxidation process on our carbon brake material. However, without further tests, which would be cost prohibitive at this point, we would still recommend you avoid spraying this compound directly on the brake, especially the carbon disks. Ogden ALC has found through direct experience and subsequent testing that cleaning compounds in general have a significantly adverse effect on the carbon friction coefficients (brake performance) that does not simply "burn off" with repeated landings. Clint Forrest at OO-ALC/LILE, DSN 775-6062, would be the person to contact if you would like additional details of his findings.

On another subject, we have still not received the purchase order from the contracting office at Nellis AFB for the three brakes overhauls and wheel purchase. I understand it has been finalized and is just awaiting signature and transmittal. I may have an opportunity to accelerate the required carbon order under our proposed lead time if I can get the purchase order as soon as possible. That would put you in better shape for your upcoming show season. We would truly appreciate it if you could help in that area.

Finally, if your schedule allows, I would like to visit you sometime in mid-March examine your brakes on the aircraft, review your spares posture for this year and to begin planning for the support you would need in 1999. Meanwhile, please feel free to give me a call if you have any questions.

Best regards,

  
Gregory Meyer  
Manager, Business Development  
Regional, Business & Military  
Aircraft Wheel and Brake Division

cc: Dale Henning  
Mark Weick

# BFGOODRICH INTERORGANIZATION CORRESPONDENCE

TO: Dale Henning, cc: Troy: K. Abbott, S. McCrillis, P. Snyder, K. Worth;  
Troy BRDC: S. Lau, V. Woodward, R&D Files  
FROM: Ed Stover, ARD PROJECT: C Brake Mfg. & Tech. Support DATE: 1/29/97

SUBJECT: EFFECT OF ENVIRO-KLEEN ON OXIDATION OF CARBON BRAKES

A sample of Enviro-Kleen solution was received 1/15 for analysis of metals in residue which might cause catalytic oxidation when the cleaner is used on aircraft brakes. The MSDS identified the active ingredients as monoethanolamine (CAS: 141-43-5) with inert ingredients including surfactants and chelates. Valerie Woodward conducted analysis by EDX 1/27 of an oily residue left after evaporation at room temperature for 1 week. In Figure 1, the spectrum shows major P, minor Cl, with moderate Na and minor K, indicating that the inorganic constituents are probably Na phosphate, with some K.

Since Na and K were present as phosphates we did not expect that they would function as catalysts. To check this, oxidation tests were run at ~1200°F on two adjacent coupons from the bottom face of F-16 R30812, one after soaking in the full-strength solution and drying to 300°C. The coupons were placed side-by-side on polished sections from rotor clips on the rack used for oxidation testing in the Rapid-Temp furnace. They were inserted into the preheated furnace in flowing air and weighed after removal in 6 time periods of 20-90 minutes. At about 5% weight loss, the sample contaminated with Enviro-Kleen oxidized at a rate 38% of the rate of the coupon tested as cut, losing 8.75% of the carbon weight after 6 hours at 649-654°C vs 38.8% weight loss in the coupon with no addition. Note that 1200°F is the normal baking temperature (in N<sub>2</sub>) for M-1 or M-2 oxidation inhibitors. Sodium phosphate is known to inhibit C oxidation, and we can assume that it did so here when heated to 1200°F.

This cleaning solution inhibits carbon oxidation. It would normally be used diluted with water, so the amount of phosphate left would be less than in these oxidation tests. Whether or not enough phosphate would be left on friction surfaces to reduce coefficient at low temperatures (for example by retaining or absorbing more water) is another issue which may need consideration.

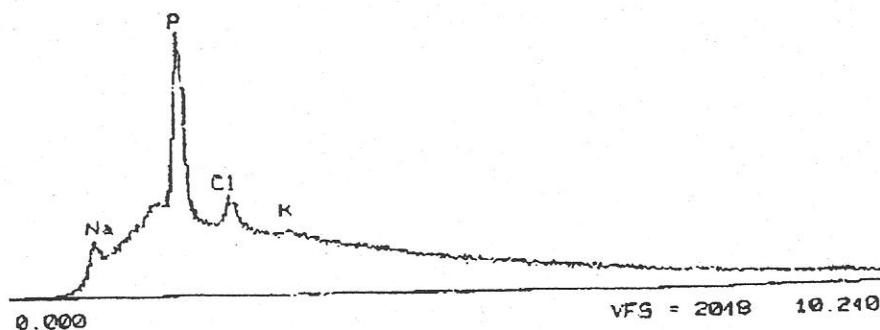


Figure 1. EDX scan of residue left by evaporating ENVIRO KLEEN solution.

