



# **CORTEC**

Laboratories, Inc.

# ***Solutions Start Here***



**ISO/IEC-17025**  
LABORATORY TESTING ACCREDITED



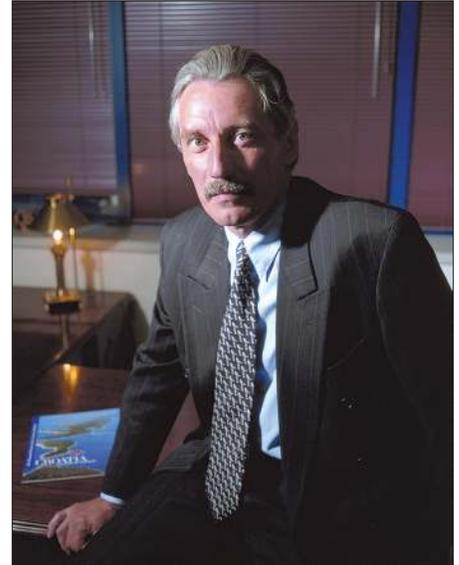
**CORTEC**  
CORPORATION

*Environmentally Safe VoCl<sup>3</sup>/MCI<sup>2</sup> Technologies*

---

## Our Corporate Vision

“Vision is the ability to see things that are invisible” As CEO of Cortec® Corporation, it is my job to help create and to champion our company’s vision. Vision is important, because without it nothing grows. These visions have always been created with the conclusion in mind, which have involved the growth of Cortec® as the ultimate ending. Sometimes, the ending may not be quite what I initially envisioned it to be, but these visions usually help take us to the next level. I believe that we would all agree that it is easy to view the past and difficult to see the future. Looking to the future is not easy because it takes courage, risk and commitment, not just by me, but also from every member of the Cortec® family. Your commitment needs to start with faith (belief without evidence) that we are the best at what we do and we provide the best to our customers.



Boris A. Miksic,  
President and CEO of Cortec® Corporation

Today, we are ready to take our company to the next level of growth. We need to have everyone working as a team in order for us to reach our corporate vision, as well as our personal goals. We all win when we work efficiently together. We need to continue to produce break-through products and applications. We need to focus on increasing our sales and reducing our expenditures. Your actions will continue to keep our products competitive in today’s World market. It’s a challenge, but you can do it! It will be fun. Think about this as the vision of Cortec®:

- **World Class Product Offerings**

*An Innovator and designer of leading-edge products*

- **World Class Customer Service**

*A positive, long-lasting impression through every link of our company*

- **An Ethical and Respectful Company Culture**

*Respect and treat our colleagues, customers and vendors, as we would our own family members*

- **An Energized, Friendly, Empowered, Knowledgeable Team**

*Develop your knowledge and application of our products, no matter what your job title is. Once you know it – you’ll be excited.*

- **A Company Atmosphere which Fosters Continuous Improvement and Open Communication**

*Teach each other. Make it better. Improve at your job.*

- **Achieve Profitable Sales Growth**

*Nothing will grow without your cooperation.*

- **HAVE FUN!**

*“If you choose a job you love, you will never work a day of your life.”*

*I love to see people that do a great job and have fun doing it! These are the real company heroes.*



## Our Laboratory Mission

- To continue to develop innovative, high quality, environmentally friendly products.
- Provide exceptional technical service to customers. No matter how big the project or how small the request, we strive for excellence in our response.
- We truly believe in, care for, protect and support each other.

## Our Quality Promise

Cortec® Corporation is committed to continual improvement of processes and services to achieve ongoing customer satisfaction. It is therefore our policy to:

- *Consistently provide quality testing services that conform to customer and regulatory requirements.*
- *Ensure that all personnel are competent and qualified for the tasks they perform and that all personnel familiarize themselves with quality system documentation in order to implement the policies and procedures in their work.*
- *Professionally and effectively perform testing services to produce accurate and precise results.*
- *Consistently comply with ISO/IEC 17025 to ensure quality testing services, and to continually improve the effectiveness of the Quality Management System. It is Cortec® Corporation's goal to encourage active participation of all employees in quality planning and continual improvement efforts to meet all quality and service objectives.*

Cortec® Corporation is recognized as an active contributor to the scientific community, having been awarded 63 patents and presented over 250 publications and presentations. Cortec® and its employees are active members of several professional and scientific organizations including the National Association of Corrosion Engineers, Concrete Corrosion Inhibitors Association, American Chemical Society, Northwestern Society for Coatings Technology, Association of Water Technologies, US Green Building Council, and Society of Plastic Engineers.



