

EcoLine® = Sustainable Celebrating a Growing Portfolio of Biobased Products!

In Cortec® language, EcoLine® equals sustainable and biobased: high priorities for Cortec®. This year, those priorities have translated into the release of at least eight biobased products under the EcoLine® brand name (at least 10 if you count multiple versions). These products include

- · Corrosion inhibiting grease for salt spray environments
- A breakthrough biobased alternative to banned paint strippers
- And a biobased rubber revitalizer for equipment preservation!

Expanding Cortec's Biobased Grease/Lubricant Portfolio

The largest category of EcoLine® products released this year is Cortec's growing portfolio of biobased greases and lubricants. Greases and lubricants typically fulfill three important functions:

- · Lubrication for smooth operation
- · Protection against wear
- · Corrosion protection

Each EcoLine® grease has its own properties and ability levels when it comes to these different functions. Like tools in your toolbox, some are specialized to particular industrial niches. Cortec's grease/lubricant portfolio covers all aspects of lubrication including different NLGI grade requirements and performance characteristics.

The common characteristic of Cortec's six new greases/lubricants for 2018 is their biobased content. They offer more sustainable choices with a lower environmental impact than petroleum based lubricants while meeting the same or better performance characteristics.

Cortec® Surface Preparation: A Breakthrough Alternative to Banned Paint Strippers

An especially exciting EcoLine® development this year is in the surface preparation category. In the month of September, Cortec® announced the release of EcoLine® 4320 and 4330, two USDA Certified Biobased Product versions of a heavy-duty green chemistry paint stripper designed to remove coatings, inks, and resins from metals, concrete, and wood surfaces.

As more retailers pull toxic paint strippers containing methylene chloride and N-methylpyrrolidone (NMP) off the shelf, Cortec® stands ready to offer this greener biobased alternative that does not contain these toxic substances targeted by the voluntary ban. In addition to being biobased, EcoLine® 4320/4330 contains recycled solvents and protects against flash rust and tarnishing throughout the stripping process. With the voluntary sequestration of NMP and methylene chloride paint strippers, Cortec® is pleased to present safer and more environmentally responsible alternatives to do the job of paint removal.

No Need to Neglect Rubber Components When Preserving Metal

Cortec's EcoLine® Biobased Rubber Revitalizer is a good companion product to have along when performing equipment preservation. In the course of preservation, workers often come across rubber components that can also benefit from preservation and/or revitalization. By applying Cortec's soy-based rubber revitalizing product, they can clean, protect, and revitalize rubber parts like rubber hoses, tires, weather stripping, CV boots, rubber vehicle tracks, and other rubber components that are prone to crack and

dry out when exposed to the sun. EcoLine® Biobased Rubber Revitalizer is a USDA Certified Biobased Product and is a qualified product under the mandatory federal purchasing initiative of the USDA BioPreferred® Program (www.biopreferred.gov).

Learn more about these biobased releases in the PRODUCTS section.

DIN CERTCO Verifies Cortec's Certification to Use "Seedling" Logo

Eco Film® passed its 2018 annual verification inspection by DIN CERTCO, authorizing it to continue bearing the DIN CERTCO "seedling" logo! This distinguishing mark of compostability around the globe verifies that these two types of film and bags meet requirements for industrial compostability according to European (EN 13432), U.S. (ASTM D 6400), and ISO (ISO 17088) standards.

When placed in an industrial compost setting, Eco Film® will fully biodegrade into carbon dioxide and water within a matter of weeks, with no eco-toxicity to the soil, plants, or microorganisms involved in the process. An important characteristic of Eco Film® is that it does not rely on biodegradability additives for compostability.

