# CANADIAN FINISHING & COATINGS MANUFACTURING MAGAZINE

\$12.00

**November/December 2014** 

# Marine Coatings Solutions

Coatings for interiors and exteriors of boats need to follow strict regulations.

# INTERIORS

Interiors for boats tend to follow the latest trends in domestic and contract interior design, and for this reason, the ICA Group R&D laboratory has developed specific cycles for the coating of marine interiors.

For this sector, ICA Group has come up with solutions and coating cycles that have

the capacity to comply fully with the strictest tests deriving from the Marine Equipment Directive (European Directive 96/98/CE). The Directive's certification concerns the marking and marketing of the equipment used on, and fitted to, non-military vessels registered in any country. The group has had various transparent and pigmented coating cycles certified by RINA, a notified body for the certification of equipment pursuant to the Marine Equipment Directive. ICA Group has formulated a complete series of water-based coatings that offer the tangible opportunity to reduce both environmental

continued on page 17

# ALSO IN THIS ISSUE

- Air Pollution Control
- Anti-Corrosion Additives
- Biocides, Algaecides and Preservatives
- Skills Shortages in Industry
- E-Coat
- Masking
- Testing Equipment

# **MUCH MORE!**

# Looking Forward in Chrome

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motive force to the cathode (the part which is to be plated with chromium).

Cadmium plating is used for two primary purposes: To provide sacrificial corrosion protection to steel components and To provide galvanic compatibility between electronegative materials such as Al and Mg, and more noble materials such

# In the News

Crystal Serenity Cruise Ship in Quebec Ci

# **Association News**

# FABTECH 2014 Keys up for Atlanta

FABTECH, North America's largest metal forming, fabricating, welding and finishing event, features an all-star lineup of speakers and panels this November. Keynote presentations by executives from Google Enterprise and Walmart, a special Veterans Day panel on how veterans can help bridge the skills gap, predictions for the coming year from top manufacturing executives, and a motivational speech by a U.S. veteran and football star are just a few of the special events at FABTECH 2014.

FABTECH will be held at the Georgia World Congress Center in Atlanta on Nov. 11-13, 2014, and is expected to bring together 27,000 attendees and more than 1,400 exhibiting companies demonstrating the latest industry products and solutions. Cindi Marsiglio, Walmart's vice president for U.S. manufacturing, will kick off FABTECH with a keynote presentation at 9 a.m. on Nov. 11 on "Creating U.S. Jobs and Bringing Manufacturing Home." Walmart has committed to spend \$250 billion dollars over the next decade on U.S. made products in an effort to grow and expand U.S. manufacturing and encourage the creation of jobs. Marsiglio will

PM # 41515012 Return undeliverable Canadian addresses to Wilkinson Media Canada Inc., Suite 259,2186 Mountain Grove Ave. Burlington, ON Canada L7P 4X4 Electroplating, at its simplest, is the application of a metallic coating to a substrate (which can be metallic or non-metallic) by the use of an electrolyte as a conducting medium (the plating solution) and a source of electrical power (direct current), which acts on a pair of electrodes (the anode and the cathode).

For chromium plating, the metallic coating on the substrate is elemental chromium, which is obtained from a hexavalent chromium solution (the electrolyte, which is chromic acid) and a source of direct current, which supplies an electroas stainless steels.

Cd plate is normally chromated with a typical hexavalent chromium conversion coating.

The first chromium deposits were plated from a cold solution and were thick, dull deposits, which had to be polished to obtain a high luster. It was also found that chromium could not be used as a complete replacement for nickel plating but as a thin top layer over the nickel.

One of the greatest advances in chromium plating was with the introduction in 1932 of silicofluoride ions as cata*continued on page 31* 

continued on page 5





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# 2015 will be a year of Colour Possibilities

This is our last issue of 2014. And it is Fall. The Canadian Autumn is by far my favourite time of year. Colour is bursting out everywhere you look as the trees display their brilliant fall hues.

Canadian paint manufacturers are thinking about colour too and have announced their newest colour schemes for next year.

Sico paint, a brand of PPG Architectural Coatings unveils four colourful themes they are calling Harmony...between our man-made and natural environment; Creativity...expressed in artistic endeavours of the individual; Worldly...a glamourous fusion of ethnicity; and Quality...articulated in quiet, soulful minimalist interpretations.

After years of playing it safe with neutral decor, Canadians are demonstrating more confidence in their colour choices, and this will translate into bolder, more expressive-looking homes in the year ahead according to Sico and its announcement of the 2015-2016 colour themes.

From rich wood and terra cotta shades to deep slate, aqua blue, fruity red and vivid jewel tones, next year's palette by Sico paint is filled with bold, energetic hues from all colour families – with blues of all shades being a favourite in each group.

Based on research conducted by PPG's international team of colour experts, the Sico brand has unveiled four prevailing decor themes for the upcoming year: Comfort Zone, Tempo, Pattern Play and Introspection. Each theme offers a diverse range of bold colours, from down-toearth to opulent tones.

Meanwhile, Benjamin Moore, billing themselves as North America's favourite paint, colour and coatings brand, has released its 2015 Colour of the Year – Guilford Green HC-116, a silvery green that complements both modern and traditional styles in a seamless manner. In addition to unveiling the Colour of the Year, Benjamin Moore introduced Colour Trends 2015, a curated palette of 23 colours consisting of green, blue, blush and berry shades.

Taking cues from trends in fashion, textiles and the arts, the Benjamin Moore Colour Studio team spotted the common thread of balanced palettes and a design sentiment that continued to reflect a sense of optimism. Guilford Green harmoniously complements the Benjamin Moore Colour Trends 2015 palette, which also celebrates the concept of monochromatic colours - using warm, cool, dark and light layers of the same hue. With a monochromatic colour scheme throughout a floor plan, each room can have a very distinctive look, making it almost imperceptible that there is a single hue at work. The Colour Trends 2015 collection features four colour families – green, blue, blush and berry. The bold, more saturated hues represent an evolution from the soft



pastels that comprised the brand's Colour Trends 2014.

The New Year for CFCM will feature a new magazine format and a new website. See you in 2015. Send your Letters To The Editor

attention Sandra L. Anderson, sandra.anderson@cfcm.ca

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# Volume 8 Number 6 November/December 2014

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### WILKINSON MEDIA CANADA INC. Suite 259 2186 Mountain Grove Ave. Burlington, ON Canada L7P 4X4

# In the News

discuss how Walmart is taking a leadership role in moving manufacturing back to the U.S. and working to find solutions to major barriers to onshoring manufacturing.

In celebration of Veterans Day, FABTECH will hold a special panel on "Bridging the Manufacturing Skills Gap with Veterans" at 12:30 p.m. on Nov. 11. With high demand for people to fill skilled manufacturing jobs in the U.S., and thousands of veterans and National Guard members exiting military service looking for civilian careers, five leaders from organizations that connect veterans and manufacturers will discuss how veterans could be the key to bridging the skills gap.

Four-time Super Bowl champion and Vietnam War veteran Rocky Bleier will speak at 8:30 a.m. on Nov. 12. Bleier will discuss the parallels he sees between the struggles he faced in the past and the challenges all business people face in today's crowded, competitive marketplace. Rocky will also make a special guest appearance at the FABTECH Industry Night reception from 5:30 – 7:30 p.m. at the College Football Hall of Fame.

Mike Walton, head of enterprise manufactur-





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ing for Google, will give two presentations at FABTECH. Walton works with Fortune 500 manufacturers to introduce game-changing strategies and technologies into their manufacturing operations. He will give an in-depth demonstration of big data integration for manufacturing at 10 a.m. on Nov. 12. On Nov. 13, Walton will speak on "Transforming Your Manufacturing Business for the New Digital Age" at 8:30 a.m. In this presentation, FABTECH attendees will learn how to accelerate new product initiatives and time-to-profit using the latest digital technology and tools.

The "State of the Industry – Executive Outlook" panel will take place on Nov. 12 at 12:30 p.m. Todd Henry, operations manager at Caterpillar, Inc., Dave Whelan, senior vice president for supply chain at BlueBird Corp. and Raj Batra, president of the Industry Automation Division at Siemens, will discuss whether they believe the manufacturing sector might be experiencing a renaissance or just an up-tick. The panel is moderated by Edwin Stanley of GH Metal Solutions.

All of these special events are open to all registered FABTECH attendees.

The five FABTECH co-sponsors include: SME, the American Welding Society (AWS), the Fabricators & Manufacturers Association, International (FMA), the Precision Metalforming Association (PMA), and the Chemical Coaters Association International (CCAI).

## Show Hours:

Tuesday, November 11, 10:00 am - 6:00 pm Wednesday, November 12, 9:00 am - 5:00 pm Thursday, November 13, 9:00 am - 4:00 pm www.fabtechexpo.com

# Paint Manufacturers Remain Focused on Obtaining a New Program Operator for Post-consumer Paint in Ontario

The Canadian Paint and Coatings Association (CPCA) is pleased that Waste Diversion Ontario (WDO) has now posted information on the Ontario Environmental Registry (EBR) regarding the proposed new paint Industry Stewardship Plan (ISP) in Ontario. This follows the Ministerial Directive of July 17, which delayed ISP approval and requested further consultations.

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# TAPES & DISCS

The EBR posting concludes more than two years of extensive consultations on the proposed paint ISP, which saw both industry and the WDO consult widely with all the relevant stakeholders who would benefit from a new program operator for post-consumer paint. The most significant part of the comprehensive ISP guidelines established under the Act was the requirement for effective transition and to that end an "agreement in principle" with Stewardship Ontario and Product Care was arrived at several months ago.

CPCA members look forward to new program operations proceeding under Product Care given its impressive track record and long history of running successful post-consumer paint programs across Canada.

Canadian paint manufacturers and brand owners are the obligated stewards in Ontario and they have proven their commitment to postconsumer paint recycling across Canada with a successful post-consumer paint program in every province. As the new program operator in Ontario, Product Care will provide enhanced governance, greater transparency and significant improvements in program effectiveness.

In 2013, post-consumer paint programs in Canada recovered more than 25 million kilograms of paint. This is a positive trend for the entire industry and Product Care is expected to bring with them best practices established over many years, which will lead to positive outcomes for the future of waste diversion in Ontario.

# CPCA Awards Annual Scholarship to Deserving Student

The Canadian Paint and Coatings Association's (CPCA) Board of Directors is pleased to announce that Alexandra Bennett is the 2014 recipient of its annual scholarship for the deserving children of staff at its member companies.

This is the second time CPCA has awarded this scholarship, which continues the tradition set out by the Toronto Society for Coatings Technology for many years. Last year's recipient was Mary Yao, the daughter of one of the staff members of John E. Goudey Manufacturing Ltd.

The \$2,000 scholarship is awarded to a recipient who has been selected by CPCA's Education Committee. The granting of the scholarship to deserving high school and post-secondary students is based solely on academic achievement.

Bennett, who is the daughter of one of the staff members of PPG Canada Inc., graduated with honours in 2012 from Banting Memorial School in Alliston, Ontario. She is currently in her third year of studies at the University of Guelph, majoring in biotechnology and ethics.

Bennett also has two part-time jobs, is an

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active volunteer at the university and within the Guelph community, and a crew member of the Guelph University's dragon boat team. Following graduation, she plans to attend the University of Western Ontario to obtain a Master's degree in public health sciences.

CPCA would like to take this opportunity to congratulate Ms. Bennett and wish her well in all her future endeavours.

# CPCA Grants Diploma in Coatings Technology

The Canadian Paint and Coatings Association (CPCA) is proud to announce that Eric Bockus is the latest recipient of the Diploma in Coatings

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### Technology.

Bockus, who currently works in the radiation coatings sector, has successfully completed all three semesters of the courses required for the Diploma in Coatings Technology. The courses provide a solid foundation in many aspects of coatings technology that can be beneficial to people working in the paint and coatings industry. In recent years, more than 800 graduates have earned the diploma, which focuses on theoretical concepts, industrial paint applications and sales and marketing.

To learn more about CPCA's e-learning opportunities, go to www.canpaint.com.

# CACD Training Program, Chemical Supply Chain Management

The Canadian Association of Chemical Distributors (CACD) recognized that there was a need for a training program for the chemical industry. CACD developed the Chemical Supply Chain Management (CSCM) Program to address five critical issues affecting the industry:

- Inspire appropriate succession planning
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- Encourage professional development and expertise
- Assist organizations with minimal regulatory knowledge

The CSCM education course is an online or in-class program designed and targeted to sales & marketing representatives, operations & regulatory personnel and executives working for or with foreign supply chain partners in the chemical industry.

CACD's members and supplier partners are entitled to an enrollment discounted rate as a benefit of membership in the Association.

There are three semesters in the program. Semester 1 is a diploma course and is a prerequisite for continuing in the course. Students who successfully complete semester one will be awarded with a diploma in the Fundamentals of the Chemical Supply Chain and have an understanding of the following:

• Evolution of Regulations in Canada

- Importing & Exporting into / from Canada
- Federal & Provincial Government
   legislative process
- Government advocacy, engagement and stakeholder participation
- Mandatory acronyms

Successful completion of Semester 2 and 3 will result in an accreditation as a Chemical Industry Regulatory Professional (CIRP).

Why should you enroll in this program?

# students will have the opportunity to enroll in the Chemical Industry Regulatory Professional (CIRP) accreditation course.

For more information, please visit www.cscm-edu.com or contact the CACD Head Office at 905-332-8777.

# 5th Annual Nano Ontario Conference

The 5th Annual Nano Ontario Conference to be held November 6, 7, in Windsor, ON addresses issues relevant to innovation and commercialization activities involving nanotechnology.

The conference features an industry panel discussion, highlighted presentations from contributed papers, interactive networking and an exhibition from industry sponsors.

