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Marine and Marina Uses: Biobased Products to Help Meet Your Mission

There is an array of currently available biobased products, including those made from soybeans, which can meet the needs marine and marina users.

These products include:

- **Lubricants**
 - *Two-cycle engine oils, including those for marine outboard engines*
 - *Hydraulic fluids for equipment used at marinas*
 - *General purpose lubricants*
- **Parts Cleaners/Degreasers** for use in maintenance operations
- **Hand Cleaners** for use in maintenance operations
- **Paint Strippers** for use on boats and marina facilities
- **General Purpose Cleaners, Janitorial Products, Wood Sealers, and Masonry and Metal Structure Coatings** for use at marina facilities

Products in these categories:

- **are commercially available;**
- **are designed to meet relevant commercial product performance standards;**
- **are cost-competitive; and**
- **have environmental, health, safety and petroleum use reduction benefits.**

Congress and the President recognized these benefits and approved legislation that requires government agencies to use them. In May 2002, the President signed the Farm Security and Rural Investment Act of 2002, commonly called the Farm Bill, which calls on federal agencies to establish affirmative procurement programs for purchasing biobased products unless there is a price, performance, or availability reason not to do so. Other organizations, agencies, and individuals who adopt the use of biobased products can also recognize and capture the benefits

Information on soy-based commercial and industrial products, including an electronic catalog listing available products and manufacturer contact information, can be found on the United Soybean Board's (USB's) website at <http://www.unitedsoybean.org/newuses>.

Below are examples of biobased products that have marine and marina applications. Included in this package are more detailed descriptions and technical information for

each of the products listed below. Manufacturer-specific information is included with this packet for informational purposes only.¹

Lubricants: Soybean oil-based lubricants can be used in a variety of marine and marina applications. Some of the common uses are in oils for two-cycle outboard marine engines, two-cycle engine oil for other equipment (such as grass and weed trimmers), hydraulic fluids for mobile equipment (such as tractor mowers) and stationary equipment (such as lifts and hoists), and general-purpose oil for lubricating nuts, bolts, tools and equipment. According to the product manufacturers, these lubricants:

- Are virtually non-toxic
- Are readily biodegradable
- Exhibit lower evaporation loss, have a high viscosity index, and increased lubricity
- Have higher flash points than petroleum-based products
- Have excellent thermal and oxidation properties
- Meet the requirements of various Original Equipment Manufacturers
- Are safe to use, store and dispose

(For information on other soy-based lubricant products such as oils for lubricating wire ropes and chains and greases, see listings in the Soy Product Guide at <http://www.unitedsoybean.org/newuses> and/or on the product manufacturers' websites.)

Contacts for lubricant product information in this package:

Bio-Stabilized™: William Garmier, Renewable Lubricants, Inc., (330) 877-9982, <http://www.renewablelube.com>

EnviroLogic®: Mark Miller, Terresolve Technologies Ltd., (800) 661-3558, <http://www.terrsolve.com>

Safe Lube™: Kim Kristoff, Gemtek® Products, (602) 265-8586, <http://www.gemtek.com>

Parts Cleaners: Biobased cleaning fluids can be used in a variety of ways, such as hand wiping, dip tanks and parts washers, to remove oils, carbon, and grease from mechanical parts and equipment used at marinas. According to their manufacturers, these products:

- Are efficient and cost effective
- Are readily biodegradable
- Are virtually non-toxic
- Contain no ozone depleting chemicals (ODCs), hazardous air pollutants (HAPs), global warming compounds, or SARA reportable chemicals
- Are approved SNAP solvents

¹ This fact sheet is provided for information only. The United Soybean Board does not endorse, promote or make any representations regarding any specific product mentioned herein.

- Franmar Chemical[®], Inc. manufactures a soy-based product, called BEAN-e-doo[®] Parts Washer, that according to Franmar meets stringent VOC and vapor pressure standards, has a flash point of 400 degrees F, and can be used in most parts washing equipment.
- Bio-Parts Soy-Cleaner/Degreaser, according to its manufacturer Renewable Lubricants, Inc., is a specially formulated, ultimately biodegradable parts cleaner that can be used to replace petroleum solvents for cleaning parts and equipment. According to Renewable Lubricants, it is a safe, non flammable product has been formulated with anti-oxidants for improved stability.
- SC-Supersolve[™], according to its manufacturer Gemtek[®] Products, will not volatilize, is reusable and filterable to 0.01 microns for extended use in precision parts cleaners and automotive parts washers, and is part of Gemtek's chemistry that has been recognized by EPA's Design for the Environment program.
- Soy Technologies, LLC makes SoyGreen[®] 1000, which according to the manufacturer is a water-free soy-based cleaning solvent ideal for parts cleaning applications and is odor free, non flammable with a significantly higher capacity than conventional solvents.
- Workcell Systems, Inc. has two biobased parts cleaning fluids, Glysol[™] PC and Glysol[™] SA. According to Workcell Systems, Glysol[™] PC is a powerful biobased parts cleaning fluid derived from soybeans and other natural sources that can replace mineral spirits in manual and immersion-type parts washers and is safer, cleans better, lasts longer, has low toxicity, no unpleasant fumes or skin irritation and is biodegradable. According to Workcell Systems, Glysol[™] SA is an advanced formula semi-aqueous biobased soybean-derived cleaning fluid that removes both solvent-soluble and water-soluble soils and has no flash point, is safe for use in spray-type parts washers and is biodegradable.
- Vertec BioSolvents, Inc. has a corn and soybean-derived parts cleaner, called VertecBio Gold[™] Parts Cleaner. According to its manufacturer, the parts cleaner has a low vapor pressure and a high loading capacity, has been recognized by EPA's Design for the Environment program, has been approved for use at military bases, and can be used in a variety of parts washing applications.

