



Biodegradable
Recyclable

United Bio Lube

Enabling Compliance with White House Executive Orders
13101, 13123, 13134, 13148, 13149

Sustainable
Renewable



Contact: Jeffrey S. Marth
Email: jMarth@UnitedBioLube.us

www.UnitedBioLube.us

Phone: (650) 213 - 9979
Fax: (650) 223 - 0305

A Green Chemistry Company

Enabling U.S. Oil Independence

Product Information

BPL™ - Bio Penetrating Lubricant + Bio Corrosion Inhibitors

Military Government Industry Transportation Marine Agriculture Home

Go Green! BPL™ Soy-based Renewable Lubricant Replaces Hazardous WD40!

United Bio Lube's BPL™ - Bio Penetrating Lubricant with patented **Bio Corrosion Inhibitor (BCI™)** chemistry is engineered to **penetrate** deep into close tolerant areas, **displace water** and **remove deposits**, then **lubricate** while preventing **rust** and **corrosion** from re-occurring.

BPL™ is a 100% **Ultimate Biodegradable**¹ soy-based vegetable oil formula made from **Stabilized™**² **High Oleic Base Stocks (HOBS)**³.

Green Chemistry based BPL™ exceeds OEM industrial requirements for a **universal, multi-purpose, heavy-duty, light industrial** Penetrating Lubricant and Preservative Oil.

An ideal product for **LEED Certified Green Buildings**, BPL™ - Bio Penetrating Lubricant + Bio Corrosion Inhibitors is both a superior and renewable alternative to hazardous **WD40** and all other toxic and flammable petroleum (Mineral Oil, Synthetic, Synthetic Blends) penetrant products!

In addition to being a smart, cost effective, and renewable purchase, **BPL™ outperforms and makes obsolete the use of all major brands of hazardous petroleum penetrating lubricants**, specifically: **WD40, 3in1, TriFlow, Liquid Wrench, PowerLube, LPS#2, PB-Blaster, Mouse Milk, Unilease, GT85, Kroil, CRC 5-56**, and all other harmful, lesser performing brands - particularly when one collectively considers performance, worker health & safety, and environmental impact along with a proper **Total Life Cycle Analysis**, i.e. **BEES - Life Cycle Cost Analysis Tools**. BEES provides a truer cost assessment when including impacts to eco systems from manufacturing, usage, and disposal costs.

Based on American ingenuity, BPL™ truly is a unique combination of high **quality, multi-functionality, premium** performance features.

BPL™ offers Manufacturers, Feets, and Maintenance Facilities (Hospitals, Schools, Governments) an opportunity to gain substantial performance enhancements while protecting capital investments in advanced machinery, equipment, tools, and hardware.

Safe, reliable, affordable, and available today, BPL™ - Bio Penetrating Lubricant + Bio Corrosion Inhibitors is setting new industry standards for:

- Quality & Performance
- Worker Health & Safety
- Environmental Protection
- Economic Sustainability



To purchase, simply call **(650) 213 - 9979**. Or, sign-up online and open your **Green Purchasing Account** at **www.UnitedBioLube.com**.

Universal, Multi-Purpose, Multi-Functional

BPL™ is a safe product with many uses.

BPL™ is an exceptional **universal** lubricant **engineered, tested, and approved** for high demand use in our **U.S. Military, Federal Agencies, and Manufacturing Industries.**

BPL™ is ideal for **Trade Professionals** working in **Industrial Plants, Machine Shops, Marinas, Auto Repair Garages, Offices Buildings, and Home Workshops.**

Multi-functional **BPL™** is recommended for the **maintenance and repair** of all types of indoor and outdoor **equipment, tools, and hardware** commonly used in **Government, Transportation, Agriculture, Forestry, Construction, and Marine** applications.

Superior **water displacement** characteristics make **BPL™** an ideal choice for **Construction and Landscaping** jobsites to protect equipment, tools, and hardware exposed to humid, wet weather.

BPL™ works to protect **threaded parts** before assembly.

BPL™ provides the proper protective thin fluid film lubricant coating for **Power Hand Tools.**

Use for in **mechanical assemblies** where traditional penetrating oils and solvents are not effective.