- Invited Speakers include:
- David J. Lockwood, Principal Research Officer, National Research Council Canada, Institute for Microstructural Sciences, Ottawa ON
- Lawrence T. Drzal, University Distinguished Professor, Chemical Engineering and Materials Sci-

ence Director, Composite Materials and Structures Center, Michigan State University, East Lansing MI

- Gregory W. Auner, Strauss TEAMS Endowed Chair, Director, SSIM, Professor, Electrical and Computer, Biomedical Engineering, and the Department of Surgery, Wayne State University, Detroit MI
- Tricia B. Carmichael, Associate Professor in the Department of Chemistry and Biochemistry, University of Windsor, Windsor ON
- Robert J. Nemanich, Professor, Department of Physics, Arizona State University, College of Liberal Arts & Sciences, Tempe AZ

www.nanoontario.ca

# **CPCA Ontario Christmas Luncheon**

The 2014 Canadian Paint and Coatings Association (CPCA) Christmas luncheon will be held on Tues Dec 9, 11:30 to 1:00 pm. Location will be announced shortly.

Toy Drive Donations will be accepted at the door. For corporate sponsorship and to RSVP please contact jjevric@lvlomas.com

# Dow and Preferred Sands Collaboration Wins 2014 Polyurethane Innovation Award

The Center for the Polyurethanes Industry (CPI) of the American Chemistry Council (ACC) announced that Dow Chemical Company and Preferred Sands' innovation, TERAFORCE Technology, won the 2014 Polyurethane Innovation Award.

The winner, which was selected from among three finalists, was announced during the Closing Session of the 2014 Polyurethanes Technical Conference in Dallas.

The winning polyurethane chemistry, TERAFORCE Technology, is a collaborative innovation between Dow Chemical Company and Preferred Sands that expands the frontiers of polyurethane applications by improving oil productivity and the sustainability profile of the hydraulic fracturing process.

TERAFORCE Technology is an important element of the U.S. energy boom and manufacturing renaissance and can play an integral role in job creation. Preferred RCS Resin Coated Sand with

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# In the News

Dow TERAFORCE Technology (the enabling polyurethane) saves energy during production of the resin-coated proppant through shorter production cycles and low temperature, and reduces hazardous risks associated with proppant flowback. The technology also eliminates the need for an external activator, or additional chemicals, that competing technologies require to be injected into oil wells. The two companies continue to develop technologies for broader applications across energy markets, and ever-more efficient and sustainable oil and gas recovery.

More than 900 people attended the 2014 Polyurethanes Technical Conference, which featured 59 technical presentations, 57 Table Top exhibits, 33 poster presentations and eight Professional Development Program courses.

# ACA to Host Coatings Tech Conference

The American Coatings Association (ACA) will host its 2015 CoatingsTech Conference, March 9-11, at the Marriott Louisville Downtown in Louisville, Ky.

ACA's biennial CoatingsTech Conference is the coatings industry's leading technical event offering coatings manufacturers, their suppliers, universities, and government representatives an opportunity to share ideas. The 2015 event will embrace the theme: "Focus: Innovation! Infrastructure! Efficiency!"

The conference will feature the prestigious Mattiello Memorial Lecture, Roon Award competition papers, Gordon Best Paper competition, student poster presentations, as well as a multi-track forum for all professionals in the coatings industry.

Leading the conference will be two informative Technology Short Courses, to be offered on Monday. In addition, tabletop exhibits held during the event will feature displays of the most recent innovations in products and services offered to the industry.

www.paint.org/education/coatingstechconference.html

# **Company News**

# **Royal Buys Chemque**

Vision on quality

Royal Adhesives & Sealants LLC (Royal), a portfolio company of Arsenal Capital Partners (Arsenal), announced that its subsidiary Royal Adhesives &

# **STONE TUCKER INSTRUMENTS INC.**

Sealants Canada LTD will acquire substantially all of the assets of Chemque, Royal's seventh add-on acquisition since 2010.

Toronto-based Chemque is a major supplier of polyurethane foams and adhesives to the telecom, flooring and construction markets. The acquisition builds on Royal's platform of adhesive, sealant and coating solutions.

# **Bayer to Split Off MaterialScience**

Bayer Group has announced that it will spin off its polymer and coatings MaterialScience unit as an independent, publicly traded company within two years. Bayer said the separation process should be complete by 2016.

Bayer MaterialScience, established in 2004 as an independent subgroup of Bayer, is among the world's largest manufacturers of high-tech polymer materials. The company is also one of the world's leading suppliers of raw materials for coatings, adhesives and specialties.

# Carlisle to Acquire Liquid Finishing Business Assets from Graco Gives Carlisle a leading position in a new industry segment with widely recognized premium brands in industrial liquid finishing equipment and systems

Carlisle Companies Incorporated has announced the signing of a definitive agreement to purchase from Graco Inc. and its subsidiary Finishing Brands Holdings Inc., their held separate liquid finishing business assets ("Liquid Finishing Brands"), in a \$590 million cash transaction.

David A. Roberts, Carlisle's Chairman and Chief Executive Officer says, "From our years at Graco, both Chris Koch and I are intimately familiar with the markets in which Liquid Finishing Brands participates." He adds, "When we heard that Liquid Finishing Brands would be sold, we immediately pursued the opportunity to acquire the business. We have made a solid commitment to build a new Carlisle segment as a viable, global competitor to Graco with Liquid Finishing Brands as the foundation and believe that it will be a significant contributor to the success of Carlisle in the years to come. The acquisition of Liquid Finishing Brands fits all of the strategic criteria we established for reinvesting the proceeds from the sale of our Transportation Products segment – namely, purchasing a manufacturer selling high margin, engineered products with an aftermarket tail into attractive global markets. We will work cooperatively to achieve prompt regulatory approval so we can bring Liquid Finishing Brands on board and continue growing this outstanding business both organically and through acquisitions."

The Liquid Finishing Brands business was acquired by Graco in April, 2012, as part of its purchase of the liquid and powder finishing businesses of Illinois Tool Works Inc. The Liquid Finishing Brands business is currently being held separate from Graco's other businesses pursuant to an order of the U.S. Federal Trade Commission (FTC), and Graco is required to sell the business within 180 days after entry of the FTC's final divestiture order, which occurred on October 6, 2014.

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With annual sales of approximately \$275 million, Liquid Finishing Brands is a global manufacturer and supplier of liquid finishing equipment and systems serving diverse end markets for paints and coatings, including OE automotive,

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automotive refinishing, aerospace, agriculture, construction, marine, rail and other industrial applications. The business operates from 26 locations in seven countries with 50 per cent of its sales in the Americas and the remainder primarily in Asia and Europe. Liquid Finishing Brands manufactures and sells products under the well-known brand names of Binks, DeVilbiss, Ransburg and BGK.

The transaction is expected to be accretive to Carlisle in the first year. Carlisle will include Liquid Finishing Brands in a new industry segment named Carlisle Fluid Technologies. The acquisition is subject to FTC and other regulatory approvals and certain other closing conditions.

J.P. Morgan is serving as exclusive financial advisor and Dorsey & Whitney LLP is serving as legal counsel to Carlisle.

### **PPG's Waterborne in Collision Centers**

PPG Industries' has now converted more than 10.000 automotive refinish collision centers in Canada and the United States to its waterborne systems. The majority of these conversions took place in National Rule areas rather than in low-VOC (volatile organic compound) compliant regions, which means most PPG customers chose to use waterborne products and systems even though they were not required to do so to meet low-VOC regulations.

The company's Envirobase High Performance and Aquabase Plus products are now in their third generation. PPG introduced its waterborne technology to the international OEM (original equipment manufacturer) market in 1986 and brought the world's first commercialized refinish waterborne basecoat to market in 1992. Since then PPG has added new primers and clearcoats to the two brands and plans to continue to expand the product lines' offerings.

### Wilden Wins Award

Wilden, part of Dover Corporation's Pump Solutions Group (PSG) and a worldwide leader in airoperated double-diaphragm (AODD) pump technology, is excited to announce that its Pro-Flo SHIFT is a winner of Flow Control Magazine's 2014 Innovation Award. This prestigious award recog-



nizes the top new technologies in flow control and movement for their contributions to the industry. The new Wilden Pro-Flo SHIFT represents a new innovation in energy efficiency within the AODD pump category. Due to its revolutionary design, the Pro-Flo SHIFT Air Distribution System (ADS) allows Wilden AODD pumps to achieve up to a 60% savings in air consumption over all competitive AODD pump technologies, while providing more product yield per standard cubic foot per minute (SCFM) of air used.

# **Specialty Chemicals Company ALTANA Enlarges Management Board**

The specialty chemicals company ALTANA is enlarging its Management Board. As of November 1, 2014, Dr. Christoph Schlünken, President of the BYK Additives & Instruments division, will be an additional member. In his new capacity, Dr. Schlünken will primarily be in charge of the BYK and ECKART Effect Pigments divisions, while Chief Financial Officer Martin Babilas will assume responsibility for the ACTEGA Coatings & Sealants and ELANTAS Electrical Insulation divisions. The Chief Executive Officer, Dr. Matthias L. Wolfgruber, will continue to oversee core functions such as Corporate Development, Corporate Innovation, and Corporate HR."The expansion of ALTANA's Management Board accommodates the increasing size of our company," says Wolfgruber." I am very happy about the addition of Dr. Schlünken, who has helped boost ALTANA's growth in different areas, most recently with the integration of Rockwood's rheology business into BYK."

Dr. Christoph Schlünken joined the ALTANA



Group in 2001 as the Managing Director of ELANTAS GmbH, after holding various sales and marketing positions at Bakelite AG starting in 1994. In 2005, Schlünken, who holds a doctorate in chemistry, became president of the ECKART Effect Pigments division. Within the framework of the rotation of all four division presidents, Dr. Schlünken became president of BYK Additives & Instruments in November 2012. He will continue to head this division until a successor is found.

AltanaManagement.jpg Cutline: From left to right: Dr. Christoph Schlünken, Dr. Matthias L. Wolfgruber, Martin Babilas

# **Huber Completes Initial Capacity Expansion**

Huber Engineered Materials, a division of J.M. Huber Corporation, announces it has increased capacity at its precipitated alumina trihydrate (ATH) plant in Bauxite, Arkansas (U.S.) by 30 per cent.

The continuous investments at Bauxite will effectively position Huber to continue supporting its customers' growth strategies with the manufacture of a broad range of precipitated ATH products. "Phase two of the expansion at Bauxite is already in motion and targeted for completion in 2015," says Don Mills, Global Sales Director for Huber's Fire Retardant Additives business. "We are well-positioned to serve our customers in a number of markets."

Huber is a global leader in supplying nonhalogen fire retardant additives including ATH, magnesium hydroxide (MDH) and engineered molybdate compounds for a variety of consumer, electrical and industrial applications, including reinforced plastics, engineering thermoplastics, rubber, carpet backing, cast polymer, coatings, roofing, adhesives, high-voltage insulators and wire and cable insulating and jacketing.

### Axalta's Ajax Open Doors.jpg

Subhead: Waterborne polyurethane coatings match performance of solventborne coatings in metal applications

Tighter government regulations and heightened consumer awareness have led to demand for increased use of waterborne paints and coatings. Today's waterborne polyurethane coatings can be formulated to exhibit properties that rival the performance of their solventborne counterparts for metal coating applications, allowing for more widespread use of low volatile organic compound (VOC), low-odor paints.

A comprehensive study recently conducted by Bayer MaterialScience LLC tested 60 coating formulations applied to steel panels, and concluded that properly formulated two-component waterborne polyurethane coatings will match or exceed the performance of solvent-based, two-component polyurethane coatings in gloss retention, color retention, pendulum hardness, impact resistance and chemical resistance. Further weathering testing for gloss retention and color retention is underway. The paints that were tested are the three most prominent colors used in the agricultural, construction and earthmoving (ACE) market - green, yellow and red.

Findings from this study are summarized in a paper,"The case for two-component waterborne polyurethane coatings," authored by Peter Schmitt, field technical service manager, Coatings, Adhesives & Specialties; Kathy Allen, senior scientist for transportation applications; and Joe Pierce, technical service rep for transportation applications, all of Bayer MaterialScience LLC. It was presented during the Coatings Trends and Technologies Conference, in Chicago, September 2014.





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# In the News

# GM Canada September Sales Increase 34 Per Cent

Chevrolet, Buick, GMC and Cadillac dealers delivered 24,555 vehicles in September 2014, an increase of 34 per cent from September 2013. Total GM Canada sales are up more than 5 per cent for the 2014 calendar year.

# People

# Anne Noonan to Join OMNOVA Solutions as President

OMNOVA Solutions announces that Anne Noonan has joined the Company as President of the Performance Chemicals business segment, effective September 22, 2014. She succeeds James Hohman, who will retire from OMNOVA on October 24, 2014. To ensure an orderly transition, Mr. Hohman will assume the role of special advisor to Ms. Noonan until his retirement date. Anne Noonan, 51, joins OMNOVA from Chemtura Corporation, a \$2.2 billion global developer and manufacturer of specialty chemicals. Chemtura was formed in the 2005 merger of Great Lakes Chemical Corporation and Crompton Corporation. Ms. Noonan held several leadership positions, first at Great Lakes Chemical and then the combined company, most recently serving as Senior Vice President and President of Chemtura's Industrial Engineered Products business, which includes flame retardants, brominated performance products and organometallic specialties. These products go into numerous applications and end markets, many of which overlap with OMNOVA's. Previously, she held a dual role as Vice President of Strategic Business Development for Chemtura and President of the Great Lakes Solutions business. Her career at Great Lakes Chemical and Chemtura

# Axalta Hosted Community During Doors Open in Ajax

# **Community Enjoyed Getting to Know a Neighbour**

Axalta Coating Systems, a leading manufacturer of liquid and powder coatings, was pleased to host members of the Ajax and surrounding communities during Doors Open in Ajax, ON on September 26, 2014. More than 340 community neighbours, families and friends visited the facility.