*Ed Stover*





DEPARTMENT OF THE AIR FORCE  
DETACHMENT 3, WARNER ROBINS AIR LOGISTICS CENTER (AFMC)  
KELLY AIR FORCE BASE, TEXAS

20 APR 2001

DET 3 WR-ALC/SFTT  
BUILDING 1621-K  
2261 HUGHES AVE STE 123  
LACKLAND AFB TX 78236-9823

ENVIRO-SAFE PRODUCTS  
ATTN: MR. GARTH STABLEY  
7415 HAWK SHADOW AVE  
LAS VEGAS NV 89113

Dear Mr. Stabley,

Reference the Qualification of Enviro-Safe Product Terra-Kleen to Specification MIL-PRF-87937C, Types II & IV.

This is to acknowledge receipt of the long-term storage stability report. Your product has now met all the requirements of the specification for Types II & IV and shall remain certified for three years subject to paragraph 3.1.2 of the specification. Re-certification, due March 2004, will require timely requalification in order to avert a lapse in your product's QPL status. Revision of the specification will require additional qualification testing for hydrogen embrittlement.

If you have any questions, please contact Mr. Gary Herrin at (210) 925-1622.

*James P. Vasil*  
JAMES P. VASIL

Chief, Product Engineering Branch  
Air Force Petroleum Office



Qualified Products List issued by a government activity. To the public such statements connote endorsement by the Department of Defense, which is contrary to departmental policy.)

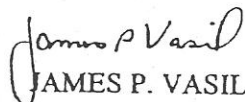
d. This listing applies only to products in the plant specified in this letter of qualification and is effective at 8 a.m. local time of the qualifying activity as of the date of this notification.

e. This listing applies only to products identical to that qualified. The qualifying activity must be advised of any changes to the product. Failure to notify the qualifying activity of a change of formulation is cause for removal from the QPL, regardless of the extent of the formulation change.

f. To remain on this listing, manufacturers must requalify their product every 3 years. Failure to requalify will be sufficient cause for removal from the QPL.

This qualification is granted contingent upon the product meeting the storage stability requirements of specification MIL-PRF-87937C, paragraph 3.11.

Qualified manufacturers are advised that Defense Supply Center Richmond (DSCR), Richmond VA 23297-5810, is the procuring activity for all MIL-PRF-87937 material. Qualified suppliers are advised to contact DSCR on all matters pertaining to procurement of MIL-PRF-87937 aircraft cleaning compound. Requests or correspondence pertaining to Air Force use, testing or evaluation of a particular or unique product should be directed to Det 3, WR-ALC/SFTT.

  
JAMES P. VASIL

Chief, Product Engineering Branch  
Air Force Petroleum Office

cc:

DSCR-JDTA (Myers)

DSCR-JDSA

DSCR-JDPC



DEPARTMENT OF THE AIR FORCE  
57<sup>TH</sup> AIRCRAFT MAINTENANCE SQUADRON (ACC)  
NELLIS AIR FORCE BASE, NEVADA

November 3, 1998

Garth Stabley  
Enviro-Safe Products  
7415 Hawk Shadow Avenue  
Las Vegas NV 89113

Dear Sir:

We have been using Terra-Kleen™ for all general-purpose cleaning, including spot cleaning on F-16 Aircraft surfaces and canopies, and electrical contacts. Terra-Kleen™ is mixed according to use, and cleans effectively by spraying on and wiping off, both while the plane is in service, and during regular, routine maintenance.

During the fueling of an aircraft, if any fuel is spilled on the aircraft, the fuel can be safely washed off with Terra-Kleen™ without removing the aircraft from service.

We also use Terra-Kleen™ to clean our building's floors and walls, restrooms, and to eliminate odors and kill pests.

Sincerely,

Alex DeJesus, TSgt



DEPARTMENT OF THE AIR FORCE  
DETACHMENT 3, WARNER ROBINS AIR LOGISTICS CENTER (AFMC)  
KELLY AIR FORCE BASE, TEXAS

1.0 OCT 2000

Det 3, WR-ALC/SFTT  
1014 Billy Mitchell Blvd, Ste 1  
Kelly AFB TX 78241-5603

Enviro-Safe Products  
Attn: Mr. Garth Stabley  
7415 Hawk Shadow Ave.  
Las Vegas, NV 89113

Dear Mr. Stabley,

Reference qualification of Enviro-Safe Product Terra-Kleen to MIL-PRF-87937C, Type IV.