Use with parts and assemblies made with **plastics and plated plastics.**

Multi-Purpose Indoor Outdoor Applications

BPL™ provides superior **Lubricity** and **Anti-Wear** protection for all types of professional **Tools, Wheels, Cables, Hinges, Locks** or any **Rotating** or **Sliding** objects, including:

- Air Conditioners
- Air Tools
- All Levers
- Antennas
- Antiques
- Armatures
- Axles
- Automobiles
- Ball & Socket Joints
- Bearings
- Bicycle Cables
- Bicycle Gears
- Blades
- Boat Trailers
- Boat Hardware
- Buckles
- Cabinet Hardware
- Cable Housings
- Cables
- Car Battery Terminals
- Castors
- Chain Saw Bolts
- Chains
- Chutes
- Clamps
- Come Alongs
- Computer Fans
- Cutting Tools
- Dies
- Door Knobs
- Door Knockers
- Drills
- Electric Hedge Clippers
- Electric Switches
- Engine Blocks
- Exhaust Fans
- Firearms
- File Cabinets
- Fishing Reels
- Fuse Boxes
- Folding Chairs
- Folding Tables
- Garage Doors
- Gate Hardware
- Golf Carts
- Grinders
- Guides
- Hand Clippers
- Hand Trucks
- Hedge Shears
- Hinges
- Hose Rollers
- Ironing Boards
- Irrigation Valves
- Jacks
- Kitchen Sink Hardware
- Knobs
- Ladders
- Lawn Edgers
- Lawn Mower Blades
- Lawn Mower Cables
- Lawn Mower Wheels
- Light Bulb Sockets
- Linkages
- Locks
- Loppers
- Machines
- Mail Boxes
- Metal Shears
- Nuts & Bolts
- Outboard Motors
- Pliers
- Pruning Shears
- Pulleys
- Rail Conveyors
- Rails
- Rollers and Tracks
- Room Fans
- Rototillers
- Saws
- Scissors
- Sewing
- Shafts
- Skateboards
- Skates
- Sprinkler Heads
- Strollers
- Switches
- Table Vises
- Fish Tackle Boxes
- Tool Boxes
- Trailer Connectors
- Trailer Lights
- Valves
- Vise Grips
- Weathervanes
- Weed Wacker Shafts
- Wheels
- Wheel Barrows
- Wheel Bearings
- Winches
- Windows
- Window Cranks
- Window Latches
- Wrenches

BPL™ Usage, Storage, and Clean-up

BPL™ cleans up well with common soap and water. Meets **RCRA** laundry and disposal requirements for dirty rags.

BPL™ has an **Inverted Spray Valve** that allows **easy 360° spray** application in all directions, even upside down. Great in those hard to reach spots.

Suitable for numerous **Indoor** and **Outdoor** uses, BPL™ may be easily applied by a variety of convenient methods to meet any application need including **Brush, Drip, Squirt**, or conventional spray equipment, i.e. **Hand Pumps, Aerosols, or Guns**.

The natural smelling formula has an **Extremely Low Volatility**, is **VOC-free**, and **Fire Resistant**.

BPL™'s extremely low volatility yields a pleasant, mild vegetable oil odor with no harsh, harmful fumes.

Engineering Note: BPL™ - Bio Penetrating Lubricant + Bio Corrosion Inhibitors can be tailor designed to gain efficiencies in specialized applications.

BPL™ Outperforms WD40 In 4 Key Functional Areas

BPL™ is a product everyone needs for professional and household projects.

BPL™ outperforms and makes obsolete hazardous and flammable WD40 and all other leading petroleum products in 4 key functional areas: **Penetration, Lubrication, Rust & Corrosion Prevention, and Anti-Wear Protection**.

BPL™ is a true **Drop In Replacement** for petroleum and synthetic oils in the categories of Lubricants, Penetrants, and Corrosion Inhibitors.

Products like **WD40, 3in1, TriFlow, Liquid Wrench, PowerLube, LPS#2, PB-Blaster, Mouse Milk, Unilase, GT85, Kroil, CRC 5-56**, and all the others in their class can now be replaced with one safe alternative having equal or superior performance - namely **BPL™**!

1. BPL™ Penetrates!

BPL™ super penetrant loosens frozen parts from hardened rust and corrosion!

BPL™'s superior penetrant characteristics supply the proper lubrication to all critical parts to keep metal components free of frictional wear and fatigue.

Penetrant power is capable of breaking through a 1/2 inch of rust in 5 - 10 minutes.

Penetrant capabilities allow BPL to creep into tolerances with spacings 1 millionth of an inch apart.