Visitors were briefed on the paint manufacturing process and took a tour of the plant. A highlight for many was the virtual painting challenge where guests participated in a painting simulator. Another highlight for the group was learning about Axalta's colour leadership role that has been part of the company's legacy for more than 60 years, as demonstrated by Axalta's 60th Anniversary Colour Popularity Report.

Guests also had the opportunity to take photos with the No. 24 Axalta Chevrolet SS driven by four-time NASCAR Cup Series champion, Jeff Gordon.

Doors Open Ajax is one of 49 open house events in Ontario. Every year from May to October, communities across the province

open the doors of hundreds of historical buildings, places of worship, museums, private homes, industrial areas, green buildings, heritage gardens and more to welcome visitors to some of these rarely accessible venues.

Axalta's Ajax facility is one of the city's earliest established businesses. Axalta was happy to be a part of Doors Open this year.



has spanned 27 years.

James Hohman joined OMNOVA Solutions in 1996 as Director of Strategic Business Development for the Performance Chemicals business segment. He was named president of Performance Chemicals in 2005 and was elected a senior vice president of the Company in 2011. During his tenure, he led negotiations for the acquisitions of the Goodyear/Calhoun, Georgia latex facility and the U.S. specialty chemicals businesses of Sequa Chemicals and Polymer Latex. Under Mr. Hohman's leadership, OMNOVA acquired ELIOKEM in 2010, which added a broader range of chemistries and applications, and extended OMNOVA's reach into new global specialty chemical markets.

# Eric Gongora Appointed Global Director, Enthone Semiconductor Product Marketing

Eric Gongora has been appointed Global Director, Semiconductor Product Marketing, by Enthone Inc. Mr. Gongora will be working closely with the company's Wafer Level Packaging (WLP) research and development, technical applications, and commercial teams to introduce advanced WLP technologies that create value to semiconductor manufacturers and electronics OEMs.

Mr. Gongora brings to Enthone over nineteen years of experience in the semiconductor industry spanning areas such as operations, business development and global product line management. Since beginning his career in engineering at General Electric, Mr. Gongora has served in positions of increasing responsibility, working for



Eric Gongora

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Urethane Resins

### RÜTGERS Novares www.novares.de Hydrocarbon Resins

Shamrock Technologies www.shamrocktechnologies.com PTFE and Wax Additives

### WPC Technologies www.waynepigment.com Anti-Corrosion Pigments

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leading companies including Motorola, Amkor Technology, and ChipPAC. Most recently, Mr. Gongora served as director of mainstream products at STATSChipPAC where he managed a global wirebond product group with approximately \$500M in revenue.

Mr. Gongora earned a Bachelor of Science in mechanical engineering from the University of Florida and a Master of Business Administration from Arizona State University.

# Specialty Polymers Inc. hires new Vice President of Sales

Specialty Polymers Inc., has hired Brad McPhee as



the company's new Vice President of Sales and Marketing.

In his role as Vice President of Sales and Marketing, McPhee will be responsible for overseeing the company's sales staff and marketing department. He will also be in charge of generating new business and developing new technology. With McPhee's hiring, longtime VP of sales and marketing Steve Reiser will take on a new role managing the company's technical group and adhesive business.

"Brad comes to us with a wealth of experience in the polymer and chemical industry," says Sheryl Southwell, Specialty's President."His experience in the industry is tremendous and he's a natural fit within our organization."

McPhee worked for 28 years in sales management and marketing roles with Rohm and Haas and Dow Chemical and worked as the business development director at Organik Kimya US, Inc. He graduated from Ryerson Polytechnical University in Toronto with a degree instructional media.

# **Pricing Updates**

# Arkema Coating Resins Announces Price Increase for All Latex Products Sold in North America

Effective September 23, 2014, or as contracts allow, Arkema Coating Resins increased pricing on

# Taking Care of Business

# CPCA Focused on a New Program Operator for Post-consumer Paint in Ontario

Waste Diversion Ontario (WDO) has now posted information on the Ontario Environmental Registry (EBR) regarding the proposed new paint Industry Stewardship Plan (ISP) in Ontario. This follows the Ministerial Directive of July 17, which delayed ISP approval and requested further consultations. WDO's impressive array of information on the EBR shows the extensive consultations that took place on the paint industry's application for the ISP, which would put in place a new and improved program operator for post-consumer paint in Ontario. The EBR posting concludes more than two years of extensive consultations on the proposed paint ISP, which saw both industry and WDO consult widely with all the relevant stakeholders who would benefit from a new program operator for post-consumer paint. Despite having more than 90 per cent of the paint industry stewards supporting the paint ISP, CPCA and Product Care would be pleased to address any and all concerns not addressed in the past two years of consultations with stakeholders. The deadline to comment on the ISP for paint and batteries is November 21, 2014. Canadian paint manufacturers and brand owners are the "obligated stewards" in Ontario and they have proven their commitment to post-consumer paint recycling across Canada with a successful post-consumer paint program in every province. As the new program operator in Ontario, Product Care will provide enhanced governance, greater transparency and significant improvements in program effectiveness. In 2013, post-consumer paint programs in Canada recovered more than 25 million kilograms of paint. This is a positive trend for the entire industry and Product Care is expected to bring with them best practices established over many years, which will lead to positive outcomes for the future of waste diversion in Ontario.

# CPCA and ACA Presidents Meet with Health Canada's Deputy Minister on GHS

On September 4, CPCA President Gary LeRoux and Andy Doyle, President of the American Coatings Association (ACA), met with Health Canada Deputy Minister George Da Pont and several of his senior officials on recently passed legislation on the Globally Harmonized System for Workplace Chemicals (GHS). Their discussions focused on reinforcing key messages for industry, such as setting up appropriate GHS implementation timelines for effective transition that extends beyond the June 1, 2015 launch date for GHS in Canada. There is also a move to convince the U.S. Occupational Safety & Health Administration (OSHA) for similar transition timelines in the U.S. A number of other issues were addressed related to proposals for the Hazardous Products Regulations (HPR), reminding Health Canada that a series of variances will inevitably lead to the use of unique labels in Canada at huge costs for industry. Health Canada assured industry that it is

focused on finalizing the new regulations before year-end, but regulatory process issues could delay it to early in the new year. A two-year transition period is actively being considered. Health Canada doesn't think that the provinces and territories will be a major issue in terms of implementation and enforcement, as per discussions among the Deputy Ministers of the provinces and territories. Health Canada confirmed that all of the training has begun and more work is being done regarding the requisite guidance documents.

# CPCA Receives Further Confirmation that GHS Training to be Deployed by Health Canada in Fall 2014

Members of the paint and coatings industry are advised to enroll in classroom or on-site training for the new Hazardous Products Regulations (HPR) during the fall, before or after the HPR is finalized in the Canada Gazette, Part II in December. Plant managers, Environmental Health and Safety managers/coordinators, warehouse and distribution managers/coordinators and R&D/laboratory personnel should attend GHS training sessions by Health Canada and various organizations (ICC, Lehder, etc.). A number of organizations have been enlisted to assist with this important initiative, such as the Canadian Centre for Occupational Health and Safety (CCOHS).

# CPCA Assisting Health Canada on Touch-up Paint Category

Health Canada is responsible for complet-

# Value-Added Membership

As the recognized voice of the paint and coatings industry in Canada, CPCA has been dedicated to taking collective action for more than 100 years. Consider just a few of the issues before the industry:

# Globally Harmonized System for Labeling

How much will proposed new labeling regime for chemicals in the workplace cost you and how can it be reduced?

# Top 3 Reasons to Join

- Know what is being done to your business now, not after the fact
- Take action and provide input to ensure your business can grow and prosper
- Share the responsibility to counter measures that threaten your paint and

all latex products sold in North America.

The prices for ENCOR and SNAP acrylic, styrene-acrylic and styrene-butadiene latexes, NEOCAR Acrylic latexes, Celocor opaque polymer, ENCOR vinyl-acrylic, vinyl acetate-ethylene latexes, NEOCAR Latexes and ENCOR styrene-acrylic hard resins will increase by \$0.02 to \$0.04 per wet pound, or per pound for hard resins.

This action, according to the company, is necessary due to escalation in the cost of key raw materials.

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# Low-level VOC Emissions

Will your products survive further reductions in VOC limits and still perform and sustain your business over the long term?

# Chemicals Management

Are you aware of the current, ongoing assessment of the chemicals used in your products with new risk management actions required for many? Are your products compliant and do you care about which products might be banned or regulated in future and how that will be done?

# Product Stewardship and Sustainability

Are you compliant with stewardship regulations and do you want to help shape the future of new regulations imposed by government on your business?



Stronger Together: CPCA provides the strength, commitment and resources to help you get informed, stay connected and sustain your business.



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3

# **CPCA** Corner

ing certain enforcement projects each year. The responsible Directorate is looking at evaluating industry's compliance with section 4 and 5 of the Surface Coating Materials Regulations for touch-up paints used on metal surfaces. Health Canada has enlisted the help of CPCA to gather as much information as possible on the different industry players (CPCA members and non-members) involved with the manufacture, import, advertisement or sale of touch-up paint in Canada. All "consumer available" paint used/marketed as a touch-up coating for metal surfaces is within the scope of this project (e.g. "rust coats" and "automotive" touch-up paints). However, under the SCMR, touch-up paints are exempted from the total lead limit of 90 mg/Kg. If the concentrations exceed the limit, there are specific labelling requirements that are applicable. CPCA members reminded Health Canada that, in the U.S., consumer products are required to meet the 90 mg/Kg limit for lead under the Consumer Products Safety Information Act (CPSIA). CPCA has advised Health Canada to restrict the enforcement project to Canadian-based company products. Health Canada confirmed that it would move forward with the enforcement project and test various samples of touch-up paints on the market, regardless of the country of origin. If the total lead limit is exceeded, Health Canada will ensure that appropriate warning statements appear on the labels. Please advise CPCA if you would like to become involved.

# **CPCA Finalizing Educational Materials** for the New Code of Practice for MEKO

Health Canada recently provided comments on several drafts of educational materials (poster, fact sheet, video script, news release) developed by CPCA to assist its members and industry in their compliance with the Code of Practice on MEKO.

Health Canada was pleased with the CPCA materials and offered a number of comments and recommendations. CPCA is consulting with its members and continues to seek feedback. The final materials for the MEKO educational campaign will be made available the Canadian paint and coatings industry in the coming weeks.

# **CPCA** President Speaks at **BECOR** Seminar

CPCA President Gary LeRoux spoke at the Building Envelope Council Ottawa Region's (BECOR) Lunch and Learn Technical Seminar held on September 25, 2014 in Ottawa. The event's theme was "Coatings, How to Choose the Right Coating for the Job." BECOR is a non-profit organization committed to promoting advanced technologies and techniques in the design, construction and performance of the building envelope. Topics covered the Canadian coatings industry generally, the role of CPCA and the aspects of performance standards, as well as PCR and EPD (Environmental Product Declaration) approach. Mr. LeRoux also discussed VOC regulations, CMP and product stewardship initiatives to demonstrate the paint industry's efforts to ensure that their products are safe and viewed as safe by government and the general public.

# **Requirements Repealed for** Key Items Used in Federally Registered **Meat Establishments**

The regulatory changes for federally registered meat establishments were published in Canada Gazette, Part II on July 2, 2014 and the changes came into force the same day. With these amendments, the Canadian Food Inspection Agency (CFIA) no longer has regulatory authority to evaluate or register Construction Materials, Packaging and Non-Food Chemical Products. Therefore, CFIA will no longer update the Reference Listing of Accepted Construc-



tion Materials, Packaging and Non-Food Chemical Products although the Reference Listing will continue to be retained on CFIA's website for a period of approximately two years. As part of the evaluation of some of these products (packaging materials and non-food chemicals). CFIA required a safety assessment be conducted by Health Canada. Health Canada issued a Letter of No Objection (LONO) after the safety assessment. These new regulatory requirements are aimed at reducing red tape and administrative burden on the industry. By eliminating premarket evaluation and registration activities, CFIA can refocus its efforts and activities on areas of greater risk.

# Update on the Environment Canada NDSL Clean-up

About 19 substances were identified by industry for deletion from the 607 substances contained in the DSL cleaning TSCA Flag database. From these 19 substances, 16 were identified by ICG mem-

bers (including one by CPCA). The three other substances were identified from other groups. The federal government has proceeded with the deletion. The publication for considering the deletion of the remaining 588 substances will come at the end of 2014 or in the first part of 2015, with a final deletion to come into effect later next year.

# **CPCA Obtains Updated Timelines** for Key Environment Canada/Health Canada Publications

CPCA recently informed its members about the updated main timelines planned by Environment Canada and Health Canada with respect to upcoming publications in relation to the Challenge, CMP-2 groupings and Non-Challenge substances. Of note was that fact that the BDTP final risk assessment report and risk management approach document will be published in the winter of 2015 (before or after February 2015). CPCA will continue to provide input on these substances.

# Long-awaited Revised NSN Advisory Note Regarding Nanomaterials

A new Advisory Note regarding nanomaterials replaces the corresponding advisory note published in 2007. The purpose of this note revision is to outline to stakeholders that nanomaterials (not already on the DSL) are subject to NSN provisions and to inform stakeholders that supplemental information (e.g. particle size, particle size distribution, etc.) is likely to be requested for any materials that may be considered new nanomaterials. The text regarding nanomaterials appearing on the NSN website has also been amended. CPCA and its members look forward to reviewing the proposed approach to nanosubstances appearing on the DSL.



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Full details on these and other issues are contained on CPCA's website at www.canpaint.com for members only.







