











Cortec's global leadership in corrosion control is accompanied by a longstanding commitment to environmental responsibility, evidenced by its expanding portfolio of sustainable products. Cortec® is making especially rapid advances in developing USDA Certified Biobased Products made from renewable materials. In addition, Cortec's unique assortment of biobased, biodegradable, and/or repulpable packaging materials, along with environmentally friendly spray-can alternatives to traditional aerosols, make Cortec® a leader in environmentally conscious corrosion control technology.

## USDA CERTIFIED BIOBASED PRODUCTS

Cortec® offers a wide range of USDA Certified Biobased Products for use in cleaning and surface prep, construction, bio-fuels, lubrication, metalworking, rust prevention, and water treatment. These products are part of the USDA BioPreferred® Program Mandatory Federal Purchasing Initiative\*. Through ongoing development of new USDA Certified Biobased Products, Cortec® is providing a wide variety of "green" corrosion control options and promoting the use of sustainable resources for any industry that faces metal corrosion.

\*For more information about the BioPreferred® Program, go to https://www.biopreferred.gov.

#### **Cleaning & Surface Prep**

#### EcoClean<sup>®</sup> Biodegradable Scale and Rust Remover Powered by Nano-VpCl™

A heavy duty biodegradable scale and rust remover. One of the fastest acting products on the market for dissolving heavy scale, corrosion, and naturally occurring oxides off metals. Improves heat-transfer efficiency by creating clean surfaces on heat-exchanger equipment. Effective and safe to use on iron, carbon, stainless steel, copper, aluminum, magnesium, and their alloys. Contains 100% USDA certified biobased content.



#### EcoLine® Bio-based Rubber Revitalizer

A soy-based product designed for cleaning, protecting, and improving gripping capabilities of genuine and synthetic rubber. Contains 68% USDA certified biobased content.



#### **EcoLine® Surface Cleaner & Degreaser**

A heavy-duty, water-dilutable cleaner/degreaser for tough cleaning jobs in industrial and commercial applications. Non-flammable and safer to handle than harmful or hazardous solvent cleaners. Contains 59% USDA certified biobased content.



## EcoLine® 4320 / EcoLine® 4330

Heavy-duty "green" chemistry paint strippers designed to remove coatings, inks, and resins from metals, concrete, and wood surfaces. Contain 50% USDA certified biobased content. No methylene chloride or NMP.



#### FlashCorr® VpCl®

A highly effective environmentally friendly cleaner with a unique ability to neutralize and remove salt deposits. Contains 64% USDA certified biobased content.



#### **VpCI®-422 Liquid Organic Rust Removers**

Effectively removes rust and tarnish from steel, iron, copper, and brass without creating waste disposal difficulties. More user-friendly than traditional rust removers. Contains 92% USDA certified biobased content. Also available in air-powered spray cans as EcoAir® 422.



#### VpCI®-423

A water-based gel that effectively removes rust and oxides from steel, iron, brass, and copper. Works well on vertical and overhead surfaces. Contains 91% USDA certified biobased content. Also available as EcoAir® 423 (air-powered spray cans) and EcoClean® 423 Rust Remover (squeeze bottles).



#### Construction

#### MCI®-2005

A water-based, organic, corrosion inhibiting admixture for protection of metallic reinforcement in concrete structures. Earns credit towards LEED certification. Lower toxicity and environmental impact than traditional corrosion inhibiting admixtures such as calcium nitrite. Contains 67% USDA certified biobased content.



#### **Fuel Additive**

#### VpCI®-705 Bio

Multifunctional fuel additive for biodiesel and other bio-fuels. Serves as a corrosion inhibitor, fuel stabilizer, and water emulsifier for biodiesel, diesel, and gasoline. Contains 80% USDA certified biobased content.



#### Lubricants

#### EcoAir® Biobased CLP

A "green" multifunctional cleaner/lubricant/protectant packaged in a recyclable air-powered spray can. Loosens rusted parts and protects equipment components from wear and corrosion. Contains 89% USDA certified biobased content.



#### EcoLine® Bio-based Grease powered by Nano VpCI®

A multipurpose biobased grease with superior corrosion protection properties for harsh conditions (e.g., salt spray). Formulated from vegetable oils, lithium-based thickener, extreme pressure additives, and Vapor phase Corrosion Inhibitors. Contains 86% USDA certified biobased content.