Cortec's DIN CERTCO certification covers the following Eco Film® products:

- Compostable Film (reg # 7P0090)
- Compostable Waste Bags (reg # 7P0091)
- Compostable Shopping Bags (reg # 7P0343)



BioCorr® ATF Receives USDA Biobased Certification

Cortec® recently announced the certification of BioCorr® ATF Rust Preventative as a USDA Certified Biobased Product! This exceptional biobased rust preventative contains 54% USDA certified biobased content and is a qualified product under the mandatory federal purchasing initiative of the USDA BioPreferred® Program.

BioCorr® ATF Rust Preventative is a biobased oil-in-water emulsion rust preventative intended for preservation of transmissions in storage or during transportation. It offers multimetal protection and is an excellent alternative to petroleum derived products. Unlike traditional rust preventative oils, this product leaves a dry, virtually undetectable film on the surface of the metal, helping to create a clean workplace and prevent material waste. In addition to being compatible with transmissions, BioCorr® ATF can be used for the protection of pipes, flanges, gears, cast iron sheets, and coils. The product is applied by dipping or spraying.

To learn more about BioCorr® ATF please visit: https://www.cortecvci.com/Publications/PDS/BioCorrATF-Rust-Preventative.pdf



BIOCORTEC® PRODUCT RELEASES

Cortec® EcoLine® Grease/Lubricant Portfolio

EcoLine® Biobased Grease Powered by Nano VpCl® Target Environment: Salt Spray NLGI Grade: 3

EcoLine® Biobased Grease is formulated from vegetable oils, lithium-based thickener, extreme pressure additives, and Cortec® VpCl® corrosion inhibitors. It contains 86% USDA certified biobased content and is a qualified product under the mandatory federal purchasing initiative of the USDA BioPreferred® Program.

EcoLine® Biobased Grease protects metals with which it is in direct contact as well as metals in hard to reach cavities. Vapor phase Corrosion Inhibitors in the grease will diffuse throughout the space to form a protective layer on metal surfaces inside the bearing that might not be in direct contact with the lubricant. EcoLine® Biobased Grease provides protection against corrosive salt spray conditions, as demonstrated by its passage of ASTM D5969 Rust Prevention testing in a 5% seawater solution. It is ideal for lubricating machinery or bearings that operate intermittently or are difficult to access. More info: https://www.cortecvci.com/whats_new/announcements/EcoLine-Biobased-Grease-PR.pdf



EcoLine® Drilling Rod Grease is formulated from vegetable oils and aluminum complex based thickener. It offers superior lubricity and water repellency with a better lubricity than most petroleum-based grease. EcoLine® Drilling Rod Grease contains extreme pressure additives for excellent protection where constant drilling vibration creates a high load on drilling rod joints. It is formulated to be applied to wet surfaces and is available in NLGI grades 1, 2, and 3. More info: https://www.cortecvci.com/whats_new/announcements/EcoLine-Drilling-Rod-Grease-PR.pdf

EcoLine® Wire Rope Grease
Target Environment: Cables and Wire Rope
NLGI Grade: 0 and 1

EcoLine® Wire Rope Grease is formulated from vegetable oils, aluminum-based thickener, and anti-corrosion additives for maximum wire rope protection. It is available in NLGI grades 0 or 1. EcoLine® Wire Rope Grease is an excellent choice for environmentally sensitive areas (e.g., near waterways).* More info: https://www.cortecvci.com/whats_new/announcements/EcoLine_Wire_Rope_Grease.pdf







EcoLine® Biobased Food Machinery Lubricating Grease #1 and #2

Target Environment: Food Machinery Lubrication

NLGI Grade: 1 and 2

EcoLine® Biobased Food Machinery Lubricating Grease #1 and #2 are NLGI grade 1 and NLGI grade 2 greases (respectively) that provide superior lubricity to moving parts. They can be used to lubricate machinery where there is the possibility of incidental contact with food. EcoLine® Biobased Food Machinery Greases are formulated in accordance with U.S. FDA regulation 21 CFR 178.3570, "Lubricants With Incidental Food Contact" and are also registered with the NSF Nonfood Compounds Registration Program as H1 category lubricants for incidental food contact (Reg. #157337 for grade 1 and Reg. #157338 for grade 2). The two greases are made from natural seed oils and contain 96% USDA certified biobased content. They are both qualified products under the mandatory federal purchasing initiative of the USDA BioPreferred® Program. More info: https://www.cortecvci. com/whats new/announcements/Food Machine Grease PR.pdf



