

May 2007

# CORTEC<sup>®</sup> Vision

## Cortec<sup>®</sup> Starting Trends



Cortec's 100% Biodegradable bags

regular plastic bag

Cities around the world are catching on to the trend of outlawing non-recyclable bags from use in supermarkets, drugstores, and other large retailers.

**“If you want to benefit mankind, do so through your work.”**

– Henry Ford

# Cortec® Starting Trends

San Francisco is becoming the first in the nation to outlaw non-recyclable plastic bags from use in supermarkets, drugstores and other large retailers. By a 10-1 vote, the Board of Supervisors required the use of compostable or recyclable bags — a move officials predict could soon be imitated by other cities nationwide.

“Each year businesses here dispense an estimated 180 million plastic bags, killing marine life and clogging landfills,” said Supervisor Ross Mirkarimi. “The Plastic Bag Reduction Ordinance,” written by Mirkarimi and co-sponsored by six other supervisors, gives major supermarket chains with more than \$2 million in annual sales six months to make the switch to biodegradable bags. Pharmacies and retailers with at least five locations have one year. Violators face fines of up to \$500.

At a news conference before the bill’s passage, Mirkarimi handed out canvas shopping bags that read “SF Environment: Our Home. Our City. Our Planet.” The new law calls for bags that are reusable or made of recyclable paper or plastic that can be composted. “We can take steps to make our economy a little more soulful in San Francisco,” Mirkarimi told the crowd in front of City Hall. “We can’t sleepwalk into the future. The end of the era of cheap oil is here.”

Advocates say biodegradable bags are stronger than conventional petroleum-based polyurethane plastic bags. In his office before the news conference, Mirkari-

mi produced a biodegradable bag holding 55 pounds of rocks. South Africa, Taiwan, Bangladesh, and Paris have enacted similar bans. Ireland imposed a plastic-bag tax. Mirkarimi said he has heard from other cities nationwide that are interested in following San Francisco’s lead.

At a Whole Foods store in San Francisco on Tuesday, shoppers applauded the board’s vote. “It’s just too easy not to do,” said Nancy Gutierrez, who browsed in the store’s produce section. For years, she said, she has carried her own canvas bag, adding, “Saving the planet starts with the smallest things.” Shopper June Rimer agreed. “I’m all for banning our plastic bag habit,” she said. “It’s not like we’re giving up too much.” Nearby, Gabriella Shultz pointed out fellow shoppers. “Look, every apple, every strawberry, goes into a plastic bag. People get these bags home and they don’t recycle them. They just throw them away.” Such bags are not part of the law.

“In San Francisco, the city’s 54 largest supermarkets alone, dispense 125 million plastic bags a year, which account for 1,400 tons of landfill waste annually,” Mirkarimi said. “Californians use more than 19 billion plastic bags, an average of 552 per resident,” said Assemblyman Lloyd Levine (D-Van Nuys). “The refuse creates 147,000 tons of waste in state landfills,” he said.

*Abstract from Los Angeles Times  
Local News, March 28, 2007  
By John M. Glionna, Times Staff Writer*



100% BIODEGRADABLE



100% BIODEGRADABLE





# New Products

## ***New products are critical to the success of corporations***

Facing increasing competition, rapidly revolving technologies, changing customers' needs, and shorter product life cycles makes a steady stream of successful new products fundamental to business success.

However to be just innovative these days is not sufficient. You have to be faster than your competitors. "It is a race and only the fittest will survive" –Paul Sloan. Today misconception is it seems that innovation is important, but not urgent. We all tend to focus on urgent issues and putting out fires. "We feed today and starve tomorrow" Paul Sloan. Improving innovation is an ongoing strategic challenge. It requires strategic leadership and involves taking risks. To be innovative we have to look beyond the company to what are the worlds needs.

One of the misconceptions is that innovation is only about new products coming out of Research and Development (R & D). Innovation is the implementation of new ideas through every aspect of the business – products, services, methods, process, routes to market, partnerships, etc.