# EcoLine® Bio-Based Food Machinery Lubricating Grease #1 / EcoLine® Bio-Based Food Machinery Lubricating Grease #2

NLGI grade 1 and 2 greases for lubrication of machinery where there is the possibility of incidental contact with food. Made from natural seed oils. Superior lubricity and wide range of operating temperatures. Contain 96% USDA certified biobased content.



#### **EcoLine® CLP**

Provides lubrication, penetration, cleaning, and corrosion protection. A "green" replacement for hazardous mineral oils and other hydrocarbon based solvents. Carrier based on canola oil and canola methyl ester. Contains 89% USDA certified biobased content. Also available in easy-to-apply wipe-on version.



#### **EcoLine® Cutting Fluid**

A multifunctional concentrate for metal cutting operations. Provides excellent corrosion protection and lubrication during the cutting process. Contains 64% USDA certified biobased content.



## EcoLine® Drill Rod Grease

A premium quality biobased, biodegradable lubricant for drilling rod applications. Contains 82% USDA certified biobased content.



## **EcoLine® ELP (Extreme Lubricant Penetrant)**

A high-performance biodegradable soy-based lubricant and penetrant for general purpose use. Contains 95% USDA certified biobased content.



#### **EcoLine® Fifth Wheel Grease**

Premium quality biodegradable, multipurpose NLGI grade 2 grease recommended for use in fifth wheel plates of semi-trucks. Contains 91% USDA certified biobased content.



#### EcoLine® Rail Curve Grease, Winter / EcoLine® Rail Curve Grease, Summer

Premium quality biobased, biodegradable greases designed to meet heavy-duty lubrication needs where rail curve greases are used. Winter version contains 80% USDA certified biobased content. Summer version contains 86% USDA certified biobased content.



#### **EcoLine® Wire Rope Grease**

Premium quality biobased, biodegradable grease that protects wire rope against corrosion and extreme pressure wear. Contains 83% USDA certified biobased content.



#### **EcoLine® Metalworking Fluid**

Metalworking fluid formulated with biobased oil, additives, and emulsifiers. An excellent replacement for chlorinated products. Excellent corrosion protection. Can be used as a lubricant for heavy-duty rolling, grinding, extruding, stamping, and cutting. Contains 70% USDA certified biobased content.



#### **Packaging**

#### **BioPad®**

A unique flexible corrosion inhibiting device constructed from biobased non-woven material. Provides multi-metal protection and serves as an extra-strength source of VpCI® for protection of large volumes. Contains 58% USDA certified biobased content.



#### CorShield® VpCl®-146 Creped Paper

Premium corrosion inhibiting creped paper that offers a cushioning effect to physically protect delicate parts. Fully recyclable/repulpable. Contains 92% USDA certified biobased content.





#### CorShield® VpCl®-146

Fully recyclable/repulpable VpCl® kraft paper for interleaving and wrapping of metal parts. Protects ferrous and non-ferrous metals against aggressive environments such as humidity, SO<sub>2</sub>, H<sub>2</sub>S, and galvanic corrosion of dissimilar metals. Contains 92% USDA certified biobased content.



#### EcoShield® VpCl®-144

Fully recyclable premium moisture barrier paper with Vapor phase Corrosion Inhibitor protection. Used for packaging of metals when corrosion protection and extra moisture resistance is needed. Contains 69% USDA certified biobased content.



#### **Rust Preventatives**

#### **BioCorr® Rust Preventative**

A water-based, biobased, dry-film rust preventative. Protects metals during storage and transportation. An excellent environmentally sound alternative to petroleum derived products. Contains 64% USDA certified biobased content. Also available in SC (super-concentrate) version.



#### **BioCorr® ATF Rust Preventative**

An oil-in-water emulsion rust preventative for preservation of transmissions in storage and during transportation. Forms an invisible dry to touch film. Contains 54% USDA certified biobased content. Also available in SC (super-concentrate) version.



#### EcoLine® 3220

A ready-to-use canola-oil-based rust preventative. Tenacious film clings to metal surfaces for excellent corrosion protection in storage and shipment, with long-lasting vapor phase protection. Contains 99% USDA certified biobased content.



#### EcoLine® 3690

A ready-to-use canola-oil-based rust preventative designed for severe marine and high humidity conditions. Self-healing and moisture-displacing. Contains 72% USDA certified biobased content.