BPL™'s ability to creep is demonstrated by placing a 3/8" x 2" bolt on its head with 1/4" of BPL™ in the bottom of a lab beaker, and observing the speed as BPL™ creeps vertically up and around the threads passing through the rusted bolt and onward up the bolt against gravity.

As BPL™ **Cuts Deep** through surface contamination into the tightest tolerances to loosen and free frozen, locked parts and components, it **Displaces** and **Repels** moisture while actively **Dissolving** and **Removing** rust and impurities from metal surfaces, i.e. **Asphalt, Hardened Grease, Carbon, Dirt, Scale, and Tar**.

Superior **Surface Wetting** and **Moisture Displacing** properties continue to perform even when parts are submerged in **Fresh** or **Salt** water, i.e. when sprayed on **Boat Motors** and **Fishing Gear**. Passes **Salt Water Corrosion Protection ASTM D-665**

BPL™ works very well on **Ferrous, Non-ferrous, Yellow** metals, and **Alloys**, regardless of the density or porosity of the surface. BPL™ forms an effective barrier against atmospheric humidity and corrosion by penetrating the pores of metals to displace moisture beneath the immediate surface.



BPL™ is recommended for **Chain** and **Cable** lubrication. **BPL™** penetrates deep into the inner core of **Cables** and **Chain Links**, preventing rust and wear while providing smooth operation.

BPL™ has the right formulation to be an excellent light **Air Tool Oil** and **Spindle Oil** for high speed performance.

BPL™ can be used to protect **Locks** and **Firearms** where tight tolerances must be reached and kept clean.

2. BPL™ Lubricates!

BPL™ improves operation by reducing friction between moving parts.

BPL™'s natural oily film has shown in laboratory and field tests to **outperform** petroleum oils in terms of natural **Lubricity**.

BPL™'s super high **Viscosity Index (VI=211)** naturally provides superior **Lubricity** with a very high **Load Carrying Capacity** as demonstrated by achieving a **.40 mm** scar wear during a **ASTM D-2266 Four Ball Wear Test**.

BPL™'s lubricating power eliminates **Squeaks** and **Squeals** in all moving components such as **Hinges**, **Shafts**, and **Keyways**.

BPL™ leaves a **Long Lasting** protective **Thin Fluid Film** surface coating between both **Ferrous** (i.e. Steel), **Non-Ferrous** (i.e. Aluminum, Titanium), and **Yellow** (i.e. Copper, Brass, Bronze)' metal components to repel **Dirt**, **Rust**, and **Water**.

BPL™ provides lubricating protection of all metals outside for up to **9 to 12 months** and up to **2 - 2.5 years** of protection for metals stored inside.

BPL™'s outstanding film **Persistency** and **Stability** in extreme temperatures will not cause or leave sticky deposits on metal surfaces.

Because it **Lubricates** and does not **Evaporate**, **BPL™** is recommended for **Metalworking**, **Fabricating**, **Assembly**, and **Storage** to protect **Parts**, **Tools**, **Dies** and **Molds** from corrosion and wear.

Since BPL™ is **Non-Conductive**, it lubricates electrical components, i.e. **Guitar Potentiometers**, **Light Bulb Sockets**, and **Car Battery Terminals**.

Use to eliminate moisture-induced short circuits.



3. BPL™ Inhibits Rust & Corrosion!

United Bio Lubes BPL™ - Bio Penetrating Lubricant is fortified with advanced **Bio Corrosion Inhibitor (BCI™)** chemistry.

Utilizing patented **Bio Corrosion Inhibitor (BCI™)** chemistry, BPL™ forms an **Thin Fluid Film** on metal surfaces that provides long term prevention against rusting and corrosive attack.

BPL™ provides **2 - 2.5 years** of **Indoor** protection against **Rust** and **Corrosion** and up to **9-12 months** of **Outdoor** protection.

BPL™'s long lasting Thin Fluid Film acts as a **Moisture Repellent** to protect, guard, and seal against continuing rust and corrosion caused by **Water**, **Salt-water**, **Dirt**, **Dust**, and **Chemical Imperities**.

BPL™ provides **Scale** and **Deposit** protection for **Ferrous**, **Non-ferrous**, **Yellow** metals, and **Alloys**.

BCI™ chemistry is not chemically reactive to yellow metal containing parts as demonstrated by the **ASTM D 130**, "**Copper Strip Corrosion Test**".