# **OCCO** Annual Golf Tourney

The Oil & Colour Chemists Organization of Ontario (OCCO) held its annual golf tournament September 2nd at Nobleton Lakes Golf and Country Club.

Mother nature interrupted the golf after 9 holes, but activities continued with an indoor putting contest and an early dinner.











Mike Dryden and John Egoff.



Mike Dryden and Sandeep Sharma.





Mike Dryden and Gary Menick.



Bruce Clatworthy and Colin MacGregor Low Gross Winner.





Mike Dryden and Stephen Maj Brenntag Low Net Trophy winner.



Mike Dryden and Tracy Thorn.





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Bruce Clatworthy and Scott Mackie Longest Drive.

Bruce Clatworthy and George MacGregor.



Bruce Clatworthy and Neal Byles.



Bruce Clatworthy and Martin Wikoff.

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# Powder Coating 2014 in Indy

Organizers are pleased with the attendance to the 2014 Power Coating Show in Indianapolis, IN, September 16-18. CFCM was there.

Photos by Pete Wilkinson



Luis Carpio and Brooke Roahrig, Echo Engineering.



Ron Glaser and Jay Kunick, Fischer Technology.



Robert Trhlin and Zoran Pavlic, Allnex.





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Suresh Patel, Kirk Beaster, Jason Martin and Donald LaFlamme, Chemetall.



Michael Beamish, Terry LaRue and David Beamish, DeFelsko.



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Greg Taylor, Gema.



Paul Mace and Ed Baldassi, Decora Powder Solutions, St. Catharines, ON



Jeff Thomas, Jena Industries.





Mike Wittenhagen, Trena Benson, and Rob Fillippi, Axalta Powder Coatings.



Gordon Markstrom, Jeff Parker and Tim McCarthy, Finishing Brands.



Mike Floyd, Damen Toushan and Christine Jordan, Uni-Spray.



Corey Brown, Jeff Brown, and Gary Cyrlin, Exel/Sames.



# Calendar of Industry Events 2014 & 2015

**November 11-13, 2014:** FABTECH 2014, Georgia World Congress Center, Atlanta, GA, *www.fabtechexpo.com* 

December 3, 2014: OPCA Christmas Luncheon, http://www.ontpca.org/

**December 9, 2014:** CPCA (TOSCOT) Xmas luncheon. Location TBA. Toy Drive Donations will be accepted at the door. For corporate sponsorship and RSVP *jjevric@lvlomas.com* 

March 10-11, 2015: uv.eb WEST 2015, Crowne Plaza Hotel - Redondo Beach, CA, www.radtech.org

May 5-7, 2015: Powder Coating Show, Louisville, KY, www.powdercoatingshow.com

May 18-21 2015: Eastern Coatings Show, Taj Mahal Hotel and Resort in Atlantic City, NJ.

June 8-11, 2015: SUR/FIN 2015, Stephens Convention Center, Rosemont, IL, www.NASFsurfin.com

**November 5-7, 2015:** WMS Woodworking Machinery & Supply Expo, International Centre Toronto ON, *www.WoodworkingExpo.ca* 

November 9-12, 2015: FABTECH 2015 McCormack Place, Chicago, IL, www.fabtechexpo.com



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Jacky Kwan, Legett & Platt, Windsor, ON.



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# CPCA Annual Conference and AGM Takes Quebec City

The CPCA Canadian Paint and Coatings Association held its 101st Annual Conference and General Meeting in Quebec City October 5-8.

Sunday began with a bus and walking tour of old Quebec, Plains of Abraham and Ilse d'Orleans. And was capped by an evening welcome reception.

Monday featured a Board of Director and Committee meeting followed by The Chair's Reception and Annual Gala Dinner.

Terry Sutherland of PPG Industries Canada was presented with the Industry Achievement Award. This award is presented to an individual or organization that has demonstrated exceptional achievement in advancing the interests of the industry and the association. Mr. Sutherland is being honoured for his long-standing dedication and invaluable contributions to CPCA's Health, Safety and Environment Committee, especially with its Paint and Coatings Working Group.

Alex Drody of Cloverdale Paint and Madelyn Harding of Sherwin-Williams received the Industry Statesman Award. This award is presented to individuals who have recently retired or are retiring and have made a significant contribution to the association at the national or local level.

The CPCA's highest honour, the Roy Kennedy Outstanding

Achievement Award for 2014, was presented to Mike Klein, President and CEO of Dominion Colour Corporation.

Out going CPCA Chair Dale Constantinoff received a horse sculpture as a token of appreciation.

The evening was capped off with a high energy musical presentation by the Quebec City based Painchaud Family. They played numerous instruments and genres. They involved the audience in several on stage antics with a Grand Finale tribute to Tom Cruise and the Top Gun movie.

Tuesday business sessions began with a welcome from Dale Constantinoff, Sherwin-Williams Chair, CPCA.

Charles Bangert Partner, Orr & Boss offered an economic outlook for the global paint and coatings Industry andthe effects of global monetary policy.

The Innovations Forum featured innovative approaches in wood finishing, energy efficiency and nanotechnology.

Veronic Landry Senior Scientist FP Innovations explored the synergies between the coatings industry and wood products manufacturing.

Serge Depatie, VP NanoXplore explored advantages of graphene in paint and coatings including ant-corrosion and thermal properties.

Christian Moreau Ph.D Professor Concordia University Research Chair in Coating Technology focused on new coating technologies and functional surface solutions such as Cold Spray and Thermal Spray that will improve energy efficiency for aerospce, automotive and industrial coatings.

Gary LeRoux, CPCA President covered the many issues that face the CPCA and the industry followed by the Annual General Meeting.

Josette Buisson President and Craetive Director Alias Color talked about attracting consumers based on

colour marketing and the design, technology and development for the coatings industry.

Mark Kurschner President Product Care explained the paint recycling success of EcoPienture in Quebec and the impact on municipal waste in Nova Scotia. Ontario is investigating post consumer recycling paint with Product Care.

Tony Papa National Product Manager Univar Canada, explained the ongoing concerns for supply chain management for the distributor and the end user.

Keynote Speaker, Stephane Simard, author of Generation Y covered human resources management and hiring practices to acquire and retain employees.



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Wink and Noelle Vogel.

Doug Crabb. and Bob Kelly.

Mary and Doug Parsons and Gary LeRoux.

Daniel Goldberg and Tony Papa.



Maryse Gervais, Andre Buisson, Dale and Sylvia Constantinoff.



Fred Veghelyi, Michael Morden and Steve Holland.



Darrin Noble, Michael Klein, Brian Collict and Tim Vogel.



Barbara and Sharon Kelly and Ed Thompson.



Kristin Harold, Lysane Lavoie and Steve Wolinsky.

Terry Newton, Micheline Foucher and Kamlaish Mudhar.



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# **AGM** TAKES QUEBEC CITY



Debbie and Paul Macko, Kathryn Faherty and Barbara Kelly.

Terry Sutherland, Laura Johnston, Sue and Ron Nakamura.

Jean Baptiste Moranta, Patrick Rodrique, and Errol Bonaventura.



Dale Constantinoff presents Madelyn Harding formerly Sherwin-Williams with Industry Statesman Award. Darrin Noble and Chris Currie.

Wink Vogel accepts the Industry Statesman Award for Alex Drody formerly of Cloverdale paint.

Dale Constantinoff presents Terry Sutherland of PPG Industries Canada with the Industry Achievement Award.

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A Great Finish is Only the Beginning

# McKeever Inc. talks about the Chemcraft Mobile Product App

We traveled to El Cajon, CA, just outside of San Diego to talk with Dan McKeever, owner of McKeever Inc, and Rob Olivarez, his Finish Specialist from Chemcraft Distributor E.B. Bradley.

McKeever Inc. was founded in 2005 and produces architectural millwork, cabinetry and custom woodwork for commercial and residential customers.

"We've had a long relationship with Rob and E.B. Bradley," said Dan McKeever "They've been with us from the beginning."

"As Dan said, we've been with Mckeever since about 2005, but only in the last couple of years have we been supplying their coatings." said Rob Olivarez, "We also provide them product training and technical support. Because of the Low VOC regulations here in Southern California, one of the most important things we supply is product documentation. We make sure they have what they need for the inspectors and regulators."

"It's a real a challenge keeping up with all the VOC data for the products." said McKeever, "We need to have the information readily available for inspections and for



Front, L to R: Rob Olivarez - Finish Specialist, E.B. Bradley. Dan McKeever - Owner, McKeever Inc.



Dale Constantinoff presents the Roy Kennedy Outstanding Achievement Award for 2014 to Mike Klein, President and CEO of Dominion Colour Corporation.



Outgoing CPCA Chair Dale Constantinoff receives a token of appreciation from Sharon Kelly.



AkzoNobel

submitting new project bids."



Back, L to R: Terry Best - Sales Representative, E.B. Bradley. Colin McKeever, Technology Supervisor, McKeever Inc.

"The Chemcraft App has made it a lot easier. It's the same information as before, but now it's at Dan's or someone else in the facilities fingertips." said Olivarez.

"On new jobs, we have to show product data up front, and the mobile app makes it easy for us to pull that information up." said McKeever, "It works out pretty well for us. The app is a very good thing to have. It's easy to use, and you can find what you need quickly."

"From a distributor side of things, I really like the tools that Chemcraft has brought to market to benefit the end-user." said Olivarez "The app is a great example of that. To put product information, how-to videos, a troubleshooting guide in an easy-to-use app is great. While this is all information that I have readily available to give to our customers, there are just times when they need it faster. It's a great tool."

To get the Chemcraft Mobile App, go to chemcraft.com/mpca on your mobile device and follow the instructions to download.

Visit chemcraft.com to locate your nearest distributor.

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Gary LeRoux opens the Tuesday business sessions. continued on page 19

# www.cfcm.ca

# $16\,$ canadian finishing & coating manufacturing $\,$ November/december 2014 $\,$

## Continued from front cover

impact and the risks to the health of the person applying the coating. In addition to the aesthetic requirement to align the styling of marine furnishings with that of domestic interior design, there are also specific performance requirements that these coating products must guarantee. Thanks to its experience in this sector, ICA Group has succeeded in perfecting coating cycles that are able to deliver high levels of chemical/physical resistance and elasticity.

ICA Group's water-based coatings can easily be used in place of traditional solvent-based coatings without compromise to the chemical/physical or aesthetic properties of the coating.

www.icaspa.com

# EXTERIORS

Dow Microbial Control, a business unit of The Dow Chemical Company has announced European Union regulatory approval of its antifouling active substance DCOIT (4,5-Dichloro-2-octyl-2H-isothiazol-3-one), an innovative technology used in paints and coatings to prevent the settlement of unwanted organisms on the surface of structures immersed in water.

The European Commission has approved DCOIT for use in coating formulations that fall under the Biocidal Products Regulation (BPR) "Product Type 21," which encompasses antifouling products. From an environmental point of view, this is one of the most challenging product types for which to gain approval, and DCOIT is only the second active substance to be given EU market clearance in this category.

Antifouling products are used to control the unwanted growth and settlement of fouling organisms — such as microbes and higher forms of plant or animal species — on marine vessels, aquaculture equipment or other structures used in water. Such biofouling reduces a ship's operating efficiency, thereby wasting money and harming the environment through increased fuel consumption and emissions as well as the spreading of marine invasive species.

"We are pleased that Dow Microbial Control's technology has been embraced by a regulatory body and in a product category that is respected for having some of the most stringent environmental standards in the world," said Mark Henning, Global Business Director for Dow Microbial Control. "This landmark EU approval confirms an excellent environmental profile for DCOIT as an antifouling agent for commercial fleets, superyachts, nets and other marine structures." DCOIT has been used safely around the world as an active substance in antifouling products under the trademark SEA-NINE<sup>™</sup> since the early 1990s. SEA-NINE<sup>™</sup> won the prestigious US EPA Presidential Green Chemistry Challenge Award in the category of Designing Safer Chemical Products. This award recognizes



and promotes fundamental breakthroughs in chemistry that prevent pollution and have broad applicability in the industry.

"SEA-NINE<sup>™</sup> is exemplary of Dow Microbial Control's commitment to providing top-performing products while also leading customers to a more sustainable future," said Rick Strittmatter, Global Research & Development Director for Dow Microbial Control. "Smart business practices and responsible environmental decisions are no longer an either-or proposition. Dow makes it possible to have both."

www.dow.com/microbial/.

Akzo Nobel offers Marine and Protective Coatings for maximum protection in the toughest conditions.

The company, earlier this year celebrated the success of its Intersleek1100SR technology following a series of nominations and award wins from RINA, Seatrade and Riviera Maritime. Intersleek 1100SR is the shipping industry's first biocide-free foul release fluoropolymer technology that addresses the significant issue of slime fouling on ship hulls.

For over 100 years, Akzo Nobel's Marine Coatings business, International Paint has successfully provided solutions to meet the global marine industry's constantly evolving needs and earned a reputation for trust and quality.

Our marine coatings are engineered to deliver proven performance in-service whilst representing value for money. Environmental responsibility is a major feature of the marine coatings offer, particularly in terms of new product introductions and ongoing global research programmes. ships, including fishing vessels, cargo barges, dredgers, tugs, offshore supply vessels and ferries, require high levels of protection at both the new building stage and in-service. For both coastal trading and inland fleets, International Paint has the marine product offer to meet the varied requirements of shipyards and vessel operators.

Military: The World's navies, which include aircraft carriers, guided missile cruisers, frigates and destroyers, submarines, amphibious warfare ships and auxilliary vessels all require specialist products. To meet the highly specific needs of warships and their support vessels, International Paint offers advanced deck systems, fouling release systems, low solar absorption exterior coatings and tank linings all designed to maximise fleet availability whilst controlling operational costs.

www.international-marine.com

Manufacturers of marine coatings are meeting the industry's needs with product solutions that address environmental, government, as well as all other concerns.