**Scope of Accreditation  
For  
Cortec Laboratories, Inc.**

4119 White Bear Parkway  
St. Paul, MN 55110  
Debbie Haman  
651-429-1100 ext. 192

In recognition of a successful assessment to ISO/IEC 17025:2005, accreditation is granted to **Cortec Laboratories, Inc.** to perform the following tests:

Accreditation granted through: **August 30, 2019**

**Testing - Mechanical**

Technology	Range, when necessary	Methods Used	Product Types	Remarks
Viscosity	(1 to 8M) cP	ASTM D2196	Coatings, Lubricants	(5 to 95) °C
Humidity		ASTM D1735 ASTM D1748 CC-018	Coatings, Lubricants	Ambient conditions vary seasonally
Salt Fog		ASTM B117	Coatings, Lubricants	Ambient conditions vary seasonally
Vapor Inhibiting Ability (VIA)		CC-027	Crystalline, Liquids, VCI Coated Materials, VCI Containing Films	
Immersion Corrosion Testing		ASTM G31 CC-029	Additives, Water Based Corrosion Inhibitors	Ambient to 95°C
Electrochemical Polarization Measurements		CC-030	Water Based Electrolytes	Ambient to 95°C
Electrochemical Impedance Measurements		CC-022	Concrete Samples with Rebar	
Vapor-Phase Rust-Preventing Characteristics of Hydraulic Fluids		ASTM D5534 Mod	Lubricating and Metalworking Fluids	

Technology	Range, when necessary	Methods Used	Product Types	Remarks
Rust-Preventing Characteristics of Inhibited Mineral Oil in the Presence of Water		ASTM D665 Mod	Lubricating and Metalworking Fluids	
Adhesion (Tape)		ASTM D3359	Coatings	
Adhesion (Testers)	(0 to 2 000) psig	ASTM D4541 (Method B)	Coatings	
	(0 to 500) psig	ASTM D7234		
Corrosion Inhibiting Admixtures for Steel in Concrete by Polarization Resistance in Cementitious Slurries		ASTM G180	Concrete Admixtures	

**Testing - Chemical**

Technology	Range, when necessary	Methods Used	Product Types	Remarks
Fourier Transform Infrared (FTIR)		CC-006	Liquids, Powders, Polymer Films	(400 to 4 000) cm <sup>-1</sup>
Ultra Violet Visible (UV-Vis) Spectroscopy		ASTM E169	Liquids	(190 to 1 100) nm
Flash Point	Ambient to 145°C	ASTM D93	Liquids	

**Notes:**

- 1) This laboratory offers commercial testing service.
- 2) Mod- Modified Test Method

Approved by:   
R. Douglas Leonard  
Chief Technical Officer

Date: **September 22, 2016**





## Cortec® Laboratories is comprised of a diverse group of scientists providing experience across many markets.

Name	Title	Area(s) of Expertise
Robert Kean, Ph.D.	Director, Cortec® Laboratories	Product Development Oversight, ISO-17025 Technical Director, Lab Report Approval, Packaging R&D and Production Assistance, Patents and Trademarks
Ming Shen, Ph.D.	Product Development Manager	New Product Portfolio Management, R&D, MCI®, Preservation, Process Additives, Water Treatment, Production/Scale-Up
Pavlo Solntsev, Ph.D.	Product Development Chemist	R&D, VCI Chemistry, Preservation, Additives, Process Additives, Lubricants, New Chemistries
Sen Kang, Ph.D.	Senior Corrosion Engineer	R&D, MCI®, Water Treatment, Process Additives, New Chemistries, VCI Detection
Rick Shannon	Coatings Chemist	Coatings R&D and Support, Lab Testing
Anne Carlson, B.Ch.E.	R&D Engineer	Packaging R&D and Support, ISO 17025, Production Scale-Up and Troubleshooting
Brian Benduha, A.S.	Lab Technician	R&D Projects, QA Testing, Equipment Calibration and Maintenance, Customer Testing
Cindy Mason	Lab Technician, ISO Coordinator	ISO 17025 Lab Quality, QA Testing, Equipment Calibration and Maintenance, Customer Testing
Ruth Werronen, B.A.	Administrative Assistant	Lab Reports, SDS Translation, New Product Entry, General Assistance
Pam Rue, A.S.	Administrative Assistant	Lab Reports, Ordering and Cost Tracking, General Assistance
Eric Uutala, B.S.	Technical Service Manager	Integrated Solutions, Global Services
Casey Heurung, B.S.	Technical Service Engineer	MCI®, Process Additives, Water Treatment, Powder Products
John Wulterkens, B.Ch.E.	Technical Service Engineer	Integrated Solutions, Packaging, Coatings, Oils/Oil Additives, Process Additives
Liz Austin, B.S.	Compliance Supervisor	SDSs and Product Labels, Regulatory Compliance, ISO 9001 Coordinator
Ishan Mishra, B.S.	Compliance Specialist	SDSs and Product Labels, Compliance Assistance