#### **EcoLine® Long Term Rust Preventative**

A soy-based long-term rust preventative and lubricant. Provides excellent corrosion protection in high humidity and chloride-containing environments. Contains 85% USDA certified biobased content.



#### **Water Treatment**

#### M605 PS

A corrosion inhibitor additive for deicing salts and closed loop cooling system brine solutions. Nitrite-, chromate-, and phosphate-free. Contains 98% USDA certified biobased content.



#### EcoClean® Biodegradable Scale and Rust Remover Powered by Nano-VpCI™

A heavy duty biodegradable scale and rust remover. One of the fastest acting products on the market for dissolving heavy scale, corrosion and naturally occurring oxides off metals. Improves heat-transfer efficiency by creating clean surfaces on heat-exchanger equipment. Effective and safe to use on iron, carbon, stainless steel, copper, aluminum, magnesium, and their alloys. Contains 100% USDA certified biobased content.



#### EcoLine® VpCI®-642

A corrosion inhibitor for offshore hydrostatic testing with seawater. Replaces nitrite-, chromate-, and hydrazine-based rust preventative products. Contains 93% USDA certified biobased content.



#### **VpCI®-645 Marine Use Corrosion Inhibitor**

A unique concentrated formulation that protects ferrous and non-ferrous metals from corrosive solutions containing chlorides. An effective replacement for nitrite- and chromate-based formulations and hydrazine-based oxygen scavengers. Contains 93% USDA certified biobased content.



## **Sustainable Packaging Options**

Cortec's sustainable packaging options include a range of biobased, biodegradable, and/or recyclable materials. Each type of packaging meets a specific need such as compostability, corrosion protection, moisture and grease resistance, and even ESD protection!

#### **Biodegradable and Biobased Films**



#### **Eco-Corr Film®, Patented**

The first biodegradable corrosion inhibiting film. Eco-Corr Film® contains Cortec's proprietary VpCl® Technology and provides excellent contact, barrier, and vapor phase corrosion protection for ferrous and non-ferrous metals. Formulations containing up to 40% biobased content are available and can be designed to fit required properties ranging from highly elastic to semi-rigid structures. When placed in a commercial composting environment, Eco-Corr Film® will fully disintegrate within months. Eco-Corr Film® is shelf stable.

#### Eco-Corr Film® ESD, Patented

A compostable, corrosion-inhibiting film with ESD protection to eliminate static electricity (e.g., for packaging electronics). When placed in a typical commercial composting environment, Eco-Corr Film® ESD will disintegrate within months.















#### Eco Film®

A compostable film designed to replace non-degradable films such as traditional low density and high-density polyeth-ylene. Provides good mechanical properties and stability. Made from resin certified by BPI (international Biodegradable Products Institute, Inc.) to be compostable in municipal and industrial composting facilities according to ASTM D 6400 (BPI certificate #890974).













#### Eco Works®, Patented

A range of compostable film and bag products containing 5-45% renewable content and no polyethylene. When placed in a typical commercial composting environment, Eco Works® films will fully biodegrade within months. Eco Works® is made from resin certified by BPI (international Biodegradable Products Institute, Inc.) to be compostable in municipal and industrial composting facilities according to ASTM D 6400 (BPI certificate #890974). Eco Works® also contains an annually renewable biopolymer derived from plant sugars. Eco Works® film and bags can be used for checkout bags, lawn and leaf bags, organic waste diversion, and other industrial and commercial uses.













#### **Eco Works® Resin**

A proprietary blend of aliphatic and aromatic polyesters designed for compostable film extrusion applications. When placed in a typical commercial composting environment, films produced from Eco Works® Resin will fully biodegrade within a matter of months. Eco Works® resin is certified by BPI (international Biodegradable Products Institute, Inc.) to be compostable in municipal and industrial composting facilities according to ASTM D 6400 (BPI certificate #890974). Films produced from Eco Works® Resin are certifiable as 100% compostable per ASTM D6400 and DIN EN 13432.

## Paper

#### **Anti-Skid Linerboard**

A liner for pallets, shipping containers, conveyers, and floors where slippage is a concern. Designed to prevent slippage of cases, cartons, and bags up to a twenty degree slide angle. Available with and without VpCI® protection.