Photos by Pete Wilkinson

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Manufacturers of masking materials for Industrial Finishing know how important masking quality is to create that perfect finish. CFCM asked manufacturers about their post popular and newest products.



Courtesy of Caps'nPlugs

Caps'n Plugs is a leading Canadian distributor and custom manufacturer of plastic and rubber injection mouldings, vinyl dip mouldings and compression mouldings. The company claims to have the largest stock in Canada of tapered plugs, pull plugs, flange pull plugs, several styles of caps, various types of tape, cord, round tubing and more - that can be used for all high temperature painting, coating and plating. All silicone or EDPM rubber parts can withstand repeated painting and bake cycles.

Most of the popular cut widths of green polyester tape are in stock at Caps'n Plugs including three types of sandblasting tape efficient at masking off parts during sandblasting (with no residue) than the commonly used duct tape. High temperature masking discs are ideal for masking off holes or grounding areas around holes. These high temperature masking discs remove cleanly from surfaces without leaving any residue behind.

Echo Supply is now offering rapid custom die cutting.



Echo Supply offers custom die cutting.

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**Essentra Components** offers EPDM Caps and plugs.

Essentra Components offers a full range of EPDM caps and plugs in a variety of styles for your unique application. EPDM caps and plugs are a cost effective solution for high temperature masking applications. The reusable EPDM material withstands temperatures up to 425°F (218°C) but costs 30 per cent less than silicone masking products.



Mocap's silicone rubber X-Treme tape.

MOCAP's silicone rubber X-Treme Tape is a self-bonding flexible masking tape that will stretch wrap to conform to irregular shapes and features no adhesive, resulting in no secondary clean-up after high-temperature processing. The tape will protect and mask during plating and conformal coating as well as high-temperature powder coating. It will resist up to 500° F (260° C) and remove easily. Often, it can eliminate the requirement for a 'custom' mask. Masking manufacturers offer products to suit every Finisher's need.



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Editor's Note: Companies mentioned in this article can be reached: www.capsnplugs.com www.essentracomponents.ca www.echosupply.com www.mocap.com

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# **CPCA** TAKES QUEBEC CITY





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Dale Constantinoff welcomes the attendees.



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When inspecting painted and coated

surfaces to ensure compliance with the specification it is important that the work is carried out quickly and accurately. If rework is required, it must be carried out in a manner that does not delay the completion of the process. The speed of inspection is greatly assisted by manufacturers of testing equipment that offer several new innovations in the industrial finishing and plating and anodizing sectors.

**The DeFelsko Corporation's** PosiTector accepts ALL coating thickness (6000/200), environmental (DPM), surface profile (SPG/RTR), and ultrasonic wall thickness (UTG) probes.

This innovation allows quick and easy conversion from a coating thickness gage to a surface profile gage, dew point meter or ultrasonic wall thickness gage with a simple probe change. Each probe retains its own unique calibration information allowing for full probe interchangeability. Long form certificates of calibration are included with each probe.

Available as either Standard or Advanced, all models feature built-in memory, onscreen statistics and PosiSoft USB drive. Advanced models also include color LCD, onscreen graphing, and more.

Download and transfer options include USB, WiFi, Bluetooth, PosiSoft.net cloud-based storage and NEW PosiSoft 3.0 Desktop Software.

DeFelsko also offers other quality inspection instruments including the PosiTest Adhesion Tester and the PosiTector 200 Ultrasonic Coating Thickness Gage for measuring polyurea and other protective coatings on concrete.

www.defelsko.com

**Elcometer** has introduced two new scanning probes, known as the Ultra/Scan probes, as options for the very popular Elcometer 456 Coating Thickness Gauge. The Elcometer 456 Coating Thickness Gauge provides fast, reliable and accurate measurements for dry film thickness assessment, helping to ensure that the coating process is in control and the specification is being met to aid in the achievement of the expected coating service life. The new Ultra/Scan probes are available for measurement on either ferrous (F)

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Key features include:

- 2.4" colour display, clear menu structure and large buttons, making the Elcometer 456 incredibly easy to use.
- Impact resistant and sealed against dust and water, the Elcometer 456 is rugged and ideal for all environments.
- Memory capacity of up to 150,000 readings in up to 2,500 individual batches with alpha-numeric identification, interchangeable probes and output to ElcoMaster 2.0 software, the

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Elcometer 456 is incredibly powerful.

- Measurement capability to ±1 per cent on smooth, rough, thin and curved surfaces the Elcometer 456 gives repeatable and reproducible results and is backed by a 2-year gauge warranty.
- Fast measuring speed of more than 70 readings per minute (140+ readings per minute with the Ultra/Scan probes) - the Elcometer 456 is more than 40 per cent faster than other gauges.

The Elcometer 456 is supplied with ElcoMaster 2.0 software for simple and efficient data management for a range of coating inspection instruments.

The new Ultra/Scan Probes come fitted with a 'snap on' replaceable end cap so that the sliding action required to achieve a scan of the whole surface does not cause any wear to the probe tip, crucial to maintaining the accuracy of the probe over its life. The Ultra Scan probes use the Elcometer 456's patented offset feature, ensuring that the thickness of the cap is included in the calibration adjustment process and, as the cap wears during use, the effect is accounted for. The gauge will also display a warning message when the wear requires the cap to be replaced.

With all the features that you have come to expect from an Elcometer designed and manufactured product, such as ease of use, menu driven colour display, robust and ergonomic design, statistics and graphing, USB & Bluetooth to Android and iPhone mobile devices, the new Elcometer 480 single, dual and triple angle glossmeters sets new standards in the field of hand held gloss measurement. Key Features include:

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The Ultra/Scan Probe has replaceable end caps for increased durability.

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# **MECHANICAL CHARACTERISTICS** OF ANODIZED COATINGS

In the automotive industry weight reduction - and the associated fuel savings are top priority, which is why lightweight materials such as aluminum are used. In order to withstand mechanical stresses, however, these softer components must be made wear resistant. For this reason, hardcoat (Type III) anodize is becoming more common.

While hard anodized coatings are typically 30-80 m thick, some are only a few m! For these coatings, conventional hardness measurement systems that rely on optical evaluation of the indentation (e.g. Vickers method) approach the limits of their ability. A much better method is the instrumented indentation test, which can be applied to measure not only the hardness in terms of plastic deformation (HV), but also to assess other quality-determining characteristics. Using the instrumented indentation test, even very thin anodized coatings can be analyzed without risking influence from the substrate.

For such technical applications hard



by Fischer Technology, Inc.

anodized coatings must have a consistent hardness of 400-600 HV across the entire section. Soft anodized coatings for decorative applications have a hardness of about 200-400 HV, which is reached a few hundred nm below the surface.

The FISCHERSCOPE HM2000, by Fischer Technology, Inc. with its ESP (Enhanced Stiffness Procedure) mode is able to determine mechanical properties like the Vickers hardness or the elastic indentation modulus dependent upon the depth.

Figure 2a/b shows the Vickers Hardness HV (calculated from the indentation hardness HIT) and the indentation modulus EIT of two coatings: a hard anodized coating (480 HV) of 11 m thickness (shown in red) and a soft anodized coating of 14 m thickness (shown in blue). The higher standard deviation for the hard anodized coating stems from the roughness of its surface.

In Figure 2a one clearly sees the consistent hardness of the hard anodized coating and the increasing hardness of the softer anodized coating, which also exhibits less elasticity (Figure 2b, indentation modulus). On the hard anodized coating, the elasticity decreases as one approaches the substrate. The FISCHERSCOPE HM2000 is optimally suited for the precise determination of the mechanical characteristics of thin anodized coatings. Beside the hardness, other parameters such as the plastic or elastic material characteristics can be accurately assessed. www.fischer-technology.com

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# **E-Coat Trends**

Electrophoretic paint (E-Coat) is now the finish of choice within the automotive industry where high corrosion resistance is required on sub frame components. This is generally far more durable and offers a low cost alternative to powder coating and is becoming ever more popular in general industrial or retail applications where a high corrosion resistance and aesthetically pleasing finish is required.

E-coat Epoxy Type (electrophoretic painting) offers a high corrosion resistance, normally in excess of 1000 hours salt spray resistance as well as an excellent aesthetic appearance.

When applied to phosphate, zinc or zinc-nickel the corrosion properties are usually increased. In addition, unlike sprayed or dipped coatings the E-coat finish gives a uniform density of coating over the whole part regardless of the complexity of the product. This surface finish provides a hard surface coupled with good chemical resistance giving excellent wear properties and is an excellent alternative to powder coating on many applications.

The major wordwide suppliers of automotive ecoat KTL are PPG Industries USA, BASF Germany, Hawking Electrotechnology UK, DuPont, FreiLacke Freiotherm and Henkel.

# **TRENDS**

As advancement of E-Coat technology takes place in many segments of industrial manufacturing, new and better products are being developed.

Trends in Technology include Water white clears for plated objects; VOC and HAPS free products; Lower cure coatings; Reduced weight loss/film shrinkage; Lead free products with performance equal to lead containing materials and controlled film thickness over sharp edges. Trends in application include more efficient line designs, flexible conveyors for monorail designs, programmable hoist options and bulk coating capability. In manufacturing, trends include e-coat as resulting in less capital cost and large batch capability.

Finishers tend to decide in favour of e-coat if they want to lower operating costs, reduce impact on the environment or increase their product's finish performance. bod/cod in waste streams; closed loop capabilities; less solid waste; reduced fire hazard with water base materials

Possible disadvantages could include multiple colors that are not easily handled; initial capital investment often higher than liquid, slightly more than powder and total coverage process requires masking where coating is not desired.

Subhead: How It Works

Electrocoating is a painting method that uses an electrical current to deposite paint. The process works on the principal of "Opposites Attract".

The electrocoat system applies a DC charge to a metal part immersed in a bath of oppositely charged paint particles. The paint particles are drawn to the metal part and paint is deposited on the part, forming an even, continuous film over the entire surface, until the coating reaches the desired thickness. At that thickness, the film insulates the part, where attraction stops and the process is complete. Depending on the polarity of the charge, electrocoating is classified as either anodic or cathodic.

In anodic electrocoating, the part to be coated is the anode with a positive electrical charge, which attracts negatively charged paint particles in the paint bath. During the anodic process, small amounts of metal ions migrate into the paint film, which limit the performance properties of anodic systems. The main use for anodic products is interior or moderately exterior environments. Anodic coatings are economical systems that offer excellent color and gloss control.

In cathodic electrocoating, the product

has a negative charge, attracting the positively charged paint particles. Cathodic electrocoat applies a negative electrical charge to the metal part, which attracts positively charged paint particles. Reversing the polarities used in the anodic process significantly reduces the amount of iron entering the cured paint film and improves the cathodic properties. Cathodic coatings are high-performance coatings with excellent corrosion resistance that can be formulated for exterior durability. Anodic Epoxies have an advantage of low cure and high performance, heavy metal free and a good throwpower. Disadvantages may be poor UV resistance and colour control. End uses include agricultural, automatic, and structural steel.

Anodic Acrylics have advantages of being decorative, colour control, gloss control, economical, VOC and HAPs free and chemical resistance. Disadvantage may be less corrosion protection. End uses could include anything from metal office furniture to shelving.

Cathodic Epoxies have advantages of corrosion resistance, chemical resistance, impact resistance and being heavy metal, and HAPS free with ultra low VOCs. Disadvantages could be poor UV and colour control. End uses include auto parts, appliances and marine applications.

Cathodic Acrylics offer the advantages of UV durability, corrosion resistance and colour control. Disadvantages may include less corrosion protection than epoxy. End uses include lawn and garden, wheels, appliances, air conditioners.

The Two-Coat system has advantages of corrosion resistance in severe conditions,

UV durability and heavy-metal free. There are no disadvantages. End uses include Power transformers, automatic and any other products where severe weathering is an issue.

# E-COAT PROCESS

The e-coat process can be separated into four basic zones:

- Pre-treatment
- Electrocoat Bath and Ancillary Equipment
- Post Rinses
- Bake Cure Dry Oven

In the electrocoat process substrates are cleaned and pretreated with a phosphated conversion coating to prepare the part for electrocoating. Parts are dipped into a paint bath where direct current is applied between the parts and a "counter" electrode. Paint is attracted by the electric field and is deposited on the part. Coated parts are removed from the bath, and rinsed to reclaim undeposited paint solids, and parts are then baked to cure the paint.

An e-coating system with the appropriate supporting equipment such as the treatment system for process fluids represents a significant capital and staffing investment. For low to moderate production volumes, outsourcing is an easy decision. It is the cost effective way to obtain the advantages of e-coating for a product. However, when production volumes reach the levels where it would seem to be justified to install a system in-house, the outsource decision for ecoating becomes more than a normal "make or buy" decision.

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When it comes to the protection of steel from corrosion there are three ways this can be achieved. Slowing down the corrosion process can be done through either barrier protection, galvanic effect or inhibition effect. Each one of these methods have had success in their own right. Most protective coatings provide one and sometimes two of these methods in a single coating. There are ways to combine the three methods into a single technology. Extreme heat and cold, UV rays, salt and sand create a daily assault on bridges, buildings and outdoor structures, leading to corrosion of unprotected structures.

CFCM spoke to manufacturers of anticorrosion products used in the manufacture of paint and coatings for a sampling of their latest or most popular anti-corrosion additives.

AGC Chemicals Americas, Inc., is the developer of LUMIFLON fluoroethylene vinyl ether (FEVE) resin, a solvent-soluble fluoropolymer. LUMIFLON imparts superior corrosion resistance when formulated into coatings, sealants and paints.