Terra-Kleen is a qualified product conforming to MIL-PRF-87937C. Listing on the Qualified Products List (QPL) will appear as follows:

GOVERNMENT DESIGNATION	MANUFACTURER'S DESIGNATION	PH CONC/10%	PERCENT NONVOLATILE	TEST OR QUALIFICATION REFERENCE	MANUFACTURER'S NAME AND ADDRESS
Type IV	Terra-Kleen	8.3/8.0	12.1	SFTT 2000-008	Enviro-Safe Products 7415 Hawk Shadow Ave Las Vegas, NV 89113  PLANT:  Luseaux Laboratories, Inc. 4625 Santa Fe Drive Kingman, AZ 86401

The following statements are binding upon the manufacturer in accordance with Defense Standardization Manual 4120.24-M:

- This listing does not guarantee acceptance in any future purchase.
- This listing does not constitute a waiver of any requirement of the specification or of the provisions of any contract.
- This listing, test results, or any other information relating to qualification shall not be circulated or referred to for publicity, advertising, or sales other than those leading to ultimate use of the product by an agency of the Federal Government. Violation is cause for removal of the product from the QPL by the qualifying activity. (It must be understood that the Department of Defense takes no issue with advertisements indicating that a manufacturer's product conforms to the requirements of a specification on the assumption that the determination of such compliance is a responsibility of the purchaser. However, there is objection to reference in an advertisement to a statement of Government approval or to the listing of a product on a



Dear Mr. Stabley,

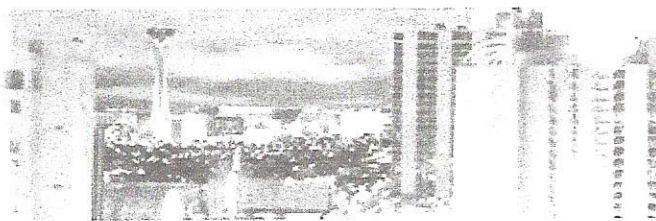
I would like to compliment your Enviro-Safe product Terra-Kleen for its many applications at the City of Las Vegas Water Pollution Control Facility. We successfully used Terra-Kleen to remove sulfur deposits and calcium carbonate from plastic median in our chemical air scrubbers. Previously acid washing was performed to complete this maintenance task with minimal results and it was very hazardous to our treatment plant and personnel. Degreasing rotating equipment pump rooms and process piping systems are just a few examples of the industrial applications which Terra-Kleen has excelled in performance. Polymer clean-ups have always been a huge problem in the wastewater industry. Terra-Kleen is the only product that we have tested that is able to clean polymer spills and leaves no corrosive residue or harmful by-products. Getting removed from the EPA toxic waste generator list a result of using solvent based degreasers, was atop priority of the City of Las Vegas Environmental Safety Manager. Environmentally safe biodegradable products have been mandated for use at our facility. Terra-Kleen met and exceeded this new specification by the Environmental and Safety Departments of the City of Las Vegas. This product was deemed safe for personal use and to discharge into the municipal sewer system. Currently we are removing all caustic, acid and butyl based degreasers from our warehouse and replacing them with Terra-Kleen. Unlike other environmentally safe, biodegradable degreasers that rely on enzymes and bacteria to disperse grease and oil, Terra-Kleen keeps these deposits and residue in suspension and does not recollect down stream. I would like to state that it has been a pleasure working with you and Terra-Kleen. Sincerely,

Charlie Pappas

---



City Hall  
400 Stewart Avenue  
Las Vegas, NV 89101  
(702) 229-6011



August 10, 1999

Enviro-Safe Products  
7415 Hawk Shadow Avenue  
Las Vegas NV 89113

Attention: Garth Stabley

Dear Mr. Stabley:

I would like to compliment your Enviro-Safe Product, Terra-Kleen™ for its many applications at the City of Las Vegas Water Pollution Control Facility. We successfully used Terra-Kleen™ to remove sulfur deposits and calcium carbonate from plastic median in our chemical air scrubbers. Previously, acid washing was performed to complete this maintenance task with minimal results, and it was very hazardous to our treatment plant and personnel.

Degreasing rotating equipment pump rooms and process piping systems are just a few examples of the industrial applications which Terra-Kleen™ has excelled in performance. Polymer clean-ups have always been a huge problem in the wastewater industry. Terra-Kleen™ is the only product that we have tested that is able to clean polymer spills and leaves no corrosive residue or harmful by-products.

Getting removed from the EPA toxic waste generator list; a result of using solvent based degreasers, was a top priority of the City of Las Vegas Environmental Safety Manager. Environmentally safe biodegradable products have been mandated for use at our facility. Terra-Kleen™ met and exceeded this new specification by the Environmental and Safety Departments of the City of Las Vegas. This product was deemed safe for personal use and to discharge into the municipal sewer system.