BPL™ is highly inhibited against moisture and rusting in both **Fresh** and **Sea** water environments. This is demonstrated in **Passing** results of both A and B Sequences of the **ASTM D 665, "Turbine Oil Rust Test"**.

BPL™ passes **CLEAN** with **No Rust** on both A and B sequences of the **ASTM D-665, "Salt Water Corrosion Protection Test"**.

Powerful Bio Corrosion Inhibitor (BCI) chemistry provides outstanding Anti-Corrosion protection in atmospheres with high humidity, i.e. Salt water 'Marine' environments with 'Salt-Mist' atmospheres and Fresh water **Marinas**.

BPL™ is recommended for use in **Metalworking** industries as a **Preservative Oil** for both 'Outside' long term storage and 'Inside' plant production work areas.

4. BPL™ Protects Against Wear & Fatigue!

Protection against wear is achieved by combining the high **Fluid Film Strength, Oxidation Stability, Shear Stability, Heat Stability,** and **Load Carrying Capacity** of **Stabilized™ HOBS** with **Anti-Wear** and **Extreme Pressure** additives.

BPL™ is engineered to maintain separation between mating surfaces. Extreme Pressure and Anti-Wear additives protect metal surfaces with a tough **thin fluid film** coating designed to prevent metal-to-metal contact.

Several test methods are used to measure Anti-Wear and Extreme Pressure properties of United Bio Lubes BPL™ - Bio Penetrating Lubricant:

1. **ASTM D 2782**, "Four Ball EP (Extreme Pressure) Test", ASTM International
2. **ASTM D 4172**, "Four Ball Wear Test", ASTM International
3. **ASTM D 5182**, "Evaluating the Scuffing Load Capacity of Oils (FZG)", ASTM International
4. **ASTM D 2782**, "Timken Extreme Pressure Test", ASTM International

Engineered for today's equipment, tools, and hardware, BPL™ - Bio Penetrating Lubricant is designed to deliver a measurable **Return On Investment** by:

1. Reducing machine Wear and Failure by:

- o Reducing Friction & Fatigue
- o Reducing Pitting & Micro-pitting
- o Reducing Scratching & Scoring
- o Reducing Galling & Welding
- o Inhibiting Corrosion & Rust
- o Improving Heat Transfer
- o Inhibiting Gum, Sludge, Varnish
- o Removing foreign and wear particles from critical contact areas



2. Reducing machine Maintenance cycles

3. Reducing overall system Down-time

Processing machinery and equipment operating under high stress will benefit from improved **Fluid Film Strength, Oxidation Stability, Shear Stability, Heat Stability, Hydrolytic Stability, Anti-Corrosion, Anti-Rust,** and **Anti-Wear Extreme Pressure** properties. These properties minimize the rates of wear and fatigue on system Components.

Collectively, these system wide performance improvements can lead to a positive **Return On Investment** in capital equipment as measured by:

- Longevity of Components and Parts
- Improved machine Operability
- Extended machine Service Life
- Improvements in plant Safety
- Improvements in plant Productivity, and ultimately,
- Brand Integrity and Protection

Tribological Properties, Qualities, and Features

BPL™ forms a thin lubricating **Fluid Film** on metal surfaces with a low tendency to evaporate, superb film strength, and a very high, long lasting, resistance to Rust and Corrosion.

In addition to superior Lubricity, the super high **Viscosity Index (VI = 211)** of the **Stabilized™ HOBS** provides a very high **Load Carrying Capacity** for improved load protection to further reduce wear during operation.

Conforms to **Federal Specifications for VV-P-216 Penetrating Oil For Loosening Frozen Metallic Parts** and **ASTM D 971 Test for Interfacial Tension of Oil Against Water**.

Made from Stabilized™ HOBS, BPL™ - Bio Penetrating Lubricant shows performance improvements over petroleum in nearly all physical properties:

Superior Lubricity

United Bio Lube's BPL™ - Bio Penetrating Lubricant is specially formulated to outperform petroleum based products. The natural oily **Fluid Film** of this high viscosity fluid has proven in laboratory and field tests to outperform petroleum base oils in terms of **Lubricity**.

Greater lubricity leads to:

- Less Wear
- Less Energy Consumption
- Lower Operating Temperatures

BPL™ has a very high **Viscosity Index**, i.e. **VI = 211**.

Oxidation Stability

Advanced **Stabilized™ HOBS**⁴ chemistry keeps **BPL™** from breaking down and forming acidic residues that harm rubber seals and other elastomers.