Traditional fluoropolymers provide excellent characteristics to improve weathering and corrosion resistance. However, these products must be heated to temperatures greater than 200 °C to cure, making field application extremely difficult. FEVE resins do not require heating to cure, allowing the flexibility for both field or factory applications. FEVE resins retain positive characteristics of traditional fluoropolymers, imparting excellent resistance to corrosion, dirt, UV rays, wind, rain and chemicals.

Since AGC introduced LUMIFLON in 1982, it has been used extensively in coatings for a variety of industries, including marine, aerospace, automotive, architecture and transportation. AGC offers LUMI-FLON in both solvent-based and water-based polymers, including a solid flake resin. This allows the formulation of coatings with no or low volatile organic compounds (VOC) and no hazardous air pollutants (HAP).

LUMIFLON is transparent, provides excellent adhesion to primers, fiberglass, plastics, composites and metals including aluminum and steel, and can be used in both clear and pigmented coatings. The product currently has a wide variety of uses, including coatings for bridges, boats, water tanks and buildings, and coil coatings for commercial construction.

AGC Chemicals Americas, Inc., is a wholly owned subsidiary of Asahi Glass Co., Ltd., a \$13 billion multinational corporation and one of the world's largest manufacturers of glass, electronic displays and chemical products. The company was formed in 2004 through the merging of sister companies Asahi Glass Fluoropolymers USA and AGA Chemicals. Headquartered in Exton, Pa., AGC Chemicals Americas maintains manufacturing operations in nearby Thorndale, Pa., and warehouses located throughout North America.

www.agcchem.com

Heavy duty coatings – the toughest industrial coatings require robust support. BYK additives boost the performance of all anti-corrosion coatings by improving specific aspects of their functionality. They are also highly practical and suitable for a wide range of applications because, depending on requirements, they can increase color brilliance, vary a coating's hardness or elasticity, or generally improve protective properties of the coating against environmental damage or abrasion. This makes them an essential component for all types of protective coatings designed to protect high value investments from the demands of daily use. Whether these are onshore or offshore applications, BYK either already has the solution you need or has the expertise and technology to develop it. BYK has developed specific additives for heavy duty coatings. These additives can be used in a range of applications, including primers, intermediate coats and topcoats. BYK has solutions for a variety of resin systems like alkyds, acrylics and epoxies, polyurethanes, silicones, siloxanes and fluoropolymers. Solvent-borne, solvent-free



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Studies have shown the excellent ability for VpCI molecules to provide protection in the presence of corrosive species, (i.e. chlorides, moisture, sulfides) and displace them at the metal surface. Vapor phase inhibiting action protects inaccessible and recessed surfaces.

or water-based, and for every area of application.

Nano technology has also been used in anti-corrosion. Cortec Corporation, a world leader in innovative, green, sustainable technologies offers the latest advancement in environmentally safe corrosion protection - BioPouch. This is not something formulated into the paint. This brand new, revolutionary "green" Vapor phase Corrosion Inhibitor (VpCI) is aimed for protection of metal parts in a non-ventilating space. BioPouch is powered by newest NANO-VpCI technology, primarily made from agricultural by-products. NANO-VpCI's emit from the pouch and saturate the enclosure via diffusion, filling all void spaces and recessed areas with protective vapor molecules. These molecules are attracted to and adsorb onto metallic surfaces, resulting in the formation of a nano protective barrier layer.

Studies have shown the excellent ability for VpCI molecules to provide protection in the presence of corrosive species, (i.e. chlorides, moisture, sulfides) and displace them at the metal surface. Vapor phase inhibiting action protects inaccessible and recessed surfaces. BioPouch is nontoxic, free of nitrites, halogens and phosphates as well as completely safe to handle.

BioPouch provides an extremely efficient and easy method to protect metals within an enclosed space. In case a nano protective layer is disturbed by moisture or opening of an enclosed space, the layer is replenished by continuous vapor re-deposition.

The Nano-VpCI is made from enhanced renewable agricultural by-products and does not destroy the natural balance of the environment while being functionally superior to hazardous oil derived products. It is very effective in polluted and humid environments. name under ICL\ Advanced Additives, one of several business segments operated by ICL/ Performance Products. As a global leader in providing corrosion inhibitors to the paint and coatings market,

ICL\ Advanced Additives is an innovative solution provider for ever-evolving needs. HALOX Corrosion Inhibitors offer safer, more durable and longer-lasting solutions to address a multitude of coating needs.

For Powder Coatings HALOX offers:

- HALOX 430, a patented calcium phosphate and ion exchange technology. It is also the newest generation heavy metal-free corrosion inhibitor. This product was designed to offset zinc, molybdenum, chromium and barium-based corrosion inhibitors.
- HALOX 430 JM is designed for long-term corrosion protection and is suitable for clear coat systems. The jet-milled feature offers significant advantages for thin film applications (<10 microns). It is easy to disperse and provides cleaner grinds for improved corrosion inhibition efficiency. It is a moderate solubility corrosion inhibitor and hexavalent chromate replacement option for galvanized, Galvalume, and aluminum alloys.
- HALOX 650 is an organic corrosion inhibitor designed primarily for coatings and primers on metal surfaces. It is specifically designed for solvent-based or powder coating applications to provide long-term corrosion protection.
- HALOX Z-PLEX 250 is a universal inorganic corrosion inhibitor designed for water-based, solvent-based, and powder coatings. It exhibits a high degree of versatility

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BioPouch is quick and super easy to use: there is no need for special equipment for application, just determine the number of pouches required per unit space. No spraying, wiping or dipping is required. Each BioPouch protects up to 1m3 of enclosed space. www.cortecvci.com

For over 40 years, HALOX has been providing the paint and coatings industry with its innovative corrosion inhibiting product line. In 2011, HALOX® was acquired by ICL\ Performance Products, one of ICL's (Israel Chemicals Limited) core operating segments. HALOX is now a product brand powder coatings. It exhibits a high degree of versatility because of its neutral pH and narrow particle size distribution with a top end below 20 microns.

This is just a sampling of the anti corrosion additive products that Halox as avaible. Besides powder coating, the company also offers products for Aerosol, Aetospa e, Agricultural and Construction Equipment, Architectural, Aut0omotive Refinish, Coil Coatings, Industrial Maintenance, Marine Pretreatment/Sealers for both wood and metal.

www.halox.com

Research is ongoing for the best performing anti-corrosion additives in the manufacturing of paint and coatings.



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**Preserving Paint** 

When it comes to the formulation of paint and coatings – although occupying a small percentage of the formulation – biocides, algaecides and preservatives are very important for a long lasting end product and much more. Biocide manufacturers report that it is not enough to simply

offer a reliable product, customers expect a full range of value-added services such as lab testing and technical support.

The outlook for 2014 in the Paint and Coatings industry saw an increase in demand for biocides. The increased market demand is not only being seen in the

# Troy Zero VOC Preservatives



# Your Partner for Success

Polyphase<sup>®</sup> 678, Mergal<sup>®</sup> BIT20W, and NEW Mergal<sup>®</sup> CM1.5 The preservatives of choice for today's 'green' coatings. national biocide market, but also in the global biocide market of the Paint and Coatings Industry. The market increase is being caused by several forces, such as environmental regulations and the increased need for low Volatile organic compound (VOC), environmentally friendly products.

Increased environmental regulations and environmentally concerns have led to more water based products being demanded over products that are oil based. This naturally leads to the demand for biocides, algaecides and preservatives to protect against the forming of microbiological growth on water based products, such as paint and coatings, polymers, emulsions and solutions, which lead to product spoilage and contamination. Biocides are used at low levels, such as less than 0.5 per cent. Biocides are a necessary addition to coatings formulations as these products are continuously vulnerable to attack from harmful microorganisms. Biocides are also needed to keep microbial growth from forming on manufactured products that are going to be bulk stored.

Customers may have health concerns over the use of biocides in water based products, but the fact is there will always be risk when using a product that is created to destroy microbiological growth. When using any type of chemical proper precaution measures should always be taken. The handler of biocides must always follow safety regulations. the growth of bacteria, fungi and yeast.

- Dantocil Products
- Omadine Antimicrobials
- Dantogard Products
- Omacide Fungicides
- Dantoserve Products
- Proxel Preservatives
- Isocil Products
- Reputain Antimicrobials
- Densil Fungicides
- Vanquish Antimicrobials

When it comes to wood protection, Lonza manufactures several biocides for the formulation of antimicrobial products for wood preservation.

www.lonza.com

**Dow Biocides** is known worldwide as a trusted provider of microbiology and regulatory resources. With one of the industry's largest and most diverse biocides portfolios, Dow Biocides offers solutions for a wide range of microbial challenges and system requirements.

Applications include Building Materials, Metalworking Fluids, Paints and Coatings, Water Treatment.

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# Zero VOC • Broad-spectrum efficacy Long-term protection • Ideal for 'green' systems

With renowned technical service and decades of experience in microbial control, Troy offers unique solutions for your formulation challenges. Polyphase® 678 dryfilm preservative controls mold & mildew and is ideal for use throughout the house, including damp areas like kitchens, bathrooms, & basements. Mergal® BIT20W wet-state preservative inhibits the growth of bacteria, yeast, & fungi in a broad range of aqueous formulations. And for rapid control of microbial contamination as well as long-term protection against spoilage, Troy introduces Mergal® CM1.5 wet-state preservative.

For more information, contact your Troy representative, or visit www.troycorp.com.



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**Lonza's** materials protection solutions offer broad spectrum activity for costeffective preservation of household and industrial formulations. Our portfolio of biocides will help preserve and control Products include:

- AQUCAR RO microbiocides
- BIOBAN biocides
- CANGUARD preservatives
- FILMGUARD OIT mildewcide
- FUNGIBLOCK fungicidal agents
- GLUTEX sanitizers and antimicrobials

Dow Microbial Control, a business unit of The Dow Chemical Company, recently introduced its first comprehensive biocide product selection guide for North America. This colorful brochure, which showcases the BIOBAN and KATHON brands, also includes biocides for Building and

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Construction Materials applications.

The eight-page guide, entitled "Paint a Bright Future for Your Products," provides selection tables for In-Can Preservatives, Dry-Film Fungicides and rapid-acting biocides for Industrial Hygiene applications. In addition, it highlights Dow Microbial Control's extensive global technical capabilities and expertise for customers.

Dow Microbial Control innovates with science and technology to provide longterm viable and sustainable microbial control.

Dow Microbial Control has always been dedicated to developing high performing and sustainable anti-bacteria and anti-mildew coating products and solutions. In terms of products, it launched recently BIOBAN 551S, a new generation of in-can preservative for paint and latex manufacturers. BIOBAN 551S is suitable for low-VOC (volatile organic compound) and VOC-free water-based systems, and with no extra performance booster added, it meets all major eco-labeling schemes. It has excellent chemical and thermal stability and does not release formaldehyde, and it do not contain added organohalogens or heavy metals. And on account of its high water solubility, it is an ideal component for new generations of VOC-free aqueous coating formulations. In terms of technologies, the TAUNOVATE highthroughput testing technology, winner of the Ringier Technology Innovation Award for the Coatings Industry, is a microbial testing and challenge testing platform developed specifically for aqueous industrial products including coatings. Based on principles of traditional microbiological experiments, it integrates micro samples, automated operation and smart data-processing, thus processing samples more effectively and yielding more precise results to meet the preservation efficacy evaluation.

Last year Dow Microbial Control and Valspar reached an agreement to collaborate and had in-depth discussions on antimicrobial technologies for the coatings industry, as well as on joint efforts in developing innovative products to meet market needs. Dow introduced anti-bacteria and anti-mildew solutions tailored to Valspar's needs. degradation caused by bacteria, fungi, and yeast. Mergal ® CM1.5 is useful for the preservation of numerous aqueous enduse products, including paints, stucco, ink, mineral slurries, starch-based adhesives, and more. Mergal CM1.5 is especially useful to boost efficacy in combination with other wet-state preservatives, and is suitable for recovery of material spoiled by microbial contamination.

- Mergal CM1.5 Benefits include:
- VOC- & formaldehyde-free
- Provides rapid control of microbial contamination
- Long-lasting wet-state protection for reduced risk of spoilage
- Lowest cost-in-use compared with other formaldehyde-free preservatives
- Protects the integrity of end-use
- Provides protection from malodors
- & discoloration
- Highly compatible
- Broad-Spectrum Activity

Mergal CM1.5 is known to be effective against a wide variety of bacteria, fungi, and yeast. Examples of common spoilage bacteria, which Mergal CM1.5 controls are Enterobacter aerogenes, Enterobacter cloacae, E. coli, Burkholderia cepacia, Staphylococcus aureus, and Bacillus subtilis. CM1.5 is also effective against Aspergillus niger (fungi) and Candida albicans (yeast), as well as other common problematic species.

Supported by the Troy Microbiological Management Advantage Program: TMMA

Managing Microorganisms in the Production Environment

TMMA is a comprehensive system approach designed specifically for plant, process, and materials protection requirements, including the principles of good plant hygiene and preventive measures. TMMA services can also include an in-depth plant hygiene survey combined with a custom-developed wet-state preservation regimen. TMMA enables manufacturers to achieve contamination-free systems and plant operations, from raw materials to finished products. TMMA provides solutions that improve product quality and reduce cost-in-use.

Troy also has other high performance wet-state & dry-film preservatives, performance additives, and metal carboxylates from Troy Corporation. www.troycorp.com

# **CPCA Installs New Board at Annual Conference and AGM**

The Canadian Paint and Coatings Association (CPCA) celebrated its 101st anniversary last week, marked by its annual conference and Annual General Meeting (AGM) in historic Quebec City.

The conference took place over three days, from October 5-7, and involved several activities for attendees, including a tour of Quebec City, special presentations by industry experts, the Chair's Annual Gala Dinner and the presentation of CPCA's industry achievement awards.