---

## Cortec® Laboratories

### Test Services and Capabilities

*Our data is the essence of both our business and, more importantly, our client's business.*

#### Environmental Test Chambers

We offer a variety of environmental chambers capable of temperature and humidity cycling, salt fog, and accelerated weathering. Test chambers include Q-Fog environmental chamber, QUV accelerated weathering tester, salt spray chamber, and ASTM D1748 humidity cabinet. Test capabilities include ASTM B117, D1748, D1735, G154, and other custom defined tests.



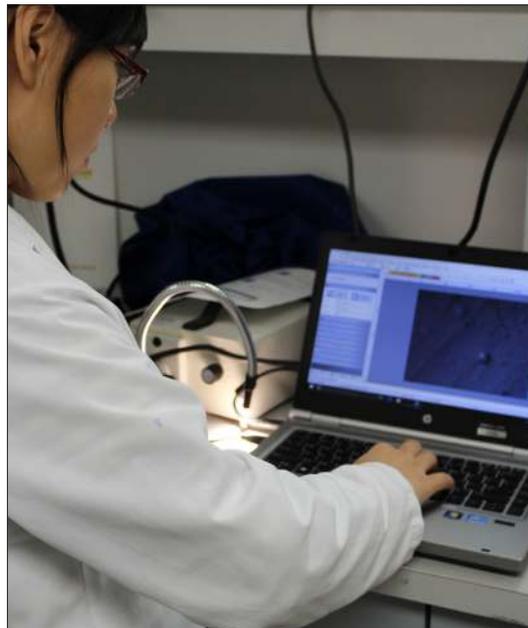
#### Chemical Testing

Cortec® Laboratories is fully equipped to analyze and evaluate chemicals using general chemistry techniques. Test capabilities include rheological measurements, pH, weight per gallon, non-volatile content, flash point determination, refractive index, water quality testing, reserve alkalinity, Gas Chromatography-Mass Spectroscopy, UV-Visible Spectroscopy and Fourier Transform Infrared Spectroscopy.



#### Corrosion Testing

The corrosion resistance of materials and coatings are evaluated by exposing them to controlled environments to accelerate and replicate known conditions which result in degradation or corrosion of materials. Being an industry leader in corrosion inhibition our lab is fully equipped to analyze the corrosion resistance of coatings, lubricants, rust preventatives, water treatment additives, etc. Test capabilities include immersion/half-immersion testing according to ASTM G31, corrosive gas environment testing, contact corrosion testing, vapor inhibiting ability (VIA), electrochemical testing, salt fog, and humidity.





## Coatings

Our lab is fully equipped with the most up to date testing equipment to evaluate the performance of coatings. Cortec® Laboratories has developed expertise in evaluating a wide range of coating performance including: adhesion, surface abrasion, sag, gloss, film hardness, impact resistance, color, and corrosion resistance.

## Electrochemistry

We offer a variety of DC Electrochemistry and Electrochemical Impedance Spectroscopy techniques to evaluate the electrochemical behavior of coatings, additives, concrete mixtures, and corrosion inhibitors. Measurements are conducted according to standard test methods such as ASTM G180 and ASTM G106; from which the corrosion rate and mechanism of corrosion can be deduced.

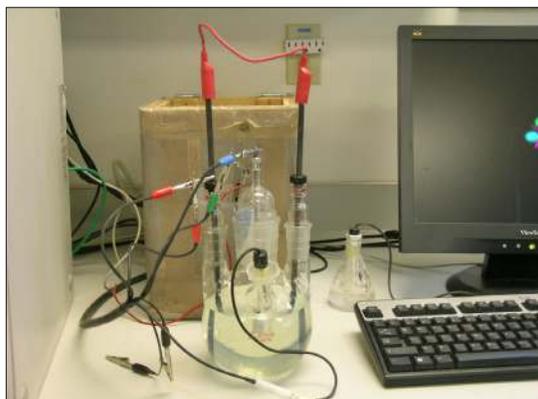
## Concrete Testing

Laboratory and field testing services in the construction industry evaluate the half cell potential and corrosion rates of reinforced concrete through electrochemical analyses. Cortec® Laboratories utilizes the galvanostatic pulse method to assess the risk of corrosion to reinforcement in concrete structures. Laboratory services also include concrete preparation, mix design testing, and EIS studies.