*"We are an innovative company and we have to continue to keep up with world wide challenges."*

**Rita Kharshan**  
**Laboratory Director**



## **BioClean Spray**

BioClean Spray is an exciting new addition to Cortec's bio-based line of products. It is a blend of coconut oil phospholipid, "green" corrosion inhibitors and surfactants designed to disperse and inhibit microbiological growth. This product differing from traditional anti-microbiological methods, BioClean Spray is non-toxic, non-hazardous, biodegradable, and is manufactured from renewable resources. The same technology can be found in cosmetics and personal care products such as hand cleaners, shampoos – even baby wipes!

Through this unique chemistry, BioClean® Spray is powerful enough to maintain the performance mandated by industry standards, and also provides a solution that is truly safe for both humans and the environment. BioClean Spray is packed using Cortec's EcoAir® technology; cans are pressurized by air rather than traditional ozone depleting propellants. Also, BioClean® Spray contains Vapor phase Corrosion Inhibitors to prevent corrosion of metals.



# New Products

## BioLube™

BioLube™ is the latest in Cortec's line of biodegradable lubricants derived from soybean oils. It combines our unique Vapor phase Corrosion Inhibitor (VpCI™) technology and an excellent lubricating package designed with the latest in friction modifiers and extreme pressure additives.

When compared to conventional lubricating products, BioLube™ offers superior corrosion protection, is biodegradable, and safe to use. It is recommended for use in a wide variety of applications including as a mold release, a general purpose lubricant, and a preservative oil for corrosion prevention. In addition, the nature of the soybean oil used to formulate BioLube™ gives it excellent penetrating properties useful in loosening, frozen nuts and bolts.

Biolube™ is available in 16 ounce aerosol cans and EcoAir® packaging; and is applied as a finely misted spray.



## Corr® Seal VpCI™ Film,

Cortec® Corporation's Corr Seal® VpCI™ film provides better contact phase corrosion protection to wrapped multi-metal parts. For the first time this product will be coated at Cortec® Coated Products 56,000 square feet (5,600 m<sup>2</sup>) state-of-the-art flexible substrate coating facility. Available for production in 2mil to 5mil sizes (50,225 microns).

Corr Seal® VpCI™ Film, offers easy peelability from the roll and will not stick to the surface of metal parts when wrapped. It will work with automated cold seal machines with the following methods: single web, double web, and sheet web. The product is also offered in a non VpCI™ version and available in a variety of sizes. The cold seal adhesive used in both VpCI™ and non VpCI™ versions is approved for the packaging of medical equipment. Both versions of Cortec® Corporation cold seal films, offer a two year shelf life.



## M-408 Additive

M-408 is a corrosion inhibitor for brake fluid. It is compatible with Department of Transportation (DOT ) 3, 4, and 5 brake fluids, but is especially effective in silicon based brake fluids, such as DOT-5. It dramatically improves corrosion protection of brake systems and does not adversely effect other properties including flammability, high and low temperature serviceability, dry and wet boiling points, and compressibility. This product is very economical. When M-408 is added to brake fluid, at a concentration level of 1 - 1.5% by weight, it provides corrosion protection for ferrous and yellow metals in conditions of high humidity and elevated temperatures.



# New Products

## M-615

The key for the durable and effective operation of any boiler is its water treatment program. Such a program usually includes a long list of products: oxygen scavengers, corrosion and scale inhibitors, pH adjusters, anti-foams, sludge conditioners, etc. Most of these products are well known chemicals and can be obtained from a number of suppliers. M-615 was formulated as a boiler system building block for the better performance and longer life span of low and medium pressure boilers.

This product contains aminocarboxylate based corrosion inhibitor and synergistically acting with it other ingredients including antiscalant and a chelating agent. M-615 provides improved heat transfer efficiency and longer equipment life by keeping the system free from corrosion and insulating deposits. This product protects from pitting corrosion, reducing maintenance time and cost. Effectiveness and high content of the active ingredients make M-615 a very economical product for extending the boiler system life.

M-615 provides corrosion protection for ferrous metals, aluminum and galvanized steel. The chelant / antiscalant combination in M-615 helps to keep the waterside surface clean, contributing to a much more reliable boiler operation. This product is perfectly compatible with the majority of oxygen scavengers and other boiler treatment programs. It is effective in a wide range of pH and water chemistries.