EcoLine® ELP (Extreme Lubricant Penetrant) is a high performance biodegradable soy-based lubricant and penetrant. It is formulated from natural seed oils and select additives that offer lubricity and performance superior to conventional lubricants. Its excellent performance, biobased nature, and low environmental impact make EcoLine® ELP a highly desirable option for industrial and household applications. EcoLine® ELP can be used on all types of metal for multiple purposes around the shop, plant, or home. Whether lubricating moving parts, loosening rusty bolts, or cooling/lubricating basic metal cutting operations, EcoLine® ELP serves as an excellent all-purpose lubricant for general maintenance needs. More info: https://www.cortecvci.com/whats_new/announcements/EcoLine-ELP-PR.pdf

EcoLine® Fifth Wheel Grease Target Environment: Extreme Pressure Areas (E.g., Semi-Truck Fifth Wheels) NLGI Grade: 2

EcoLine® Fifth Wheel Grease is premium quality biodegradable NLGI grade 2 grease that meets NLGI LB grease requirements and is formulated from vegetable oils and a lithium-based thickener. Its superior lubricity and advanced extreme pressure additives promote longer equipment life by reducing friction and wear in sliding and rolling applications. The grease shows good adhesion to resist water washout and has a wide range of operating temperatures. Instead of risking potential pollution with a fossil-fuel based grease that could spill on the ground, using EcoLine® Fifth Wheel Grease on semi-trucks provides needed lubricity but is non-harmful to the environment if it happens to leak on the road.* More info: https://www.cortecvci.com/whatsnew/announcements/EcoLine-Fifth-Wheel-Grease.pdf







Cortec's Alternative to Banned Paint Strippers

EcoLine® 4320/4330

EcoLine® 4320 and 4330 are heavy-duty, green chemistry paint strippers designed to remove coatings, inks, and resins from metals, concrete, and wood surfaces. They do not contain any EPA-listed cancer causing compounds or any California Prop 65 components that cause cancer, birth defects, or other reproductive harm. The products are formulated with renewable materials and recycled solvent. They contain 50% USDA certified biobased content and are qualified products under the mandatory federal purchasing initiative of the USDA BioPreferred® Program.

EcoLine® 4320 and 4330 have a mild odor, are made with biodegradable materials, and are VOC compliant to the California Regulation for Reducing Emission from Consumer Products.** They are nonflammable and do not contain methylene chloride, NMP (n-methylpyrrolidone), chlorinated solvents, toluene, or acetone.

EcoLine® 4320 can be applied via dipping, brushing, or rolling. EcoLine® 4330 is a gelled version that improves surface cling and dwell time for application on large or complicated objects or vertical and overhead surfaces. More info: https://www.cortecveri.com/whats-new/announcements/EcoLine-4320-4330-PR.pdf



EcoLine® Biobased Rubber Revitalizer

EcoLine® Biobased Rubber Revitalizer is a soy-based product designed for cleaning and protecting genuine and synthetic rubber against the damaging effects of drying and sun damage. It is formulated with renewable material and contains 68% USDA certified biobased content. It is also a qualified product under the mandatory federal purchasing initiative of the USDA BioPreferred® Program. More info: https://www.cortecvci.com/whats-new/announcements/EcoLine-Rubber-Revitalizer-PR.pdf

*It is always important to ensure that use and disposal of all materials is in accordance with local guidelines.

**California Code of Regulations, Title 17, Division 3, Chapter 1, Subchapter 8.5. Article 2. Sections 94507-94517