Mike Klein, President and CEO of Dominion Colour Corporation, received the prestigious Roy Kennedy Award, while the Industry Statesman Award was given to Madelyn Harding of Sherwin-Williams. The Industry Achievement Award was awarded to Alex Drody of Cloverdale Paint and Terry Sutherland of PPG Canada Inc.

Dale Constantinoff of Sherwin-Williams was also honoured for his commitment to CPCA during the Chair's Annual Gala Dinner. Mr. Constantinoff completed his threeyear term as Board Chair of the association and a new Chair will be elected soon.

"I have been most impressed by Dale's dedication to advancing the interests of the association and the entire industry," said Darrin Noble of Beauti-Tone Paint during the gala presentations. "The Board and indeed all CPCA members are better off for having had Dale as Chair for the past three years."

The AGM saw the election of new board members for the association. The full board slate for 2014-2015 is as follows: Sharon Kelly (KelCoatings), Darrin Nobel (Home-Hardware Beauti-Tone), Ed Thompson (L.V. Lomas Ltd.), Fred Veghelyi (OPC Polymers Canada), Andre Buisson (Laurentide), Richard Tremblay (Benjamin Moore), Paul Macko (AkzoNobel), Ron Nakamura (PPG Canada), Tim Vogel (Cloverdale Paint), Andy Doyle (American Coatings Association), Doug Crabb (Duha Group), Brent Jamieson (Axalta Coatings), Glen Knowles (Sherwin-Williams) and Brian Collict (A.R. Monteith).

CPCA would like to thank its Board members, all conference attendees and its sponsors for making this year's annual conference and AGM a success.

"We are nothing without our members," commented Gary LeRoux, CPCA's President. "While we work tirelessly to advocate for the industry, we are accomplishing more than ever due to the support and strength of our member base."

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- PMRA Regulatory Compliance
- Fast-Acting Biocides
- "Green" In-Can Preservation Strategies



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**Troy Corporation** has available Mergal CM1.5 Advanced Wet-State Preservative.

Mergal CM1.5 is a fast-acting, formaldehyde-free, broad-spectrum wetstate preservative that protects aqueous formulations from deterioration and As the demand increases for less harmful raw materials and products so does the cost to formulate and manufacture products. It is important for water based product manufacturers to include biocides, algaecides and preservatives to limit the negative cost to the company's bottom line, limit waste and to maximize profit while meeting customer's demands and the ever-evolving Industry.



# Canadian Skills Shortages Not a Myth

BY GARY LEROUX

The Canadian Chamber of Commerce estimates that by 2016, the country will face 1.5 million vacancies for skilled jobs. Two years from now! No industry will be spared the challenge of producing or attracting more skilled workers and the coatings industry is no exception. In a recent speech Prime Minister Stephen Harper noted that the lack of skilled workers is the biggest challenge facing Canada. Our education system is partially to blame because the education choices may lead to a chronic shortage in important skills. These include skilled trades, scientists and engineers. A recent survey of the Canadian Council of Chief Executives, representing 150 of the country's largest employers, reports that two-thirds of respondents said the shortage of skilled workers would have a medium to high impact on their major projects and/or investments. Engineers topped the list of workers.

In 2013 the widely respected Conference Board of Canada noted in a study on skills shortages that the lack of skilled workers would cost the Ontario economy billions of dollars annually. It noted that in 2013, "Ontario was losing out on as much as \$24.3 billion in economic activity and \$3.7 billion in provincial tax revenues annually because employers couldn't find people with the skills they need to innovate and grow in today's economy." This was derived from a comprehensive survey of 1,500 employers in Ontario representing 760,000 employees. The results corroborated that of the Canadian Chamber of Commerce whose Canada's Skills Gap Report in 2012 revealed that employers most needed post-secondary graduates in science, engineering, technology, business and finance.

The most widespread needs are for employees with two- or three-year college diplomas (57 per cent); four-year degrees (44 per cent); and trades (41 per cent). It is estimated that over the next 20 years 40 per cent of new jobs will be in the skilled trades and technologies. In 1998,



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In 2013 the widely respected Conference Board of Canada noted in a study on skills shortages that the lack of skilled workers would cost the Ontario economy billions of dollars annually

that number was less than 20 per cent. There is resounding evidence that the challenge is real and likely getting worse as the population ages and available workers far exceed those needed to fill vacancies. Sadly, the baby boom predictions of 20 years ago are coming true.

Some have suggested that the skills shortage is more of a skills crisis, especially if we don't take action now. So, what are governments and industry doing to meet the challenge? Governments have acknowledged the challenge and have only made tepid moves to address job shortages. The manufacturing industry directly employs nearly two million Canadians, accounts for 13 per cent of the gross domestic products and represents two-thirds of Canada's goods and services that are exported (2012 figures). In April 2014 the federal government announced a number of initiatives to support the manufacturing industry in Canada during a roundtable with the Canadian Manufacturers & Exporters (CME) association. They are partnering with the CME to help internationally trained engineers, technicians and technologists obtain jobs in their fields faster by connecting with Canadian employers facing labour shortages in manufacturing. Such an initiative is important to help sustain the manufacturing sector and the Canadian economy generally.

The Canadian Federation of Independent Business (CFIB), representing small and medium-sized enterprises in Canada, has challenged governments at all levels to meet the jobs challenge with a comprehensive set of strategies that include: 1) better apprenticeship programs that are cost-effective, easy-to-navigate, flexible and in touch with current business realities; 2) new training tax credits that recognize the investment that employers make in hiring, training and retraining workers; 3) employment insurance changes so there are no impediments for Canadians who are willing and able to work from finding employment; 4) job training programs that focus on the needs of small employers, such as the Canada Job Grant initiative and territorial employer-sponsored training programs; 5) immigration reforms to ensure the skills and qualifications of the people coming to Canada, at all skill levels, better match the needs of employers; and 6) a responsive temporary foreign worker program for those businesses that have a proven need.

But one of the biggest challenges is developing programs and policies that ensure people get the right education and training. Much of the focus has been on the public education system, but private training is becoming critical, as a rapidly changing economy means education doesn't end with graduation. More inhouse training is also a critical way to address skills shortages, such as that provided by companies for their in-house staff. Increasingly associations are stepping up with online training like CPCA's online Diploma in Coatings Technology. Some companies have seen older workers as part of the solution by providing incentives for staying longer on the job; some have focused on using unemployed youth to greater effect; others have resorted to boosting wages; governments are actively considering eliminating barriers to labour mobility to pull skilled workers from higher unemployment jurisdictions; and a general rejuvenation of apprentice training across a number of industries.

While solutions are being explored, the fact is that the shortage of skilled workers in trades from oil and gas through to logistics, technology, transportation and food manufacturing adversely impacts Canada's ability to compete in the global economy. Furthermore the challenges are unlikely to dissipate in the foreseeable future. While the skills shortage cannot be averted, certain steps can be taken to alleviate its potential impact. The Canadian government together with educational institutions, employers and reputable, specialist staffing vendors must continue to work together for economic prosperity. We cannot bury our head in the sand on such an important issue because the consequences will be severe.

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Bio: Gary LeRoux is the president of the Canadian Paint and Coatings Association based in Ottawa.

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When it comes to plating and anodizing, especially if chrome is involved, Air Pollution control is a concern that needs to be seriously addressed.

According to Environment Canada: Air pollution describes a collection of airborne pollutants that contribute to our air quality. The term "pollutants" recognizes that these substances are undesirable because of their impact on human health, the environment and the economy.

These air pollutants are all very different. They differ in their chemical composition, reaction properties, emission sources, how long they last in the environment before breaking down, their ability to move long or short distances, and their eventual impacts.

However, they also share a number of similarities, and so can be grouped into four general categories:

- Criteria Air Contaminants and related pollutants (e.g. SO2, NOx, Volatile Organic Compounds, etc..)
- Persistent Organic Pollutants (POPs) (e.g. dioxins and furans)
- Heavy Metals (HM) (e.g. mercury)
- Toxics (e.g. benzene)

Criteria Air Contaminants and related pollutants are cause to air issues such as smog and acid rain. They are produced in varying quantities by a number of sources, including the burning of fossil fuels. Air issues such as smog and acid rain result from the presence of, and interactions between, a group of pollutants known as Criteria Air Contaminants(CAC) and some related pollutants.



# **DYNAMIX** Blending Technolgy, Service and Value







Dynamix is the largest Canadian owned manufacturer and supplier of metal finishing chemistry. "The philosophy at Dynamix is simple - enhance our customers' performance and profitability, while dealing with all of our partners in an open and honest forum.

The primary focus of Dynamix is the design and manufacture of specialty chemicals for the metal finishing industry, covering all aspects of metal finishing from anodizing to zinc plating. Toll blending, packaging and distribution of custom formulated products are also available.

We offer a service that encompasses all of our values with a highly skilled and motivated team. The laboratory at Dynamix is well equipped and able to provide analytical solutions specific to a particular sector of industry and/or customer. Products are designed at Dynamix to provide unsurpassed performance and solution economy. Superior chemistry is only the beginning, as the company realizes that technical and application knowledge are just as vital to the metal finishers' success.

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CAC, in particular, refer to a group of pollutants that include:

- Sulphur Oxides (SOx);
- Nitrogen Oxides (NOx);
- Particulate Matter (PM);
- Volatile Organic Compounds (VOC);
- Carbon Monoxide (CO); and,
- Ammonia (NH3)
- In addition,
- Ground-level Ozone (03); and
- Secondary Particulate Matter(PM)

Are often referred to among the CAC because both ground-level ozone and secondary particulate matter are by-products of chemical reactions between the CAC.

CAC are produced from a number of sources, including burning of fossil fuels, and it is because of these shared sources that CAC are grouped together. Information on CAC emissions is collected every year within the National Pollutant Release Inventory (NPRI) starting in 2002. Prior to this, information was collected every five years within a separate inventory process dedicated to just the CAC.

Persistent Organic Pollutants are a collection of pollutants that can last in the environment for long periods of time and are capable of travelling great distances. Similar to heavy metals, POPs are of particular concern because they can enter the food supply, bioaccumulate in body tissues, and have significant impacts on human health and the environment, even in low concentrations.

Heavy metals are basic metal elements such as mercury and lead. This group of pollutants can be transported by the air and enter our water and food supply. Although trace amounts of some metals are needed by our body, heavy metals are poisonous in low concentrations and can bioaccumulate in body tissues. Heavy metals (HMs) occur naturally in the environment, but with variations in concentration. They are also released to the environment

from a range of human and natural sources. Heavy metals are usually carried on fine particles.

Some heavy metals, along with Persistent Organic Pollutants (POPs), form part of the class of air pollutants referred to as Hazardous Air Pollutants (HAPs).

The environmental and human health effects of heavy metals depend on the mobility of each metal through environmental compartments and the pathways by which metals reach humans and the environment. The degree of concern about human and environmental health varies with each metal. Some metals are toxic. Others are known to be essential micronutrients for humans and animals.

Respiration and ingestion with food are two pathways for many metals entering humans.

Due to atmospheric transport and other pathways, the Arctic region, including the Canadian Arctic, is a major receptor of some heavy metals such as mercury, cadmium and lead released from sources in other regions of the world.

Toxic Pollutants form a broad category of pollutants that are poisonous or toxic to human health and the environment. Although this category has some overlap with the other types of air pollutants presented here (CAC, HM, POPs etc), it also includes many more pollutants that have been determined to be toxic.

The Canadian Environmental Protection Act, 1999 (CEPA 1999; schedule 1) provides a list of pollutants of concern that are subject to legislative control and management. CEPA 1999 has also legislated that these pollutants be reported to the National Pollutant Release Inventory (NPRI)."

Air related toxics listed within CEPA 1999 schedule 1, include:

• Chlorobiphenyls that have the molecular formula C12H(10-n) Cln in which "n" is greater than 2

- Dodecachloropentacyclo [5.3.0.02,6.03,9.04,8] decane (Mirex)
- Chlorofluorocarbon: totally halogenated chlorofluorocarbons that have the molecular formula CnC1xF(2n+2-x)
- Asbestos
- Lead
- Mercury
- Vinyl Chloride
- Bromochlorodifluoromethane that has the molecular formula CF2BrCl
- Bromotrifluoromethane that has the molecular formula CF3 Br
- Dibromotetrafluoroethane that has the molecular formula C2F4Br2
- Fuel containing toxic substances that are dangerous goods within the meaning of section 2 of the Transportation of Dangerous Goods Act, 1992 and that are neither normal components of the fuel nor additives designed to improve the characteristics or the performance of the fuel; or are normal components of the fuel or additives designed to improve the characteristics or performance of the fuels, but are present in quantities or concentrations greater than those generally accepted by industry standards
- Dibenzo-para-dioxin that has the molecular formula of C12H8O2
- Dibenzofuran that has the molecular formula C12H8O
- Polychlorinated dibenzo-para-dioxins that have the molecular formula C12H(8-n)O2Cln in which "n" is greater than 2
- · Polychlorinated dibenzofurans that have the molecular formula C12H (8-n)OCln in which "n" is greater than 2
- Tetrachloromethane (carbon tetrachloride) CCl4
- 1,1,1-trichloroethane (methyl

# chloroform) CCl3-CH3

- Bromofluorocarbons other than those set out in items 10 to 12
- Hydrobromofluorocarbons that have the molecular formula CnHxFyBr(2n+2-x-y) in which 0<n<3
- Methyl Bromide
- Bis(Chloromethyl) ether that has the molecular formula C2H4Cl2O
- Chloromethyl methyl ether that has the molecular formula C2H5ClO
- Hydrochlorofluorocarbons that have the molecular formula CnHxFyCl(2n+2-x-y) in which 0 < n < 3
- · Benzene that has the molecular formula C6H6
- Inorganic arsenic compounds
- Inorganic cadmium compounds
- Hexavalent chromium compounds
- 1,2-Dichloroethane
- Dichloromethane
- Hexachlorobenzene
- Inorganic fluorides
- Oxidic, sulphidic and soluble inorganic nickel compounds
- Polycyclic aromatic hydrocarbons
- Tetrachloroethylene
- Trichloroethylene
- Bromochloromethane, that has the molecular formula CH2 BrCl
- Acetaldehyde, which has the molecular formula C2H4O
- 1,3-Butadiene, which has the molecular formula C4H6
- Acrylonitrile, which has the molecular formula C3H3N
- Respirable particulate matter less than or equal to 10 microns
- Acrolein, which has the molecular formula C3H4O
- Ethylene oxide, which has the molecular formula H2COCH2
- Formaldehyde, which has the molecular formula CH2O
- N-Nitrosodimethylamine, which has the molecular formula C2H6N2O
- Gaseous Ammonia, which has the molecular formula NH3(g)
- Ozone, which has the molecular formula 03
- Nitric oxide, which has the molecular formula NO
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- Volatile organic compounds that par-



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ticipate in atmospheric photochemical reactions,

- · Hexachlorobutadiene, which has the molecular formula C4Cl6
- Particulate matter containing metals that is released in emissions from copper smelters or refineries, or from both
- Particulate matter containing metals that is released in emissions from zinc plants

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### Continued from front cover

lysts in addition to sulphate ions. This solution has a cathodic efficiency of between 18 - 20 per cent, compared with the 12 - 15 per cent cathodic efficiency of chromic acid and sulphate only solutions.