Bench tests measuring **Oxidation Stability** indicate United Bio Lube's **BPL™ - Bio Penetrating Lubricant** is superior in comparison with non-stabilized, commercial vegetable oils (i.e. Rapeseed, Canola, Soy) and mineral oils in terms of reduced oil thickening and deposits.

Enhanced chemical stability prevents the formation and thickening of varnish and glaze.

Super High Viscosity Index

The super high, shear stable **Viscosity Index** (i.e. **VI = 211**) reduces friction between moving parts resulting in less heat generated. Less heat means **Less Energy Consumption** and **Lower Risk** of equipment failure.

At higher operating temperatures, the high Viscosity Index maintains the proper viscosity required to minimize Wear and Fatigue.

Stabilized™ chemistry prevents viscosity breakdown under high-shear conditions.

Note: High shear rates can quickly destroy the molecular bonds of petroleum penetrating lubricants over time resulting in loss of viscosity.



Heat Stability

Withstands both High and Low temperature variations.

- High **Flash Point = 146 °C 295 °F**
- Advanced Cold Flow Technology
- Low **Pour Point = -30 °C -22 °F**

Naturally High Load Carrying Capacity

United Bio Lube's BPL™ - Bio Penetrating Lubricant naturally demonstrates a high level of wear protection against **Galling** and **Welding** in heavily loaded metal surfaces, as measured by an **EP Weld Point** of 250 kg.

Anti-Wear Extreme Pressure

Third party, independent test data validates that United Bio Lube's BPL™ - Bio Penetrating Lubricant is superior to conventional mineral oils in **Accelerated Wear** tests.

Extreme Pressure and Anti-Wear additives exceed **FZG Method** (i.e. Load Stage 12) requirements for penetrating lubricants.

Bio Corrosion Inhibitors (BCI™)

Patented **Bio Corrosion Inhibitors (BCI™)** provide advanced surface protection against corrosion and rust in both fresh and sea water environments.

BCI™ chemistry effectively inhibits both **Corrosion** of **Yellow** metals and **Rusting** of **Ferrous** metals.

BPL™ is engineered to prevent corrosion and rust from occurring on the surface of metals in both **Fresh** and **Sea** water environments.

No other competitive lubricant company has this advanced **BCI™** technology offering.



Water Resistant

BPL™ rapidly **displaces water**.

BPL™ is highly resistant to moisture.

Outstanding **Hydrolytic Stability**.

Demulsification properties protect against moisture damage.

Extremely Low Volatility

No Off-Gassing of harmful vapors and fumes.

- Low Evaporation means less re-applications of BPL™
- Extremely Low Volatility leads to higher Flash Point
- **Durable** and **Long Lasting**

Chemically Compatible

BPL™ is chemically compatible with various materials.

- Compatible with most types of Seals
- Compatible with most types of Paints, Coatings, and Finishes
- Compatible with most types of Rubbers and other Elastomers
- Safe on Wood, Leather, Plastic, and Fabric
- Compatible for use over existing fluids

Additional chemical compatibility features:

- Chemically, biologically and environmentally Inert
- Contains no VOC materials or Chlorine, Silicone
- Non-hazardous to the atmosphere or ozone layer
- Will not change the properties of the metal surface
- Non-reactive at high temperatures
- Neutral to plastics
- Will not carbonize

Made From Renewable National Resources

United Bio Lube's BPL™ - Bio Penetrating Lubricant + Bio Corrosion Inhibitors (BCI™) is engineered for **Original Equipment Manufacturers (OEMs), Fleets,** and **Facilities** across America that are seeking improvements in performance and safety standards.

Companies seeking to reduce their environmental impact can now make a firm business case for switching to United Bio Lube's BPL™ - Bio Penetrating Lubricant.

Sustainable High Oleic Base Stocks (HOBS)

BPL™ is formulated from **U.S.D.A.** sponsored **High Oleic Base Stocks (HOBS)**¹ and processed with **Stabilized™**² chemistry for High Performance, Longevity, Anti-Oxidation, Cold Flow, Reduced Oil Thickening, and Lower Deposits.

HOBS are specialized commodity vegetable oils, i.e. Corn, Sun Flower, Soy, and Canola. Once stabilized against oxidation and decomposition, these oils are the toughest, safest, most affordable option available in today's marketplace.

The **non-hazardous** naturally occurring esters found in HOBS are **Ultimate Biodegradable**³, renewable, recyclable, and economically sustainable national resources.