#### CorrTainer®

Custom-made corrosion inhibiting cardboard boxes for storage or shipment of metal parts, especially small single-use packs of spare parts.

#### **EcoShield® Paper and Linerboard**

An environmentally friendly, fully recyclable/repulpable alternative to polycoated and waxed papers. Barrier side repels water and resists oil and grease.

#### EcoSonic® ESD Paper powered by Nano VpCI®

A fully recyclable/repulpable paper that combines corrosion inhibiting and static-dissipative properties for protection of sensitive electronics. Environmentally friendly coating made from soybean oil allows EcoSonic® ESD Paper to perform better on the static half-life test than papers with conventional anti-stat coatings.

#### VpCI®-148 Paper

Fully recyclable/repulpable grease, oil, and solvent resistant corrosion inhibiting paper. Used for interleaving and wrapping of lubricated metal parts that require corrosion protection.

#### VpCI®-149 Paper

A unique corrosion-inhibiting paper for extra protection of sensitive metals such as copper, aluminum, and cast iron. Effective against aggressive environments including humidity, SO<sub>2</sub>, H<sub>2</sub>S, and galvanic corrosion from dissimilar metals. Fully recyclable/repulpable.









### Emitters

#### **EcoDevice®**

A unique VpCI® emitting device constructed from biobased non-woven material. Adhesive backing allows easy-stick application inside tool boxes, electrical boxes, and other compartments where corrosion protection is needed. Each 3 in. x 1.25 in. (7.62 cm x 3.175 cm) device protects up to 1.5 ft³ (42 L) of space.



#### **EcoEmitter®**

Polymeric cup constructed from biobased resins contains fully biodegradable corrosion inhibiting powder that releases protective vapors through a breathable biobased membrane. Self-stick cup allows convenient application in enclosed spaces where corrosion protection of metals is required. Each EcoEmitter® protects 8.8 ft³ (0.25 m³) of enclosed space.

## ECOAIR®

Cortec® packages a number of its mainstay corrosion control products and some specialized cleaners in environmentally friendly air-powered bag-on-valve (BOV) spray cans. The empty cans are recyclable.\*

#### EcoAir® VpCI®-337 Corrosion Inhibitor

Ready-to-use biodegradable waterborne Vapor phase Corrosion Inhibitor that leaves a thin, self-healing film. Non-flammable. Protects void spaces such as pipe internals and double wall spaces.

#### EcoAir® VpCl®-377 Multi-Metal Rust Preventative

Water-based replacement for oil-based rust preventatives. Forms clear, dry film. Non-flammable. Indoor dry storage of finished metal parts, castings, gears, pumps, equipment, sintered metals, bars, and roll stock.

#### EcoAir® 414 Cleaner Degreaser

Water-based fast acting cleaner/degreaser with flash corrosion protection. Non-flammable. Removes temporary coatings, light oils, and greases.

#### EcoAir® 418 LM Cleaner/Degreaser

Non-foaming, heavy-duty alkaline cleaner/degreaser with flash corrosion protection. Nitrite- and amine-free. Non-flammable. Removes hydrocarbons, greases, and difficult deposits.

#### EcoAir® 422 & EcoAir® 423 Rust Removers

Environmentally-friendly biodegradable organic rust removers. Non-flammable. Removal of rust/corrosion from metal surfaces. Neutralize with EcoAir® Cleaner Degreaser.

#### EcoAir® Biobased CLP

Multifunctional cleaner/lubricant/protectant. Contains 89% USDA certified biobased content. Non-flammable. Reduces friction and wear on machine parts. Loosens seized parts.. Protects from corrosion.







#### EcoAir® BioClean Spray

An effective but gentle cleaner derived from coco oil and corn syrup. Cleans dirt, soil, dust, debris, and mold/mildew stains from wood, metal, plastics, and other hard surfaces.

#### EcoAir® BioCorr® Biobased Rust Preventative

Water-based, biobased, rust preventative that is safe and easy to use. Leaves a virtually undetectable dry film on metal surfaces.

## EcoAir® Graffiti Remover Enhanced with Nano VpCl® Technology

Exceptionally smooth flowing graffiti removal gel with flash corrosion protection. Contains no methylene chloride, ketones, chromates, phenols, chlorinated solvents, methanol, toluene, or acetone. Removes graffiti, inks, and paints from metal, concrete, and wood.