Currently, we are removing all caustic, acid and butyl-based degreasers from our warehouse and replacing them with Terra-Kleen™. Unlike other environmentally safe, biodegradable degreasers that rely on enzymes and bacteria to disperse grease and oil, Terra-Kleen™ keeps these deposits and residue in suspension and does not recollect down stream. I would like to state that it has been a pleasure working with you and Terra-Kleen™.

Sincerely,

Charlie Pappas  
Senior Chemical Technician  
Environmental Division  
City of Las Vegas



200 Athens Avenue

(702) 565-2048

Henderson NV 89015



October 18, 2003

Enviro-Safe Products  
7415 Hawk Shadow Avenue  
Las Vegas NV 89113

To Whom it May Concern:

Here at the City of Henderson Waste Water Facility, we mainly use Terra-Kleen™ for cleaning up polymer spills at the plant. It is the only product that we have found that actually removes the polymer.

We have also used it in various other cleaning applications around the facility and it works very well. We flush out the drains with Terra-Kleen™ and it does a great job eliminating odors.

Sincerely,

Lloyd Reardon  
Maintenance Supervisor  
City of Henderson, Nevada





## Testimonials

---

Nevada Department of Transportation  
250 Kyle Cyn. Road  
Mt. Charleston Station C129

Garth Stabley  
Enviro Safe Products  
(TerraKleen)

This is a short testimony to give credit to Mr. Stabley and the products used to contain a fuel spill on the tarmac at the Mt. Charleston Station. Seven years ago on a rainy day the water forced 200 gallons of diesel fuel from an underground fuel cell onto the tarmac and ran for 200 yards, endangering the sensitive area in the National Forest Service. Because of the scope and area of this spill The EPA, State and Federal, agencies were contacted. The response was timely and with the use of bunting and the TerraKleen product the spill was neutralized and the cleanup quick and concise. The 500 gallon tank was flushed and stabilized and no longer in use. Observing the cleanup and the TerraKleen product used I would highly recommend this product on any future spills or where it may be applied for safety.

Roy Neal  
Supervisor  
Mt. Charleston C129 Station

---

October 18, 2003

Enviro-Safe Products  
7415 Hawk Shadow Avenue  
Las Vegas NV 89113

To Whom it May Concern:  
Here at the City of Henderson Waste Water Facility, we use Terra-Kleen for cleaning up polymer spills at the plant. It is the only product that we have found that actually removes the polymer. We have also used it in various other cleaning applications around the facility and it works very well. We flush out the drains with Terra-Kleen and it does a great job eliminating odors.

Sincerely,

Lloyd Reardon  
Maintenance Supervisor  
City of Henderson, Nevada

---

Date: August 10, 1999

City of Las Vegas  
Charlie Pappas  
Senior Chemical Technician  
Environmental Division

[Reply](#) *Roy Neal* says:  
[July 6, 2010 at 5:04 am](#)

This is a short testimony to give credit to Mr. Stabley and the pro  
Mt. Charleston Station.

Seven years ago on a rainy day the water forced 200 gallons of o  
tarmac and ran for 200 yards endangering the sensitive area in t

Because of the scope and area of this spill The EPA, State and F  
timely and with the use of bunting and the TerraKleen product t  
concise. The 500 tank was flushed and stabilized and no longer

Observing the cleanup and the TerraKleen product used I would  
where it may be applied for safety.

Roy Neal  
Supervisor  
Mt. Charleston C129 Station



2.

[Reply](#) *Peter Celeste* says:  
[July 7, 2010 at 1:09 am](#)

I was introduced to Terra-Kleen products about six months ago at work. At first, when I was told of the numerous applications, I have to admit I was skeptical. When I started using the product to clean the kitchen and it had me home fifteen minutes earlier than usual {and my station never looked so good} I became a believer.

Two weeks ago, my white cat Otis came home from an evening of gallivanting around my apartment complex covered in oil. He looked like something out of the Exxon Valdez disaster. I didn't want to clean him up with something that might harm him so I was amazed when not only did it remove the nasty oil from his fur it made his coat as bright and soft as it was when he was a kitten {with no ill side effects}.

I just had to write to tell you this story and thank you for saving me an expensive trip to the vet.

Sincerely,

Peter Celeste  
Las Vegas, Nevada

## Leave a Reply

Name	Name (required)
E-Mail Address	Mail (will not be published) (required)
Website	Website

## CLEANERS