Note: United Bio Lube's Green Policy Position -- United Bio Lube supports the **Hybrid Breeding** method for naturally growing Mid and High Oleic Base Stock commodity crop oils.

HOBS sequesters CO2 from the atmosphere

As Soy, Sunflower, Corn, and Canola HOBS commodity crops are grown, harmful CO2 is 'pulled', or sequestered, out of the atmosphere. Scaling out HOBS development across the country can help reverse our current contributions to the dangerous trend of global warming.

BPL™ is setting new industry standards for performance, worker health & safety, and environmental protection.

BPL™ is **safe, reliable, affordable** and **available** today.



Safe, Non-Hazardous, and Environmentally Friendly

BPL™ has an additional benefit of being non-toxic to humans. BPL™ is recommended when maintenance of a hygienic atmosphere in manufacturing plants is a critical concern. BPL™ is the safe choice for use in all types of machinery, equipment, and tools.

Safe from contaminants, grown from renewable agricultural resources, High Oleic Base Stocks are naturally ultra-high purity base oils. In contrast, most competitive mineral oils are manufactured by refining, a solvent-based process that retains contaminants from a crude-oil source. Refinery generated contaminants can lead to acid development and premature aging of the penetrating lubricant.

BPL™ is safe for employees and safe for the environment. This bio penetrating lubricant is formulated with non-hazardous, non-toxic additives to help prevent contamination of workers.

BPL™ is preferred over petroleum based penetrating lubricants when there is incidental contact with the penetrating lubricant, or when direct exposure to the environment is likely.

(See [BPL™ - Bio Penetrating Lubricant + Bio Corrosion Inhibitors \(BCI™\) MSDS Sheet](#))

Advanced Safety Features

Fully Approved For Use In Manufacturing

- Compliments **Hazard Analysis and Critical Control Point (HACCP)**
- Compliments **Good Manufacturing Practice (GMP)** protocols



All Government Tested and Approved

- Certified 'Ultimate' Biodegradable and 'Biobased' by the **U.S.D.A.**
- Certified Worker Friendly by **O.S.H.A.**
- Tested and Approved by the **U.S. Coast Guard**
- Tested and Approved by the **National Parks Service**
- Tested and Approved by the **Fish & Wildlife Service**
- Tested and Approved by the **U.S. Forestry Service**
- Tested and Approved by the **North American Oceanic Administration**

(See [United Bio Lube's Renewable Lubricants Case Studies](#))

(See [United Bio Lube's Renewable Lubricants Endorsements](#))

Summary of Key Benefits

United Bio Lube's Quadruple Bottom Line

1. High Performance

- ✔ **United Bio Lube's BPL™ - Bio Penetrating Lubricant** is engineered to meet and exceed OEM performance specifications and requirements.
- ✔ **Anti-Wear Extreme Pressure (EP)** additives prevent metal surfaces from touching.

Outstanding **Load Carrying Capacity** for reduces wear and fatigue.
- ✔ Patented **Stabilized™ HOBS** chemistry prevents **Oxidation** of the Soy vegetable oil from occurring and producing harmful acid by-products.

Stabilized™ HOBS technology provides for extended lubricant Service Life.
- ✔ Super High **Viscosity Index = 211** (ASTM D-2270) provides superior lubricity.

Viscosity @ 40 C = 15.4 (ASTM D-445)
- ✔ **Bio Corrosion Inhibitors** prevent rusting and decay.

Meets ASTM D-665 Salt Water Rust Prevention Test.

Meets ASTM D-130 Copper Corrosion Test.
- ✔ Excellent **Hydrolytic Stability**.

Water Resistant. Rapidly **Displaces** water.

Passes ASTM D-1401 Demulsification Test. Demulsifies water for improved lubricity in moist conditions.

Demulsibility properties prevent formations of emulsions (i.e. Gum, Varnish, and Sludge).

BCI™'s very strong **Thin Fluid Film** protects metal integrity.
- ✔ **High Temperature Operation**

High resistance to fire. The extremely low volatility of HOBS increases this product's flash point and fire safety features.

High Flash Points prevent smoking and ignition.

Meets ASTM D-92 **Flash Point = 146 °C, 295 °F.**
- ✔ **Low Temperature Operation**

Meets ASTM D-97 Pour Point @ -30 °C, -22 ° F

Advanced **Cold Flow** Technology
- ✔ **Chemically compatible** with all types of seals and coatings.