#### EcoAir® Mold Release Powered by Nano VpCI®

Dual function mold release lubricates and protects injection molds from corrosion and restores dielectric properties. Stable up to 392 °F (200 °C). Easier release of castings from injection molds. Corrosion protection of metal molds. Lubrication of tools, pulleys, guides, motor bearings, and battery terminals.

#### **EcoAir® Tire Duragloss**

Easy to apply high gloss shine for revitalizing tires. Does not contain solvents or harmful ingredients. Non-flammable.

# OTHER SPECIALTY BIOBASED OF BIODEGRADABLE PRODUCTS

#### **Cleaning & Surface Prep**

#### VpCI®-415

A MIL-PRF-87937D Type IV Qualified heavy-duty, biodegradable cleaner/degreaser. Provides up to six months of corrosion protection for a variety of metals during indoor storage. Readily biodegradable according to shake flask biodegradation test method.

#### VpCI®-426

A water-based heavy duty concentrate designed to remove corrosion, scale, and naturally occurring oxides from iron, carbon and stainless steel, copper, aluminum, magnesium, and their alloys. Also brightens aluminum and copper. Biodegradable. (VpCI®-422 is also biodegradable. See USDA Certified Biobased Products list.)

#### Construction



#### MCI®-2005 NS

Normal set version of MCI®-2005. A water-based, organic corrosion inhibiting admixture for protection of metallic reinforcement in concrete structures. Biobased (27%). Earns credit toward LEED certification. Meets all requirements of ASTM C1582.

#### MCI®-2005 AL

A normal set version of MCI®-2005 designed for use when freezing or very high transit and storage temperatures are expected and where presence of sodium must be minimized. Biobased (20%). Earns credit towards LEED certification.

#### MCI®-2006

A powder concrete admixture that inhibits corrosion on steel reinforcing, carbon steel, galvanized steel, and other metals.

#### MCI®-2006 NS

A normal set version of MCI®-2006. Biobased (25%).





#### Lubricants

#### EcoLine® Bearing, Chain, and Roller Lube

A ready-to-use high quality rust preventative lubricant formulated from natural seed oil. Surpasses the lubricity of most conventional lubes. Tenacious film clings to metal surface to displace moisture. Vapor phase Corrosion Inhibitors protect metals not in direct contact with the lube.

#### **EcoLine® Heavy Duty Grease**

EcoLine® Heavy Duty Grease is premium quality biodegradable, multipurpose grease formulated from vegetable oils. It provides superior lubricity to promote longer equipment life.





#### Oil & Gas Industry

#### **EcoClean® Dispersant 600**

A non-toxic dispersant-emulsifier recommended for seawater that has been contaminated by oil and/or petroleum-based product spills. Prevents oil from forming a film on the water's surface. Contains 81% biobased content.

#### VpCI®-629 Bio

A fast-acting long-term inhibitor for use in crude oil processing equipment, pipelines, refineries, and petrochemical plant equipment and systems. Forms an effective corrosion inhibiting barrier for ferrous and non-ferrous metals in the presence of water, halogens, and corrosive gases. Derived from soybeans.

#### **Preservation**

#### VpCI®-609

A water-soluble, biodegradable Vapor phase Corrosion Inhibitor powder for wet or dry corrosion protection of ferrous metals and aluminum. Protects inaccessible and recessed surfaces. Available in **EcoPouch®** packaging for protection of large volumes up to 35.3 ft³ (1 m³) per pouch. Do not use with yellow metals.

#### EcoFog® VpCI®-337

A ready-to-use waterborne Vapor phase Corrosion Inhibitor for temporary protection of equipment. A complete replacement for nitrogen blanketing and dry air systems that are expensive to install and maintain. VpCI®-337 shows 87% biodegradation in 28 days. Also available in EcoAir® spray cans.





#### **Water Treatment**

#### S-14 Bio, Patented

A unique green building block designed for cooling towers and other open-loop, recirculating cooling systems. It is a powerful combination of scale and corrosion inhibitors. S-14 Bio is comprised of non-toxic, non-hazardous, and readily biodegradable ingredients, mainly a low molecular weight natural polymer based on soybean oil.

#### **VpCI®-649**

A unique liquid concentrate that protects ferrous and non-ferrous metals from corrosive solutions. Can be used in closed loop cooling systems, dry layup of fire extinguishing systems, and hydrostatic testing. Does not contain nitrites, phosphates, or chromates. Biodegradable.