Chromium plating has not changed very much from early commercial solutions patented in the 1920's. The electrolyte (plating solution) is chromic acid with sulphate as a catalyst present at 1/100 of the chromic acid concentration. The two types of chromium plating are hard (also called functional or industrial) chromium plating and decorative chromium plating.

The plating solution is the same for both processes in that the same chemistry is used (chromic acid and a sulphate catalyst) but the plating times are very different. Hard chromium plating can be up to 24 hours whereas decorative plating is up to 5 minutes.

The source of power for plating is the rectifier, which converts alternating current (AC) to direct current (DC). There can be no commercial plating without rectifiers, which are the modern day equivalent of Volta's electric pile.

Subhead: Sustainable Defence

Advanced Surface Engineering Technologies for a Sustainable Defense -ASETSDefense - is a Department of Defense (DoD) initiative sponsored by the Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program (ESTCP). Its objective is to facilitate the implementation of new, environmentally friendly technologies for surface engineering (coatings and surface treatments) by providing ready access to background information and technical data from research, development, test, and evaluation efforts as well as the status of approvals and implementations. ASETS-Defense provides defense organizations with information and assistance to improve weapons system performance and life-cycle cost while reducing or eliminating environmental safety and occupational health (ESOH) impacts from coatings and treatment processes that utilize hexavalent chromium (hex chrome, Cr6+, Cr(VI), chromate, chromic acid); coatings that contain cadmium; and coatings that contain volatile organic compounds (VOC).

ety of components for aircraft, vehicles, vessels, and gun barrels. It is used by OEMs and depots to rebuild worn components back to print. Almost all hydraulic actuators on vehicles, vessels, and aircraft are chrome plated, as are almost all aircraft landing gear and most components that are subject to wear.

Cr6+ (CrVI, hexavalent chromium) is a known carcinogen that is strongly regulated. Chromium electroplating liberates chromic acid (Cr6+) mist that must be ducted away to meet the workplace OSHA Cr6+ PEL and scrubbed to meet the EPA Clean Air Act emission limits.

# **EPA CLEAN AIR ACT RULES**

OSHA Occupational Exposure to Hexavalent Chromium (Cr6+ PEL is currently 5 gm-3)

OEM and depot personnel may be exposed to Cr6+ mist during chrome plating operations, and to chromic acid solution during masking, demasking. Emission controls required.

Several hard coatings are used in place of hard chrome, both for OEM use and for overhaul. The primary alternative in use today for aircraft is HVOF (High Velocity Oxy-Fuel) thermal spray of tungsten carbide coatings (WC-Co and WC-CoCr). Offroad mining vehicle hydraulics and other wear components use HVOF Cr3C2-NiCr. HVOF is a dry coating technology that can be used both for initial production and for rebuilding worn components. For internal diameters and complex parts electroless nickel is often used. Other electroplates are being developed or evaluated, particularly for internal diameters, such as pulse-plated nanophase Co-P (nCo-P) and Ni-W, and Co composite with chrome carbide or SiC.

# **DECORATIVE CHROME**

Decorative chrome plating processes are generally applied as final finish to improve brightness, appearance, corrosion protection, wear resistance and endurance of many different kinds of decorative articles. The most common decorative chrome plating is bright chrome – producing the highly demanded mirror bright chrome finish, if combined with a lustruous bright nickel deposit.

Black chrome processes offer deep black non-reflective coatings, while the environmental friendlier Smoke range allows color adjustments of dark-grayish looks, often combined with satin nickel deposits.

To protect workers' health from risks connected to hexavalent chrome fumes and mists, manufacturers have available non-PFOS and non-PFOA mist suppressants. It reduces the surface tension and prevents spray mists by forming a low foam blanket.

In order to prevent "white wash" or staining due to passive bright or satin

nickel deposits, both electrolytic and electroless activations are available.

The chromium plating industry is well established in Canada with the industry found in all provinces (except Prince Edward Island and the Territories). The province with the largest concentration of chromium plating is Ontario which has about 45 per cent of the industry and which is also evenly split between hard and decorative chromium plating.

Quebec has approximately 24 per cent of the industry.

In Ontario the split between hard and decorative plating is fairly even. Quebec has a large aerospace sector with hard chromium plating and also chromic acid anodizing.

Due to the requirements of energy sector in western Canada, many of the chromium platers in Alberta and Saskatchewan are hard chromium platers.

Chromium plating or the electrodeposition of chromium from a chromic acid solution (with sulphate as a catalyst) using chromic acid as the electrolyte, two electrodes (a cathode which is the part to be plated and an anode made of lead-antimony) and a source of power (the rectifier which replaces Volta's pile) has become an essential part of the industrialized world and an important industrial contact in Conada



# **CHROMATE ALTERNATIVES**

Chromate conversion coatings and chromated sealers are used to create a selfhealing conversion coating on Al and Mg alloys that is resistant to corrosion. They are also used for sealing electroplated and anodized coatings. These treatments are typically used prior to painting and finishing, since they generally improve adhesion of paints and sealants.

Hard chrome plating is used by OEMs to provide wear protection to a wide vari-

sector in Canada.



# **New Products & Technology**

# Perma SHIELD 1000 Zinc-Nickel System Approved by General Motors

Enthone is proud to announce yet another approval of a Perma SHIELD 1000 zinc-nickel system by General Motors to meet the newly revised GMW4700 Zinc Nickel Type B requirement. The approval was granted by GM to meet the growing application of zinc nickel on calipers, and includes the following processes:

- ZINCROLYTE KLC-NI ammonia-free, acid zinc-nickel;
- PERMA PASS Ultra IV Plus low temperature, transparent passivate and;
- ENSEAL 125 inorganic sealant

This approved Perma SHIELD 1000 system incorporates ENSEAL 125, a completely inorganic sealant technology specially engineered for brake calipers and other cast iron components. The sealant is compatible with both DOT 3 and DOT 4 brake fluids, and is optimized to seal zinc and zinc alloy coatings.

Perma SHIELD 1000 systems provide superior corrosion protection to red rust, while also demonstrating exceptional performance to white corrosion. Applicators have achieved substantial productivity gains as a result of dramatically reduced plating times on high hardness parts due to the system's exceptional initiation and efficiency.

enthone.com/brakes.

# Steelscape offers graffiti-resistant DURANAR, CORAFLON coatings by PPG

PPG Industries' building products group announced Steelscape is now offering metallic-coated and pre-painted steel with DURA-NAR GR (graffiti-resistant) and CORAFLON GR coatings.

Duranar GR and Coraflon GR three-coat systems feature a primer and color coat topped with a graffiti-resistant clearcoat that can be cleaned with DURAPREP Prep 400 graffiti remover by PPG. If the Steelscape steel is spray-painted, graffiti can be eliminated by applying the graffiti remover directly to the stain, allowing it to sit for 10 to 60 seconds, then wiping it with a clean cloth or scrubbing it with a nylon brush. Most stains can be removed in 10 minutes or less.

When applied on either Duranar GR or Coraflon GR clear coatings, Duraprep Prep 400 field-applied graffiti remover also can eradicate paint overspray, pen and marker ink, lipstick, scuff marks, tape residue, bugs, tar and many other substances that mar the appearance of steel building panels.

www.ppgideascapes.com

# Sata Special Edition Surfer Gun



# New Elcometer 480



With all the features that you have come to expect from an Elcometer designed and manufactured product, such as ease of use, menu driven colour display, robust and ergonomic design, statistics and graphing, USB & Bluetooth to Android and iPhone mobile devices, the new Elcometer 480 single, dual and triple angle glossmeters offer more.

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www.elcometer480.com

# Sherwin-Williams Introduces Two-Coating, Mono-Cure System for Heavy Equipment and General Finishing Products



horwin Williams has launshed Dowdura OneCure a two coating

Powdura OneCure saves finishers time and cuts production costs to make high quality powder coating easy, said Ron McMahon, Marketing Director- Powder, Sherwin-Williams Product Finishes. It offers improved edge coverage and better corrosion resistance than two-bake powder coating systems to satisfy the needs of finishers in a variety of industries and applications.

Photo: Sherwin-Williams Powdura Sprint.jpg

Subhead: Sherwin-Williams Launches Fast-Curing Powder Coating System for MDF Applications

Sherwin-Williams announces the availability of Powdura Sprint, a low-cure polyester resin-based powder coating system for use on medium density fiberboard (MDF). Ideal for finishing applications in the furniture, kitchen cabinet and general finishing markets, the coating system provides a high quality finish as it cures at temperatures as low as 250 degrees F.

Powdura Sprint requires fewer coats than competitive powder coating products, increasing line speed by up to 40 percent. The new finish also has excellent performance properties in stain and moisture resistance and offers an effective cost alternative to traditional liquid and laminate coatings.

Available in a wide range of solid colors as well as smooth and texture finishes, Powdura Sprint meets Kitchen Cabinet Manufacturing Association (KCMA) and American National Standards Institute (ANSI) standards as well as several manufacturers performance specifications.

oem.sherwin-williams.com

# New Design FILL TUBE with Built-in Fume Eliminator



AMI has developed yet another innovative safety product to simplify the venting of noxious, dangerous or hazardous fumes while at the same time providing filling of drums, totes or tanks with solvents or chemicals.

The new simultaneous Fill Tube assembly incorporates a one piece closed system fill tube design with a built in vent chamber that controls filling and eliminates fumes.

The Fill Tube with Fume Eliminator allows for complete control of filling and venting plus reduces exposure or contamination to

Beginning mid-October, Sata began offering the special edition SATAjet 4000 B Surfer. This limisted edition top coat spray gun will only be available for a short time. Offered as SATAjet 4000B RP 1.3 and the SATAjet4000 B HVLP 1.3 sherwin-williams has launched Powdura Unecure, a two coating, one cure dry-on-dry coating system designed to save finishers time and money by reducing the steps needed to achieve enhanced edge coverage and corrosion resistance. Engineered for heavy equipment and general metal finishing projects, Powdura OneCure offers patent-pending formulated primers and topcoats that have the ability to co-react and crosslink. The products provide a seamless finish that delivers high quality aesthetics with superb durability.

The mono bake system offers a high performance alternative to conventional two-bake powder primer and topcoat systems. This allows finishers to reduce energy use, labor and maintenance costs while increasing throughput. The Powdura OneCure system requires a smaller production footprint and less capital equipment. The finish meets or exceeds several OEM specifications. an operator.

This product is also designed with two (2) large handles for easy operator installation or removal into standard 2" bung hole flanges. The product is made of quality stainless steel for strength, longevity and sanitary requirements where needed. The Fill/ Vent Tube comes as a standard 2" nps for threading into bungs. The Fill/ Vent Tube is available in a wide variety of sizes and can be made to your specifications. The Fill Tube outlet ends can be made to any length or configuration such as straight or J type. Also available with multiple inlets, male and female, quick connectors, I-line and S-line connectors to meet your needs. **www.ibcresource.com** 

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# **CASF** First Golf Tourney A Success

Despite low temperatures and high winds, the rain held off and 70 people enjoyed the Canadian Association of Surface Finishing's (CASF) first ever Golf Tournament. The event, held at Piper's Heath Golf club in Milton was sponsored by UBA, MacDermid, Atotech, Coventya, Enthone, Service Filtration, RFT, JBC, Peerless Custom Rack, and Ortech. Not only did all players receive a door prize, but \$100 each was awarded for Closest the Pin at hole 8 and hole 13; Longest drive for Hole 4 and hole 18; Longest Putt at hole 18 and for the putting contest held on the practice green. Low Gross winners were the Dynamix team of Mark Stellnbergh, and Erik and Adam Lebar. After a steak dinner and before the prize giveaway, CASF Chair Richard Thibodeau talked about changes within CASF, their new website, future plans and the need for volunteers



Winners of the Low Gross: Mark Stellnbergh, Erik Lebar and Adam Lebar, Dynamix.



Braving the chill on the links: Paramit Singh and Abbas Sharriff from Enthone Canada, Jim Hercik of ARC and Jeff Batiston of JBC



Chad Stewart, Altech and Roy Sabino, Airzone.



Jonothan Holland, Trevor Khan and Richard Thibodeau,



Richard Thibodeau congratulates Chad Flickinger, Coventya, on his hole in-one.



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