Non-corrosive. Will not deteriorate Yellow metals.

No acidic residues to bind moving parts.

No gum or varnish deposits.
- ✔ **Long lasting** Soy vegetable oil formula.



2. Health & Occupational Safety

- ✔ **High Oleic Base Stocks (HOBS)** are the purest basestocks in the marketplace providing the highest level of protection against chemical contamination; such safety standards are inherently unattainable in pure synthetic lubricants and mineral oils.
- ✔ Compliments **Hazard Analysis & Critical Control Point (HACCP)** systems.
- ✔ BPL™ does not contain any chemical listed as a carcinogen or potential carcinogen by **OSHA, IARC Monographs** or **National Toxicology Program**.
- ✔ BPL™ has no known hazards. This product is considered **Non Hazardous** when handled properly and used for intended purpose.
- ✔ **Fire resistant.** The extremely Low Volatility of **Stabilized™ HOBS** increases this product's Flash Point and Fire Point fire safety features.
High Flash Point prevents smoking and ignition.
ASTM D-92 **Flash Point = 146 °C, 295 °F**
- ✔ The extremely **Low Volatility** also prevents **Off-Gassing** of harmful volatile vapors.
- ✔ BPL™ contains no solvents or waxes.
- ✔ Safe CO₂ propellant.
- ✔ BPL™ is **safe, non-hazardous**, and **OSHA** certified **Worker Friendly**.

NFPA CODE: HEALTH: 1 FIRE: 1 REACTIVITY: 0

HMS CODE: HEALTH: 1 FIRE: 1 REACTIVITY: 0

3. Environmental Compliance & Protection

- ✔ **United Bio Lube's BPL™ - Bio Penetrating Lubricant** is preferred over petroleum penetrating lubricants in applications where there is a direct danger of polluting the air, water, soil, or work environment through loss of the lubricant.
- ✔ BPL™ has the highest **USDA** rating of **Ultimate Biodegradation**.
- ✔ BPL™ is an **Environmentally Responsible** fluid formulated from **Renewable** agricultural plant resources.
- ✔ BPL™ contains **No Lead** or other **Heavy Metals: No Zinc, No Antimony, No Barium**.
- ✔ BPL™ contains **No Chlorine, Silicon, or Phenols**.
- ✔ Fully **Recyclable, Re-refinable**, and **Sustainable**.
- ✔ BPL™ eliminates storage and disposal of hazardous waste.

4. Return On Investment - ROI

- ✔ **BPL™** yields a Return On Capital Investment through better machine performance, efficiency, reliability, and longevity.
- ✔ **BPL™** eliminates the risk of worker contamination from spraying and inhaling harmful vapors.
- ✔ **BPL™** lasts longer. Offers **Extended Service Life** over conventional penetrating lubricants.
- ✔ **BPL™** delivers more usable product with its CO2 propellant.
- ✔ **BPL™** has a long lasting Service Life, far outlasting WD40 and other Penetrating Lubricants.
- ✔ **BPL™** improves equipment, tools, and hardware performance.
- ✔ **BPL™** enables compliance with new and upcoming environmental regulations.
- ✔ **BPL™** does not contaminate employee workplaces.
Bio Penetrating Lubricants do not off-gas.
- ✔ **BPL™** reduces hazardous materials handling and storage costs.
- ✔ **BPL™** helps companies and individuals play a role in securing our national energy needs.
- ✔ Using **BPL™** actively promotes a safer, renewable, and more sustainable **U.S. Bio Economy**.



¹**Ultimate Biodegradation** (Pw1) within 28 days in **ASTM D-5864 Aerobic Aquatic Biodegradation of Lubricants**.

² **High Oleic Base Stocks (HOBS)** are specialized Soy, Corn, Sunflower, and Canola vegetable oils containing high levels of **Oleic Acid**. HOBS are renewable lubricants engineered to replace petroleum basestocks. Economically sustainable, HOBS is America's solution to petroleum based oils. Moreover, HOBS supports **U.S. Farmers**, protects workers and their environment, and reduces dependency on foreign oil.

³**Stabilized™** is Renewable Lubricants Inc.'s trademarked, proprietary, and patented **Anti-Oxidant, Anti-Wear, and Cold Flow Technology**. Stabilized™ technology enables HOBS to perform as a high performance formula in high and low temperature applications, reducing oil thickening and deposits.

For assistance, please call (650) 213 - 9979