## **Case Histories**

#### Case History: EcoLine® Cutting Fluid

#### **PROBLEM**

The customer was experiencing corrosion problems during the exporting of automotive parts using sea going containers. The end users of the bearings, bushings, and thrust washers are well-known engine producers. Time in transit from manufacturer's location in Montenegro to the engine assembly plants is typically two to four months. The traditional rust inhibiting oils, imported from Japan and Germany, did not prevent oxidation and pitting of the special aluminum alloy used to produce these high-tech engine components. This resulted in significant losses from production delays and rejected parts.

#### **SOLUTION**

The customer tested Cortec® EcoLine® Cutting Fluid in their laboratory with promising results. Based on laboratory tests, a pilot plant trial was initiated; which prompted the customer's decision to implement a plant-wide, full scale implementation of EcoLine® Cutting Fluid to replace environmentally unacceptable rust inhibiting oils.

#### CONCLUSION AND REASON CORTEC® WAS SELECTED

Cortec's EcoLine® Cutting Fluid solved the customer's corrosion problems during storage and shipping. The bearings, bushings, and thrust washers have shown no sign of corrosion, even after extended field testing up to twelve months. The important benefits are to be able to deliver parts that are oil free, dry to the touch, compatible with robotized assembly operations, and an extremely cost effective corrosion protection method. EcoLine® Cutting Fluid is biobased, and enables users to demonstrate to their local community and customers their environmental sustainability and awareness.







#### Case History: MCI®-2005 NS

#### **PROBLEM**

The primary reason for the pier repair was due to impact by ships, with the secondary reasons being age and corrosion. At least two previous repairs did not hold up.

#### **APPLICATION**

A value added alternative by C.C.S., Inc. to use MCI $^{\circ}$ -2005 NS in the new concrete mix design at 1 ½ pints per cubic yard (1 L/m $^{\circ}$ ) was accepted by the Coast Guard. A portion at the end of the pier was completely reconstructed.

#### **CONCLUSION**

The plastic and hardened physical characteristics of the concrete with MCI®-2005 NS were all very satisfactory. High strengths were achieved with no cracking indicated 30 days after placement.

#### Case History: Minnesota Zoo Composting Program

#### **BACKGROUND**

The Minnesota Zoo is home to more than 3700 animals including over 500 different species located on over 500 acres of land in the Twin Cities area. Opening in 1978, the mission of the zoo is to connect people, animals, and the natural world. To support this initiative, the zoo formed a Green Team to promote various activities aimed at sustainability. One of these initiatives was to develop a composting program to reduce the amount of waste they produce.

#### GOAL

The goal of the new composting program was to divert food waste at the zoo, and reduce the trash that is taken into area landfills. To start the composting program, the zoo staff began testing various compostable plastics to see which best fit their needs. They found that Eco Film® met all of their requirements, and allowed them to use a product produced by a fellow Minnesota organization.

#### **IMPLEMENTATION**

In the spring of 2011, the program was implemented using Eco Film® for food waste created by employees, staff, and the catering service. It was also used during their summer Zoo Camp, with plans to expand this for food waste throughout the zoo. This green initiative is just one example of how the Minnesota Zoo is a true leader in our state and one that is focused on adopting practices that enable them to minimize their environmental impact.

#### Awards



**Minnesota 2000 Governors Award** 



Connecticut College Inherit The Earth Award; 1997



2005 Frost and Sullivan; Specialty Plastic Films
Technology Innovation Award

## **Bionetix® Biologicals and Biostimulants**

In a world full of pollution, many are looking for safer, more natural ways to clean up and promote the health of the environment. Bionetix® International makes this possible through biological treatments using a variety of microorganisms and nutrients to stimulate contaminant biodegradation to promote healthier, cleaner environments in countless applications.



#### **WASTE TREATMENT**

#### **AQUACLAR™**

An all-natural ready-to-use product that is safe for humans and beneficial for fish and wild animals. It is an economical and effective way to keep water in ecological balance, improve water clarity, and compete with algae growth.

#### A55L™

Enhances nitrification to reduce high ammonia concentrations in wastewater using two beneficial microorganisms—Nitrosomonas and Nitrobacter.

#### BCP10™

Degrades complex organic chemicals such as phenols, benzene compounds, surfactants, and alcohols. This enhances BOD and COD removal and accelerates the removal of unpleasant odors.