## MCI®-2019 AG, Patented

Cortec's MCI®-2019 is a 40% silane, solvent-based concrete sealer, containing time-proven Migrating Corrosion Inhibitors (MCI®). This is a small molecule product, which allows deep penetration into concrete and provides water repellency by chemically reacting with the cementitious substrate with proper application. MCI®-2019 AG is a new version of MCI®-2019. While the product will still have its amazing sealing properties and corrosion inhibition; MCI®-2019 AG will include a fugitive green dye. The fugitive dye will allow the applicator to view where they have applied the coating immediately and the green dye will fade away within 30 days. Also, the fugitive green dye is a great way to confirm application of Cortec's product.



*Adam's Landing Condominiums in Cincinnati, Ohio needed their balconies repaired. Overhead patching and caulking was completed and followed by a sealer treatment. The owner wanted a product that was a corrosion inhibitor and water repellent that could be applied in one step, so MCI®-2019 was chosen. The owner stated that he was very pleased with the MCI®-2019 application and performance during the course of the project.*



# Molybdate vs. VpCI™ Treatment

## Cost per 1000 Gallons

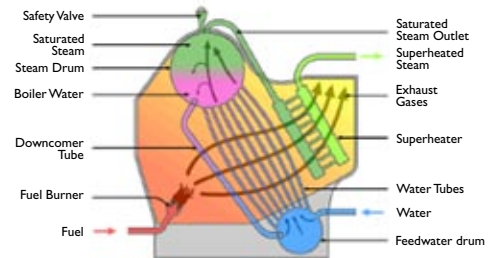
Cortec's VpCI™ offers water treaters a low cost, effective alternative to combat the rising cost of Molybdate. VpCI™-649, S-69, and S-69 P are valuable organic building blocks designed as additives to water treatment formulations. They are excellent replacements for phosphonate/nitrite/molybdate-based compounds.

These products contain a combination of Vapor phase Corrosion Inhibitors (VpCI™) along with contact inhibitors to provide superior corrosion protection, even in partially filled spaces. These corrosion inhibitors adsorb to the metal, creating a mono-molecular layer that protects both anodic and cathodic areas. They are effective for a broad range of applications and can be used in a wide range of conditions including different TDS, aeration, temperature, and pH levels; as well as systems containing glycol coolants.

Cortec® VpCI™ products are readily water-soluble, for easy application. They are also worker safe and environmentally friendly, containing no nitrite, chromate or heavy metals which make these products helpful in solving the problem of disposal, particularly for large quantities of water. These products have also been tested for skin irritation and received a score of zero for the primary irritation index.

On the other hand, Molybdate is an anodic oxidizing inhibitor that requires the presence of oxygen to be effective. Although only slightly toxic, there are concerns with Molybdate accumulation in waste treatment plant sludge, which may eventually end up on land used for animal feed crops which could poison animals feeding on these crops.

The tables (right) shows the cost per pound, dosage rate, and cost of treatment per 1000 gallon system of Cortec® VpCI™ products versus Molybdate. The Cortec® VpCI™ replacement products offer a price decrease between 25% and 50% compared to Molybdate.



Cost Per Pound (Approximate Suggested Resale)			
Molybdate	S-69P	S-69	VpCI-649
\$18.15	\$11.15	\$2.87	\$2.98

Dosage (ppm) for a Closed Loop System			
Molybdate	S-69P	S-69	VpCI-649
150 - 1000	750 - 1000	2000 - 3000	2000 - 3000

Cost (USD) per 1000 Gallons (4,000 Liters) Closed Loop System			
Molybdate	S-69P	S-69	VpCI-649
\$151.19	\$92.86	\$71.72	\$74.47

*All of the above information confirms that Cortec VpCI™ products are an outstanding alternative to Molybdate products in a wide range of water chemistries.*

## MCI® products are solving corrosion problems

Specialty Construction Products, Ltd. recently reported great news from Winnipeg, Manitoba about MCI® applications on the Maryland Bridge. Joe Solomon turned in information about five projects that will be written into new case histories for MCI®-2020 V/O, MCI®-2005NS, and MCI® Mini Grenades. Below are pictures showing how MCI® products are the answer to solving the problems of corrosion.