Contacts for parts cleaner product information in this package:

BEAN-e-doo[®] Parts Washer: Dan Brown, Franmar Chemical[®], Inc., (800) 538-5069,
<http://www.franmar.com>

Bio-Parts Soy-Cleaner/Degreaser: William Garmier, Renewable Lubricants, Inc., (330) 877-9982, <http://www.renewablelube.com>

SoyGreen[®] 1000: Randy Frees, Soy Technologies, LLC, (859) 219-9705,
<http://www.soytek.com>

SC-Supersolve[™]: Kim Kristoff, Gemtek[®] Products, (602) 265-8586,
<http://www.gemtek.com>

Glysol[™] PC and Glysol[™] SA: Richard Soble, Workcell Systems, Inc., (847) 579-0595,
<http://www.workcellsystems.com>

VertecBio Gold[™] Parts Cleaner: Jim Opre, Vertec BioSolvents Inc., (630) 960-0600,
<http://www.vertecbiosolvents.com>

Degreasers: Soy-based degreasers can safely and effectively remove a variety of materials such as heavy greases, oil, carbon, tar, and asphalt from a variety of different surfaces at marinas.

- According to its manufacturer, Renewable Lubricants, Inc.'s Bio-Parts Soy-Cleaner/Degreaser, which is described above, can be used to as a general degreaser for cleaning parts and equipment. (See product information under Parts Cleaners.)
- SC-1000™, according to its manufacturer Gemtek® Products, contains no VOCs, removes fats, greases, lipids, oils, proteins, and sugars without reacting with the cleaning surfaces, has been recognized by EPA's Design for the Environment program, is certified by SCAQMD (California) as a Clean Air Solvent and is SNAP approved.
- According to its manufacturer, Soy Technologies, SoyGreen® 5000 is a powerful, cost-effective, biobased, low VOC solvent that can be used for heavy degreasing and carbon removal.
- According to its manufacturer, the VertecBioGold™ Parts Cleaner described above, is also an excellent degreaser for heavy lubes and greases. (See product information under Parts Cleaners.)

Contacts for degreaser product information in this package:

Bio-Parts Soy-Cleaner/Degreaser: William Garmier, Renewable Lubricants, Inc., (330) 877-9982, <http://www.renewablelube.com>

SC-1000™: Kim Kristoff, Gemtek® Products, (602) 265-8586, <http://www.gemtek.com>

SoyGreen® 5000: Randy Frees, Soy Technologies, LLC, (859) 219-9705, <http://www.soytek.com>

VertecBio Gold™ Parts Cleaner: Jim Opre, Vertec BioSolvents Inc., (630) 960-0600, <http://www.vertecbiosolvents.com>

Hand cleaners: Biobased hand cleaners remove a variety of substances, including lube grease, engine oils, adhesives, tar, lacquers, paint, and ink from hands. According to the manufacturers, these products:

- Can remove the toughest grease and grime
- Leave hands feeling soft and conditioned
- Do not contain petroleum products or turpenes
- Use safe, non-hazardous ingredients

In addition to cleaners, there is a barrier cream that can be used to coat hands while doing shop work and, according to its manufacturer, allows for the easy removal of dirt and grease with water after work is completed.

Contacts for hand cleaner product information in this package:

SC-Heavy Duty Hand Cleaner™: Kim Kristoff, Gemtek® Products, (602) 265-8586, <http://www.gemtek.com>

SoyDerm™: Randy Frees, Soy Technologies, LLC, (859) 219-9705, <http://www.soytek.com>

Soy Scrub™ (hand cream) and Series 8™ (barrier cream): Dan Brown, Franmar Chemical®, Inc., (800) 538-5069, <http://www.franmar.com>

Paint Strippers: There are soy-based paint, varnish, and urethane removers that can be used in both indoor and outdoor applications, and there is a soy-based stripper for removing paint from boat hulls.