#### BCP11™

Specifically targeted for treating chemical industry wastewater streams. BCP11™ improves effluent quality and increases wastewater treatment efficiency. It is also good for reducing plant upsets from shocks, helping new plant startups, controlling filaments, and lowering odor and foam.

#### BCP12™

A powerful blend of bacteria, enzymes, and nutrients to enhance methane production from anaerobic digesters. Also reduces unpleasant odors and controls grease caps and FOG buildup.

#### BCP22™

A blend of aerobic and facultative anaerobic bacteria for use in treatment of high concentrations of fats, oils, and greases (FOG).

#### BCP25™

A blend of bacteria and enzymes for increasing the efficiency of treating dairy industry wastewater. BCP25™ improves effluent quality, reduces grease build-up, helps control filaments, and lowers odor and foam. It is also helpful in the startup of new plants.



#### BCP50™

An excellent blend of bacteria for reseeding and startup of activated sludge systems at municipal wastewater treatment plants.

#### BCP54™

Helps maintain water clarity and quality in fish and shrimp farms or wastewater effluent.

#### BCP55™

Contains a special bacterial blend that degrades starch and increases wastewater treatment efficiency. BCP55™ reduces foam, unpleasant odors, and concentrations of BOD and TSS. It can be used to reseed after a plant upset or help new plants with startup.

#### BCP56™

Provides greater resistance to the organic inhibitors present in fruit, vegetable, and wine processing. It helps reduce BOD and COD, improve effluent quality, and decrease odors.

#### **BCP80™**

Enhances and accelerates the biological digestion of animal wastes (i.e., manure). It is proven effective in helping to reduce odors and sludge accumulations.

#### BCP85™

A blend of bacteria, yeast, enzymes, and nutrients that will naturally accelerate the breakdown of household and agricultural organic wastes in composting processes.

#### BCP95™

Contains strains of bacteria that biodegrade phenol and related aromatic compounds such as cumene, catechol, and cresol. This is helpful for wastewater coming from steel coking, coal conversion, petroleum cracking, and the production of plastic resins and pharmaceuticals.

#### **BCP655™**

Bioconverter for industrial and municipal lagoons. Can help reduce ammonia levels and remove organic nitrogen (i.e., amino acids, proteins, purines, pyrimidines, and nucleic acids) from wastewater rather than converting it to another form. Can be used with A55L.

#### BCP3550™

Reduces the accumulation of petroleum products in sumps and drains. This reduces the cost of cleaning and maintenance, improves odor control, and achieves BOD reduction.

#### BIOBLOC22™

An easy-to-use block to speed up grease biodegradation in grease traps and lift stations.

#### BIOBLOC35™

A slow releasing block that contains surfactants and bacteria that loosen, liquefy, and biodegrade heavy grease deposits for oily sump maintenance.

#### **BIOLOGICAL CLEANERS**

Bionetix® biological cleaners bring the power of detergents together with the digestive capabilities of microorganisms.

#### BCL5000™

A biological based cleaner/degreaser formulated for optimum cleaning and degreasing of hard surfaces such as floors, fixtures, and equipment pieces contaminated with petroleum products.

#### **ECO-CLEAN-ALL™**

A powerful biological cleaner that digests grease, oil, protein, fat, starch, and other solid organic wastes from floors, walls, and other surfaces to maintain a clean, odor-free facility.

#### **ECO-DRAIN™**

Formulated for the treatment of drain lines, grease traps, and down lines in restaurants and commercial establishments. Regular use of ECO-DRAIN™ keeps pipes clean, prevents emergency blockages, saves on line jetting, and reduces odors.

#### **ECO-SCENT™**

A liquid capable of neutralizing a wide range of bad odors and leaving behind a feeling of freshness. The natural active ingredient in ECO-SCENT™ forms a complex with odor-causing organic compounds, yielding a lower concentration of these organic molecules.

#### **ECO-SEPT™**

Contains a diverse microbiology designed to activate digestion of solid waste in septic tank systems. It works to improve pipe purification and drain seeping, extends the life of a drain area, and controls methane production.

#### **ECO-TRAP™**

A grease trap treatment containing specialty additives that loosen and liquefy heavy grease deposits, thereby speeding up their degradation. ECO-TRAP<sup>TM</sup> reduces oil and fat accumulation, prevents emergency blockages, and reduces BOD and bad odors.