**MCI® 2020 V/O**



**MCI® 2005 NS**



**MCI® Mini Grenades**

# WORLD SALES MEETING

ST. PAUL, MINNESOTA, UNITED STATES OF AMERICA

June 14 & 15, 2007

# 2007

## CORTEC'S 30 YEAR ANNIVERSARY

### Come Celebrate with us!



#### Thursday, June 14, 2007 (Morning at St. Paul Hotel)

7:30 - 8:00	Coffee
8:00 - 8:30	Welcome to Cortec's World Sales Meeting ~ Boris Miksic
8:30 - 9:00	State of the Company Address ~ Boris Miksic
9:00 - 9:30	Introduction of Attendees
9:30 - 10:00	Technical Service Introduction
10:00 - 10:15	Coffee Break
10:15 - 10:30	Customer Service Intro and Awards
10:30 - 10:45	Sales Department Introduction
10:45 - 11:00	2006 Sales Results and "Rusty" Awards
11:00	Adjourn General Session
11:15	Cortec Family Portrait - Rice Park
11:45	Luncheon at Landmark Center
1:00 p.m. SHARP!	Buses leave for Cortec® World Headquarters, Cortec® Advanced Films, Cortec® Coated Products, and Cortec® Spray Technologies

#### Cortec® Headquarters (Afternoon)

1:30 - 2:45	Seminar Session I - Cortec®
3:00 - 4:00	Seminar Session II - Cortec®
4:15 - 5:15	Seminar Session III - Cortec®
	<i>Please refer to attached Seminar Schedule</i>
5:30 -	Buses leave Cortec® Headquarters for "Kickoff" Reception at North Oaks Golf Club
6:00 -	Cortec® Cocktail Reception - North Oaks Golf Club.

#### Friday, June 15, 2007 (St. Paul Hotel)

8:00 - 8:30	Coffee
8:30 - 9:30	Seminar Session I - St. Paul Hotel
9:45 - 10:45	Seminar Session II - St. Paul Hotel
11:00 - 12:00	Seminar Session III - St. Paul Hotel
12:00 - 1:00	Luncheon - St. Paul Hotel
1:30 - 2:45	Seminar Session IV - St. Paul Hotel
3:00 - 4:15	Seminar Session V - St. Paul Hotel
5:00	Buses leave for Cortec's St. Croix River Cruise
10:00	Buses leave Stillwater to go back to St. Paul Hotel
1:00 a.m.	Late bus leaves Stillwater for St. Paul Hotel

#### Saturday, June 16, 2007

7:00 a.m.	Bus leaves St. Paul Hotel for Cortec® Golf Challenge
9:30 a.m.	Bus leaves St. Paul Hotel for Cortec® Tennis Challenge
12:00 p.m.	Bus leaves St. Paul Hotel for Mall of America
5:00 p.m.	Bus leaves Mall of America for St. Paul Hotel

# Twin Cities 2006 Small Business Success Stories



WE LOVE RUST!



4119 White Bear Parkway, St. Paul, MN 55110 USA  
 Phone (651) 429-1100, Fax (651) 429-1122  
 Toll Free (800) 4-CORTEC, E-mail [info@cortecvci.com](mailto:info@cortecvci.com)  
 Printed on recycled paper ♻️ 100% Post Consumer

Created: 05/07  
 Cortec®, VpCI®, VpCI® Film Color of Blue®, VpCI-126®, VpCI-609®, VpCI-137®, VmCI-307®, Migrating Corrosion Inhibitors™, MCI®, MCI Grenade®, EcoWorks®, EcoAir®, Eco-Corr®, EcoFilm®, EcoLine®, EcoClean®, EcoShield®, EcoWeaver®, EcoSpray®, EcoCoat®, Eco Emitter™, EcoSol™, Eco-Tie™, Eco-Card™, Eco-Shrink™, EcoWrap™, Eco Film™, Cor-Mitt™, Cor-Pak™, CorShield®, Corrosorbors®, CorWipe®, CorrVerters®, Corr Seal®, CorLam™, Corr-Fill™, Corrlube™, ElectriCorr®, MilCorr®, GalvaCorr®, Super Corr®, HPRS®, Boiler Lizard®, Cooling Tower Frog®, Closed Loop Toad®, Cooling Loop Gator®, Pine Tree Logo®, CRI®, Metacor™, and Rust Hunter™ are trademarks of Cortec® Corporation.  
 ©Cortec Corporation 2007. All rights reserved.