- For removing anti-fouling paint from boat hulls, Franmar Chemical®, Inc. manufactures a soy-based product, called Soy Strip™. According to its manufacturer, Soy Strip™ eliminates the need for extensive sanding. Franmar also manufactures a multi-purpose paint remover/stripper, Soy Gel™. According to Franmar, Soy Gel™ is an industrial strength and consumer friendly paint, varnish, and urethane remover with a low evaporation rate and a gel formulation that makes it possible to remove several layers of paint in one application. According to Franmar, when Soy Gel™ is used to remove lead based paint, lead becomes encapsulated in the gel, preventing airborne lead particles, allowing for safe and easy disposal.
- Soy Technologies manufactures a product, SoyGreen EnviroClear™, which is used for removing paint and chemical resistant coatings. According to its manufacturer, EnviroClear™ can remove multiple layers of oil and latex paints as well as epoxies, urethanes, and elastomers. Also, according to its manufacturer, SoyGreen® 5000, which is a powerful cost-effective solvent, can also be used for paint stripping (see product information for SG-5000 under Degreasers). For stripping polyurethane, epoxy paints and catalyzed varnishes and similar finishes, Soy Technologies makes a product called SoyGreen® PolyStrip gel, which according to the manufacturer can be used for stripping floors or vertical surfaces leaving them in a ready to refinish condition.

Contacts for paint stripper product information in this package:

Soy Strip™ and Soy Gel™: Dan Brown, Franmar Chemical®, Inc., (800) 538-5069, <http://www.franmar.com>

SoyGreen EnviroClear™, SoyGreen® 5000 and SoyGreen® PolyStrip: Randy Frees, Soy Technologies, LLC, (859) 219-9705, <http://www.soytek.com>

Other:

– **General Purpose Cleaners:**

- Franmar Chemical®, Inc. manufactures a soy-based product, called Ickee Stickee Unstuck®, which according to Franmar is a cleaner that can be used to clean oils, grease, and tar from just about anything you can possibly get dirty and will even keep tools and parts rust free longer.
- Renewable Lubricants, Inc. manufactures Bio-Soy Orange™ All-Purpose Degreaser/Cleaner, which according to Renewable Lubricants is a highly concentrated industrial degreaser that removes and cleans surfaces of stubborn stains, greases, and oily grimy dirt fast.

- SoyFast, according to its manufacturer Soy Technologies, LLC, is a concentrated all purpose cleaner formulated to be ready-to-use or diluted with water.

Contacts for general purpose cleaner information in this package

Ickee Stickee Unstuck[®] : Dan Brown, Franmar Chemical[®], Inc., (800) 538-5069, <http://www.franmar.com>

Bio-Soy Orange[™] All-Purpose Degreaser/Cleaner: William Garmier, Renewable Lubricants, Inc., (330) 877-9982, <http://www.renewablelube.com>

SoyFast: Randy Frees, Soy Technologies, LLC, (859) 219-9705, <http://www.soytek.com>

– **Janitorial Products:**

- Gemtek Products manufacturers a variety of biobased cleaning products that could be used at marina facilities or on boats. These include a bathroom cleaner, a glass cleaner, a multi-surface cleaner, and an odor neutralizer. (See the Gemtek website for a complete listing of its commercial and consumer cleaning products.)

Contacts for janitorial product information in this package

Gemtek[®] Products: Kim Kristoff, (602) 265-8586, <http://www.gemtek.com>

– **Wood Sealer:**

- According to the product distributor, SoySeal is a natural soy based sealer for all wood, decks and docks that provides a 24 month seal (ASTM C-672) that spreads water, does not bead, contains no VOCs, is non-toxic, non flammable, and biodegradable.

Contact information:

Soy Seal: Rusty Clayton, True Value Commercial Supply, (641)522-9559, <http://www.soyclean.biz>

– **Coatings for Masonry and Metal Structures:**

- Green Products, Inc. manufacturers a product, ELMS[®] NATURAL MASONRY JACKET[™], that is an agricultural oil based liquid membrane designed for waterproofing and restoration of numerous masonry applications such as natural stone, brick, concrete, tile, terra cotta, limestone, split face block and more. According to the manufacturer, NATURAL MASONRY JACKET[™], is 100% UV stable, resistant to acids and oils and does not lose mill thickness as it ages, so it is a perfect long-term protective waterproofing solution.
- ELMS[®] NATURAL METAL JACKET[™] is agricultural oil based liquid membrane designed for waterproofing, rust proofing and protecting numerous structural metal applications such as bridges, railings, pylons, seaside structures, or anywhere a long term solution against the elements is needed. According to the manufacturer, NATURAL METAL JACKET[™] is 100% UV stable, resistant to acids and oils and does not lose mill thickness as it ages, so it is a perfect long term protective waterproofing and rust proofing solution and also is perfect for applications in harsh climates and environments.

Contact information:

Environmental Liquid Membrane System[®] (ELMS[®]) Grant Grable, Green Products, LLC, (877) 474-7481, <http://www.greenproducts.net>