#### **ECO-WASH™**

Formulated to provide dual action in a one-step cleaning method. Its high penetrating action cuts through oil, grease, and soils quickly and makes car washes more efficient.

#### FIZZY-TAB™

Helps control odor and maintain healthy grease traps and septic systems. Its tab form is very convenient for end users. FIZZY-TAB™ contains diverse microbiological organisms designed to activate digestion of solid waste and reduce sludge buildup.

#### GTC 3X™

A viscous liquid formulated with microorganisms selected for their ability to degrade fats, oils, and greases (FOG). GTC 3X<sup>™</sup> improves pipe drainage and reduces grease and odors in grease traps.

#### **PORTA-TREAT™**

Treats and deodorizes portable toilets and mobile systems aboard vehicles. Quick acting and leaves a fresh fragrance behind. Contains a safe, non-formaldehyde formula that has no adverse effects on sewage treatment plants. For additional fragrance and a deeper blue color, use PORTA-TREAT™ P PLUS.

#### **STIMULUS™**

A natural biostimulant, natural surfactant, and odor control product derived from natural plant extract. It can be used in treatment of wastewater and agricultural waste. STIMULUS™ inhibits the formation of odors while supplying bacteria with a food source rich in macro- and micro-elements that encourage the composting process.

#### **URINAL BLOCKS™**

Soluble cleaning blocks that slowly dissolve in water and contain a unique formula to clean away scaling problems, cure odors, and prevent blockages.

#### **EN-Z-KLEAN™**

An enzyme-based liquid detergent for industrial laundry use. It offers outstanding cleaning and stain removal power at temperatures up to 65 °C (149 °F). It is produced with natural ingredients that do not harm fabrics or hands. The detergent is biodegradable, environmentally friendly, phosphate-free, and safe for septic systems.

#### **OIL & GAS CLEANUP SOLUTIONS**

#### BCP35M™

Contains microorganisms suited to degrade petroleum in a water environment and can be used for cleanup of oil spills.

#### BCP35S™

Contains organisms that will degrade a wide range of refinery hydrocarbons such as gasoline, diesel, crude oil, benzene, toluene, ethyl benzene, and xylene in soils. Most efficient when used with BIOSURF™.

#### BIOSURF™

A great alternative to commonly used surfactants and dispersants. When sprayed onto oil slicks or spills, it disperses hydrocarbons and makes them more available to natural microorganisms that will biodegrade the contaminants. Excellent for use in combination with BCP35S $^{\text{TM}}$  or BCP35M $^{\text{TM}}$ .

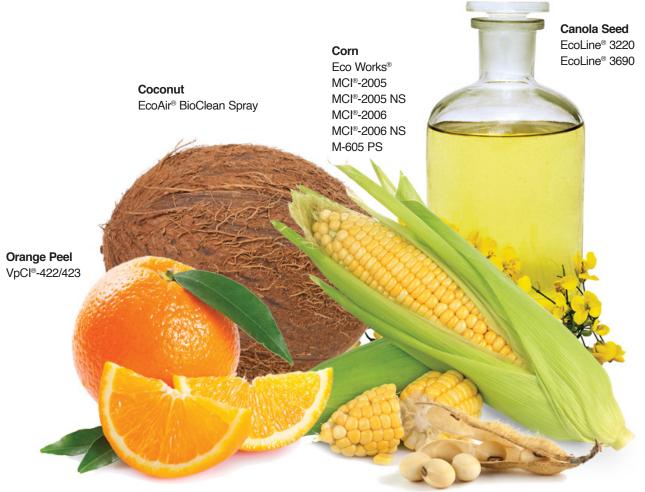
#### SPILL KIT 35S™

Brings together two of our best hydrocarbon-degrading technologies, BIOSURF™ and BCP35S™, into a kit for spill cleanups. Keep SPILL KIT 35S™ on hand to comply with spill plan regulations and avoid serious fines.



# Your source of sustainable environmentally friendly products

## Cortec® products derived from natural resources



#### Soybean

EcoClean® Dispersant 600

BioCorr® RP

EcoLine® Cutting Fluid

EcoLine® Rust Preventative

EcoLine® Cleaner/Degreaser

VpCI®-629 Bio

VpCI®-705 Bio

S-14 Bio

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