## Paper and Polymer Film Testing

Cortec® Advanced Films Division has the capacity to perform mechanical properties testing of polymeric films including tensile strength, tear propagation, puncture resistance, impact resistance, coefficient of friction, cling peel, static decay, and surface resistivity. Common test methods employed include ASTM D882, D1922, D1709, and D1894, among others.

Cortec® Coated Products' laboratory is fully equipped with an extensive array of testing equipment to evaluate the properties of coated papers and other substrates. Testing capabilities includes basis weight, caliper, curl, smoothness, tear, porosity, gloss, moisture, and brightness.



# Cortec® Corporation



## Quality Management System (ISO 9001 Certified)

### World Class Product Offerings

An innovative producer of leading edge products.

### World Class Customer Service

A positive, long-lasting impression through every link of our company.

### World Class Environmental Commitment

Cortec® commits to continued development of processes and products that are useful, non-hazardous to the environment, and recyclable whenever possible.

### An Ethical and Respectful Company Culture

Respect and treat our colleagues, customers, and vendors as we would our own family members.



## Environmental Management System (ISO 14001 Certified)

Cortec's strong environmental concern is demonstrated in the design and manufacturing of products that protect materials of all kinds from environmental degradation. A strong commitment to produce recyclable products made from sustainable resources has been and will be our future policy. This brochure can be recycled.



## Laboratory Accreditation (ISO/IEC 17025)

Cortec® Laboratories, Inc. is the only lab in our industry that has received ISO/IEC 17025 Certification, which ensures quality in recording and reporting data, as well as calibrating equipment within the laboratory.



## LIMITED WARRANTY

All statements, technical information and recommendations contained herein are based on tests Cortec® Corporation believes to be reliable, but the accuracy or completeness thereof is not guaranteed.

Cortec® Corporation warrants Cortec® products will be free from defects when shipped to customer. Cortec® Corporation's obligation under this warranty shall be limited to replacement of product that proves to be defective. To obtain replacement product under this warranty, the customer must notify Cortec® Corporation of the claimed defect within six months after shipment of product to customer. All freight charges for replacement product shall be paid by customer.

Cortec® Corporation shall have no liability for any injury, loss or damage arising out of the use of or the inability to use the products.

BEFORE USING, USER SHALL DETERMINE THE SUITABILITY OF THE PRODUCT FOR ITS INTENDED USE, AND USER ASSUMES ALL RISK AND LIABILITY WHATSOEVER IN CONNECTION THERE WITH. No representation or recommendation not contained herein shall have any force or effect unless in a written document signed by an officer of Cortec® Corporation.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. IN NO CASE SHALL CORTEC® CORPORATION BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.



4119 White Bear Parkway, St. Paul, MN 55110 USA  
Phone (651) 429-1100, Fax (651) 429-1122  
Toll Free (800) 4-CORTEC  
productinfo@cortecvci.com  
www.CortecVCI.com  
www.corteclaboratories.com

Revised: 10/17 - Supersedes: 12/14

Cortec®, BioCorr®, BioCortec®, BioCushion™, Boiler Lizard®, Closed Loop Toad®, Cooling Tower Frog®, VpCI®, VpCI® Film Color of Blue®, VpCI-126®, VpCI-609®, VpCI-137®, VmCI-307®, EcoWorks®, EcoAir®, Eco-Corr®, EcoLine®, EcoClean®, EcoShield®, EcoWeave®, EcoSpray®, EcoCoat®, Eco Emitter™, EcoSol®, Eco-Tie®, Eco-Card®, Eco-Shrink®, EcoWrap®, Eco Film®, Cor-Mitt®, Cor-Pak®, CorShield®, CorSol®, Corrosorbers®, CorWipe®, CorrVerte™, Corr Seal®, CorLam®, Corr-Fill®, Corriube™, CRI®, Desicorr®, ElectriCorr®, GalvaCorr®, Super Corr®, HPRS®, CRI®, MCI®, MCI Grenade®, Milicorr®, Nano VpCI®, and Rust Hunter® are trademarks of Cortec® Corporation.  
©Cortec Corporation 2010. All rights reserved

Distributed by: