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Global Coatings Industry

December 2011
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Powder Coatings

Biocides Market REPORT

Pigment Suppliers Directory

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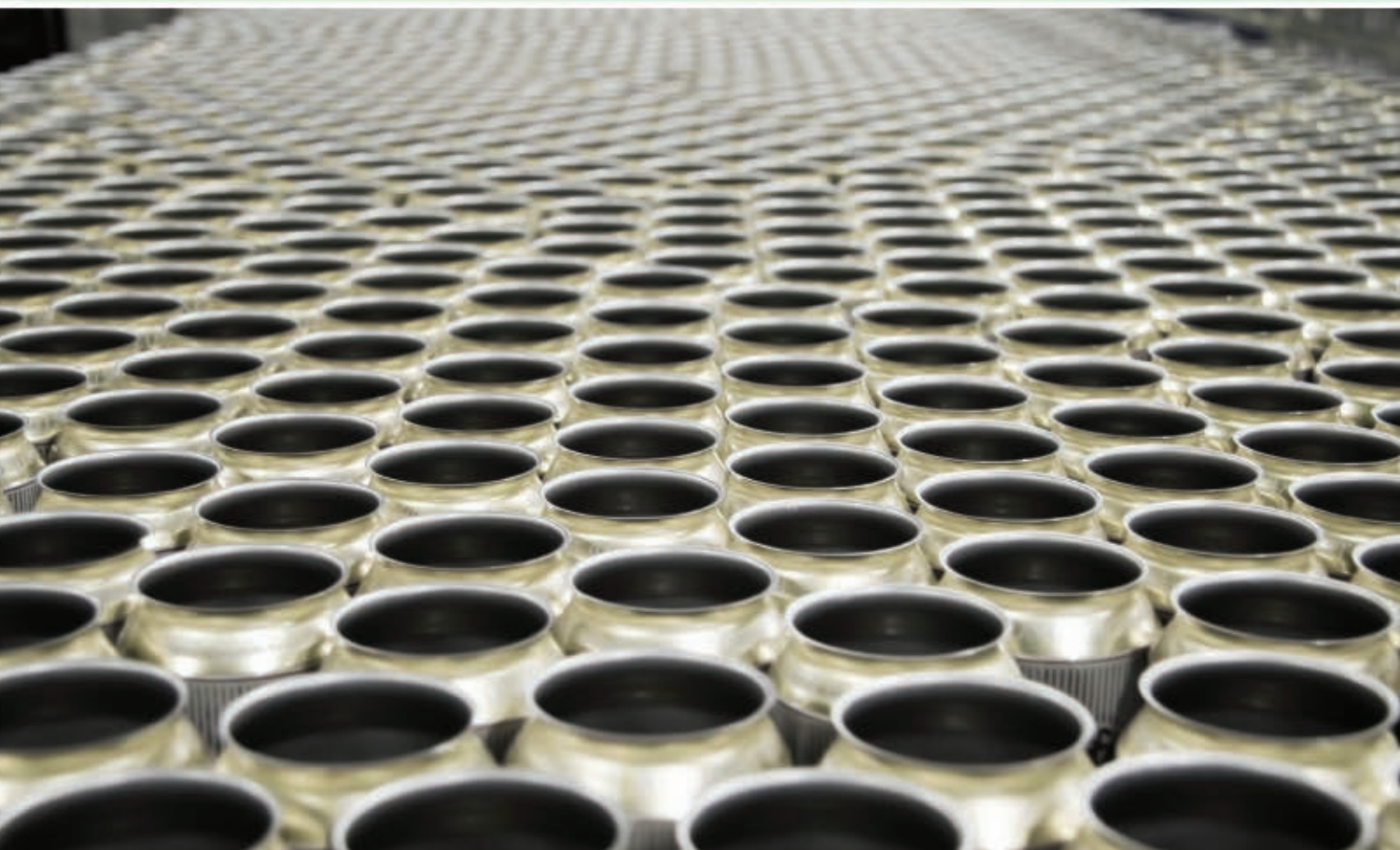
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A background image of numerous terracotta warrior statues. Four statues are highlighted with vibrant colors: a yellow one in the upper left, an orange one in the upper right, a red one in the lower left, and a blue one in the lower right. The rest of the statues are in their original greyish-brown color.

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Paint Demand Is Forecast To Rise

The demand for paint and coatings in the United States is expected to rise nearly eight percent annually through 2015, according to a study by The Freedonia Group, a Cleveland-based market research firm. The market is expected to expand strongly in both volume and value terms, rebounding from the declines of the recession-impacted 2005 to 2010 period.

However, the U.S. paint and coatings industry will continue to be impacted by the trend toward sustainability, and growing environmental concerns will subject manufacturers to increasingly stringent government regulations. As a result, paint and coating suppliers will continue to invest heavily in the development of innovative, higher-value formulations.

The large architectural market will grow at an annual rate of close to 11 percent through 2015, reaching more than \$14 billion.

Demand will be promoted by renewed strength in the housing market, particularly as home-building activity rebounds from low 2010 levels. The interior paint market will remain larger and grow faster than its exterior counterpart.

Sales of paint and coatings in manufacturing markets will expand at a respectable rate through 2015, reversing the downward trend of the 2000 to 2010 period. Among the various market segments, furniture and fixtures will enjoy one of the best growth prospects, and will remain the leading outlet for coatings over the forecast period, according to the report.

In 2010, the global market scale of coatings hit about USD\$90 billion and is expected to grow around 10 percent to USD\$99 billion in 2011. Building decorative coatings accounts for approximately 45 percent of the total market, the most among all coatings.

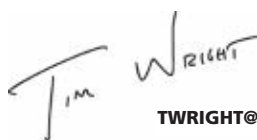
Vehicle coatings present the second largest application area, making up roughly 15 percent, of which, OE and refinish coatings occupying about 50 percent and 45 percent respectively.

Protective and marine coating represents the third largest application field, accounting for about 12 percent. General industrial coating makes up roughly 10 percent, followed by powder coating, wood coating, coil coating and packaging coatings.

Geographically, China topped the world in terms of infrastructure and real estate investment, as well as automotive manufacturing, so China is no doubt the world's largest coatings market. The market scale of coatings in China is approximated at USD\$18.9 billion in 2011, 54 percent of which was attributable to decorative coatings. In 2011, although the Chinese market was suppressed by national policy, real estate still remained strong. From Jan. to Sep. 2011, the domestic real estate investment totaled RMB4.42 trillion, up 32 percent from the year before.

During the five-year period 2011-2015, the Chinese government plans to complete 36 million suites of affordable housing. Among them, 10 million suites will be built in 2011 and 2012 respectively, and the remaining 16 million suites will be established between 2013 and 2015. It is estimated that China's real estate market is likely to rebound after the long-term suppression, and the market size of decorative coatings in China will exceed USD\$12 billion.

While China is the world's largest coating market, its domestic coating enterprises are small-scale, the market being dominated by large multinational firms. The number of domestic coating companies surpasses 2,500, while their revenue together only accounts for 11 percent of the Chinese coatings market. Among them, Guangdong Carpoly Chemical Co., Ltd. is the largest one and its revenue in 2011 is expected to register roughly USD\$350 million.



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Sika acquires architectural and PUR waterproofing coatings producer Duochem

Sika has acquired Duochem Inc., which manufactures and sells polymer flooring and waterproofing products for the construction industry. Duochem Inc. is located in Boucherville, Quebec, Canada with annual sales of approximately CHF 9 million (USD 9.7 million).

Sika AG through its Canadian subsidiary Sika Canada Inc. acquired the privately owned company. Duochem was founded more than 40 years ago and produces polymer flooring products for a wide variety of industrial and architectural applications, and polyurethane waterproofing coatings and membranes used in the protection of parking decks and concrete structures. The products are manufactured in Quebec and sold primarily to customers throughout Canada.

The acquisition will enable Sika to further strengthen its position and market penetration capabilities in the region as well as to improve its logistics and service capabilities. Duochem will operate as a unit of Sika Canada Inc. and the existing management will remain on board.

Royal Adhesives & Sealants acquires UV light-cured and water-based coatings supplier

Royal Adhesives & Sealants (Royal) announced it will acquire all of the assets of Vertis Communications' indirect wholly-owned subsidiary, Webcraft Chemicals, which operates under the name Craig Adhesives & Coatings (Craig). Royal is a portfolio company of Arsenal Capital Partners (Arsenal). Based in Newark, N.J., Craig is a supplier of ultraviolet light-cured and water-based adhesives and coatings to the printing and graphic arts markets. The acquisition builds on Royal's platform of adhesives, sealants and coatings and allows clients of both companies to benefit from an expanded range of customized and proprietary solutions. For Vertis, the sale provides additional opportunities to pay down debt and invest in cross-media solutions. The trans-

action includes a long-term supply agreement between Royal and Vertis, which

allows Vertis continued access to Craig's specialized products. **CW**

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RPM to acquire leading German EIFS company

RPM International Inc. announced that its RPM Building Solutions Group (RPM BSG) has signed an agreement to acquire FEMA Farben + Putze GmbH (FEMA GmbH) of Ettlingen, Germany. FEMA GmbH, with annual sales of more than USD \$40 million, is a manufacturer and supplier of external insulating and finishing systems (EIFS) and complementary product lines to the German and French construction markets.

"The addition of FEMA's EIFS product line immediately enhances our capabilities to address the market for energy efficient and sustainable high-performance buildings in Germany, the current number one marketplace for EIFS in the world, and France, one of the fastest growing markets for EIFS. It also provides a platform to extend FEMA's product systems through existing RPM subsidiary companies into other European countries," said Frank Sullivan, RPM chairman and chief executive.

"FEMA's energy efficient cladding complements our Tremco illbruck building sealing technologies, allowing us to serve a larger portion of the market for energy efficient buildings," said Reiner Eisenhut, president and managing director of RPM BSG Europe.

FEMA GmbH will operate as a stand-alone business within RPM BSG Europe in conjunction with Tremco illbruck and the FEMA GmbH existing management team, which was developed by Heinz Fedder, founder and CEO, who will continue with the company in a consulting capacity.

Airbus qualifies AkzoNobel base coat and clear coat system



AkzoNobel Aerospace Coatings announced the qualification at Airbus of their Aerobase base coat and clear coat system. The Aerobase base coat and Aviox clear coat UVR system has been qualified



Members of AkzoNobel Aerospace Coatings pose alongside a part of the Airbus A380.

successfully at Airbus, according to specification AIMS 04.04.033 and AIMS 04.04.037.

In addition to the standard AIMS 04.04.033 base coat/clear coat system specification, AIMS 04.04.037 includes a selectively removable system (SRS). SRS incorporates an extra sealer coat between primer and base coat which allows the selective removal of only the base coat/clear coat system in preparation for repainting. This avoids the need to reapply the primer and so results in further time and cost savings during maintenance of the aircraft.

With a focus on sustainable coatings, cutting drying times and saving costs by shortening the application process, Aerobase offers a high quality finish and reduces paint usage meaning it is an efficient and environmentally progressive paint solution. The paint system has been developed in line with one of Airbus' key objectives to produce aircraft that are friendlier to the environment and more eco-efficient.

AkzoNobel Aerospace Coatings' Aerobase system only requires one coat per color and one layer of clear coat, resulting in reduced paint usage. This, coupled with a dramatically reduced drying time, which helps to reduce energy consumption and labor costs, allow the aircraft to leave the paint facility with a good looking and durable decorative finish.

Benjamin Moore inaugurates sustainable fleet

Benjamin Moore has inaugurated use of three new Ryder tractor-trailer trucks that run on compressed natural gas (CNG). Exclusively servicing Southern California, these additions to the company's fleet emit 25 percent less greenhouse gases than other vehicles.

The tractors have been made available through Ryder's natural gas vehicle project agreement with the San Bernardino Associated Governments in Southern California. The \$38.7 million joint project is part of a public/private partnership between the transportation solutions company, the U.S. Department of Energy, the California Energy Commission and the Southern California Association of Governments Clean Cities Coalition.



One of Benjamin Moore's new Ryder trucks designed to run on natural gas.

"Benjamin Moore's commitment to sustainability pervades every department in the company, and this opportunity to ensure cleaner air reinforces our Green Promise in a way most people don't think about—shipping our eco-responsible paint products in one of the most eco-responsible ways possible," said Mike Woods, director of logistics, who credits Benjamin Moore's regional logistics manager Ron Widner with spearheading the program in which dozens of other major companies are now involved.

"It was a chance to get in on the ground floor of a transportation and environmental innovation that's only going to grow here in California and then across

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the U.S.," said Widner. He explained that many major metro areas now have passenger buses and even sanitation trucks that run on natural gas, so though the energy source is rather new to trucking, it's been proven very safe and reliable. Currently, California has about 70 fueling stations for CNG tractors; there are another 30 stations located throughout North America and that number is slated to grow steadily as the required equipment becomes available.

Swan label granted to Tikkurila's Joker and Remontti-Ässä interior paints

Two of Tikkurila's interior paints, Joker and Remontti-Ässä, were granted the Swan label on in November 2011. Such recognition is a ringing endorsement of Tikkurila's aim to develop products with a minimum impact on the environment. In addition to stringent environmental regulations, paints bearing the Swan label fulfill precise requirements for quality covering the entire product life cycle, from raw materials to the product's manufacture and use, and waste disposal. Such a product must be better than, or as good as, products without an environmental label.

Joker with its silky matt finish is ideal for interior walls and ceilings in living rooms, bedrooms and children's rooms, and similar dry spaces. The semi matt Remontti-Ässä is best suited to wall and ceiling surfaces, especially in interiors requiring continuous cleaning, such as kitchens, entrance halls and stairwells.

Joker and Remontti-Ässä belong to the top M1 category for indoor air as defined by the Finnish Society of Indoor Air Quality and Climate. This is restricted to building materials from which very little or no compounds evaporate into room air. Both products also bear the EU Ecolabel and the Allergy and Asthma Federation's collaboration symbol. Joker also fulfils the requirements of the Marine Equipment Directive (MED) for fire safety. The Key Flag logo on the packaging confirms the Finnish origin of these products. Paint cans bearing the Swan label will appear in shops at around the turn of the year, but

the paint on sale today is already identical with the paint that will be sold next year in cans marked with a Swan label.

Only products and services belonging to the best in their group are granted the official Nordic Ecolabel, known as the Swan label. The label's criteria are set so that a maximum of 20 to 30 percent of products or services in each group can meet them. These criteria are revised every few years, to ensure that the Swan label continues to differentiate the best products and services, from an environmental perspective.

HumiSeal's latest facility to include bigger R&D labs and a coatings academy for conformal coatings

UK-based conformal coatings maker HumiSeal opened its brand new state-of-the-art facility in Winnersh. The new facility boasts automated manufacturing equipment as well as increased area for storage and distribution. Office space is also greatly increased giving additional room for R&D laboratories and a fully equipped applications and demonstrations room. A dedicated area has also been assigned to the Coatings Academy, a new development from HumiSeal that aims to standardize the training on conformal coatings.

AkzoNobel awards 'Service First Applicator' status to Apropos

Apropos' brand new polyester powder coating plant has been officially recognized by the world's largest powder coating maker. AkzoNobel has awarded the plant Service First Applicator status—one of just forty such accreditations in the entire country of England. The powder coating plant was officially opened by the Mayor of Tameside in May, and has the capacity to handle orders worth up to £15 million per year.

ShawCor receives second contract to supply pipeline coatings for the Wheatstone Project

ShawCor Ltd. announced that its pipecoating division, Bredero Shaw, has received a

second contract from Chevron Australia Pty. Ltd. to provide pipeline coatings and related products and services for the flowlines on the Wheatstone Project. This contract is in addition to the previously announced contract to supply coatings on the gas supply trunkline for the Wheatstone Project. The combined value of the two contracts will exceed US\$170 million. The insulated flowlines will transport production from the gas fields, which are located offshore North West Australia, to the Wheatstone platform.

The gas supply trunkline will transport the produced gas from the Wheatstone platform to the Wheatstone LNG facility that will be located at Ashburton North in Western Australia. The contracts will be executed at Bredero Shaw's facilities in Kabil, Indonesia; Kuantan, Malaysia and Orkanger, Norway. The Kabil and Kuantan facilities are technology-based, full service coating plants that were built specifically to process large, complex projects in the Asia Pacific region. The Orkanger facility is a specialized coating plant established to provide high efficiency thermal insulation systems that meet the performance standards required for onshore and offshore insulated pipelines.

The contracts involve coating approximately 300 km of 10" to 44" diameter pipe that will be protected with fusion bonded epoxy or three layer anticorrosion coatings, Thermotite polypropylene insulation coating, SureFlo internal coating and HeviCote concrete weight coating. In addition Bredero Shaw has also received a contract for anode procurement and installation as well as custom coating. Work will commence during the second quarter of 2012.

Researchers develop plastic coatings for a range of industries from large vessels to tiny lenses

Researchers at the University of Surrey have invented a new process to make bespoke coatings that could one day reduce the drag resistance of ships and aeroplanes and thereby lower fuel consumption.

The coatings have textures that could reduce the carbon footprint of the trans-

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port industry by lowering the drag of moving through air or water. In turn, vessels will consume less energy in propulsion.

The team of physicists at the University of Surrey is now collaborating with six companies through funding from an EPSRC Knowledge Transfer Account (KTA). The project is developing ways for industrial manufacturers to use the process to create novel coatings to decorate household goods.

Using their simple, low-cost process, it is possible to create plastic coatings with small bumps and ridges in sizes ranging from less than a millimeter to a couple of centimeters. With the right design, this texture will reduce the drag forces when large vessels pass through air or water.

Professor Joseph Keddie, of the Department of Physics, who led the research, said, "It's an exciting prospect to have an impact on the energy consumed by planes and ships through a straightforward, inexpensive technology. Our process can create coatings with nearly any desired texture to meet the particular requirements of an application."

"This new technology has grown out of several years of polymer and colloids research within the Soft Matter Physics Group in collaboration with industrial partners. Our KTA project will help to transfer our research ideas into industrial manufacturing."

There are also other numerous high-tech applications where the University of Surrey's work can be used, such as to create tiny lenses to focus light. Applications of these "micro lenses" are in digital cameras, photocopiers, and solar cells.

The researchers call their process "infrared radiation-assisted evaporative lithography." They use beams of infrared light to heat certain spots on wet coatings made of tiny plastic particles in water. The hotter spots evaporate more quickly, and the plastic particles are then guided there as the evaporating water is replaced. The process is simple to use and does not require expensive equipment. The textured coatings can be used to cover nearly any surface.

The research has recently been published, with co-authors at AkzoNobel and

at the University of Cambridge, as a cover article in the prestigious Royal Society of Chemistry journal, *Soft Matter*. The scientists have also filed an international patent application on their process and are looking for partners to apply the new technology in applications.

The coatings can also have an attractive visual appearance and interesting textures, making them exciting for new designs on domestic products.

"Our novel process uses fundamental concepts of science to create objects with tremendous aesthetic appeal. The coatings are beautiful to see," said Dr Argyrios Georgiadis, whose experimental work paved the way for the technology.

Zircotec's ThermoHold thermal barrier coating helps Le Mans Ferrari 458 reduce cockpit temperatures

The ability to dramatically lower under-bonnet and cockpit temperatures, as well as prevent damage to the surrounding bodywork has led Le Mans Series participant JMW Motorsport to use ThermoHold, a ceramic thermal barrier coating technology from Zircotec. By lowering temperatures in the Ferrari 458 GTE's cockpit, the car's power-consuming air conditioning system is needed far less frequently. Minimizing this increases the car's performance while still keeping the driver and engine bay cool.

"Regulations specify the cockpit must be kept below 32°C during the races," said Zircotec's sales director Peter Whyman. "Teams have to use air conditioning systems that draw power from the engine. By using our coating we lower engine compartment temperatures and minimize heat soak into the cockpit. It's a win-win situation."

Renowned for its beautifully presented cars, JMW Motorsport searched for a long lasting solution that would prevent surrounding bodywork and paint from peeling or discoloration. "The collectors run very close to the chassis and bodywork," said Davey Nichols from Team JMW Motorsport. "By coating the manifolds we have eliminated all the damage to the painted components and can maintain the pristine finish."

The team is now working with Zircotec to look at other areas of the car where the effective management of heat could offer performance, reliability or durability gains. "Coating the composite fuel cell is something we could offer to protect it from heat and lower the fuel temperature inside," said Whyman. "In addition our ZircoFlex foil offers a lighter alternative flexible foil for cockpit bulkhead. Working together we aim to find other effective ways to manage heat and improve performance of the car and driver."

Novagard receives UL 746E approval for Novagard UV 800-260, a UV curable silicone conformal coating

Novagard Solutions, Inc., a supplier of specialty chemical products providing engineered solutions to the automotive, building construction, electrical, medical, general industrial and product assembly industries announces the Underwriters Laboratories, Inc. listing of Novagard UV 800-260 to the UL 746E specification under the QMJU2 testing protocol. This UL testing protocol and specification covers test procedures to be used for the evaluation of industrial laminates and other materials for use in fabricating printed circuit or wiring boards. These requirements provide data with respect to the physical, electrical, flammability, thermal, and other properties of the materials that are intended to provide guidance to the material manufacturer, the fabricator, the end product manufacturer, safety and reliability engineers and other interested parties. Consequently, Novagard UV 800-260 is the only UV curable silicone conformal coating to be listed with UL 746E approval for conformal coatings of printed circuit boards and control boards for indoor or outdoor applications said the company.

Testing of Novagard UV 800-260 demonstrates cure with extremely fast processing speeds and also incorporates a secondary, moisture cure chemistry for shadow areas of the coating. The 800-260 UV silicone product is ideally suited in printed circuit board applications of environments of high humidity, low or high

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Aculon doubles its R&D laboratory space

Aculon, Inc., a nanotechnology enabled performance coatings company, has completed the expansion of the company's research and production laboratory space. Started four months ago, the expansion of

Aculons laboratory facility on Sorrento Valley Road in San Diego, Ca., effectively doubles the amount of laboratory space available for research and production of cutting edge surface modification treatments. The San Diego operation has been a major center for surface modification research since 2005, and since then has grown and expanded its activities to include both research and production of Aculon's proprietary technologies.

Federal Bureau of Prisons uses Nansulate protective coatings

Industrial Nanotech, Inc., an emerging global leader in nanoscience energy saving solutions, announced that the company's Nansulate patented thermal insulation and protective coatings are in use by the United States' Federal Bureau of Prisons facilities. Applications for the coatings include steam pipe insulation, duct insulation and heat exchanger insulation. The coatings are a nanotechnology-based liquid form of insulation that offers a cost effective environmentally re-

sponsible solution for reducing energy costs said the company. Advantages for insulation and surface protection include low VOC, easy to apply, non-toxic and cannot be torn and cause debris because it is a clear coating that adheres directly to the surface. Nansulate also provides mold resistance, corrosion resistance and ease of installation with a brush, roller or paint sprayer.

Researchers develop a carbon nanotube coating that makes 3D objects invisible

A carbon nanotube coating developed at the University of Michigan acts as a "magic black cloth" that conceals an object's three-dimensional geometry and makes it look like a flat black sheet.

The 70-micron coating, or carbon nanotube carpet, is about half the thickness of a sheet of paper. It absorbs 99.9 percent of the light that hits it, researchers say.

"You could use it to completely hide any 3D attributes of an object," said Jay Guo, a professor in the Department of

PPG Aerospace coatings capture colors of World War II bomber

SPPG Industries' aerospace business has donated coatings used to repaint a B-26G Marauder bomber airplane now on display at the D-Day Museum at Utah Beach in Normandy, France. The aircraft honors a B-26 flown by Maj. David Dewhurst Jr., father of current Texas Lt. Gov. David Dewhurst.

The Marauder was repainted in preparation for its relocation from the Museum of Air and Space at Le Bourget Airport, Paris, to the Musée du Débarquement Utah Beach in Sainte Marie du Mont, France, where it is on permanent display in a new hangar. B-26 Marauder bombers flew during the D-Day invasion of the Normandy beach during World War II.

According to Pierre Reguer, PPG Aerospace sales representative, Gonfreville, France, PPG Aerospace offered to provide the coatings to help the museum preserve the legendary aircraft for future generations.

"PPG Aerospace is privileged to participate in restoring this B-26 Marauder and in honoring one of the pilots who fought so valiantly on D-Day," Reguer said.

PPG donated a wash primer, which was used to prepare the aircraft surface for primer application, as well as primer and topcoat, which recreated the olive drab color and yellow markings of the original "Dinah Might" flown by Maj. Dewhurst.

A yellow stripe across the top of the tail identifies his aircraft as part of the U.S. Army Air Forces' 386th Bombardment Group, while the letters "AN" on the rear of the fuselage signify the U.S. Army Air Forces' 553rd Bombardment Squadron. The letter "Z" on the fuselage aided identification in flight, according to the B-26 Marauder Historical Society. The serial number 41-31576 is painted on the tail, minus the "4" that started the sequence for all Marauders, according to the historical society. The original B-26 flew 129 missions during the war before being lost in a raid on a supply depot in St. Wendel, Germany, on Nov. 18, 1944, according to the historical society and the Military Air Crash Report 10462.

Bombs painted on the cockpit attribute 85 aerial missions over enemy territory to Maj. Dewhurst, who returned to the United States on Aug. 31, 1944. Lt. Gov. Dewhurst helped to fund the preservation effort after learning his father had led a squadron of B-26 Marauders on D-Day.

The repainted B-26G Marauder originally was assigned to the Free French Air Force and was sent to France on May 21, 1945, according to the historical society. It was repainted by STTS Group.



Repainted B-26G Marauder now on display at Utah Beach museum in Normandy, France.

Electrical Engineering and Computer Science and principal investigator.

"It's not cloaking, as the object can still cast a shadow. But if you put an object on a black background, then with this coating, it could really become invisible," he said.

A paper on the research is newly published online in *Applied Physics Letters*.

To demonstrate this concept, the researchers made a raised, microscopic tank shape on a piece of silicon. They then grew the carbon nanotube carpet on top of the entire silicon chip. In photos taken through an optical microscope, they show that the tank is imperceptible. As a control, they did this again, carving out a rectangle that was not coated with carbon nanotubes. The rectangle is visible on this chip, but the tank remains hidden.

Here's how the new coating works: Human eyes perceive an object based on how it reflects or scatters light. The "refractive index" of this new coating is similar to that of air, meaning light traveling through air doesn't scatter or reflect when it hits the coating.

It's well known that carbon nanotubes are capable of absorbing light, but the researchers were able to push it to such a high percentage by spacing them just right.

The "perfect black" material Guo's team created for this coating has a host of varied applications. It could possibly be used in display screens for ultra-high contrast and a crisper picture. It holds prom-

ise as solar heating device. The National Institute of Standards and Technology is using a similar material to absorb infrared light and measure the amount of heat it can generate.

The coating could inspire a new type of camouflaging paint for stealth aircraft. Today's stealth planes use shape to scatter electromagnetic waves and avoid detection, and this scheme could actually absorb the waves.

"The carbon nanotube forest can absorb a very wide range of electromagnetic wave from ultraviolet up to terahertz," Guo said, "and in principle it can be applied to an arbitrary sized object."

Just how large an object? Guo suggested an intriguing possibility - perhaps entire planets or even stars.

"Since deep space itself is a perfect dark background, if a planet or star were surrounded by a thick, sooty atmosphere of light-absorbing carbon nanomaterial gases, it would become invisible due to the same principle," Guo said. "It would become totally dark to our instruments that rely on the detection of electromagnetic waves. Could this explain some of the missing matter in the universe?"

X-rays or gamma rays would be able to penetrate through the hypothetical "dark veil" Guo proposes. Or, objects behind such veils would cast a shadow by distant stars behind them.

The paper is called "Low density car-

bon nanotube forest as an index-matched and near perfect absorption coating." Other co-authors are electrical engineering post-doc Haofei Shi and Ph.D. student Hyoung Won Baac and mechanical engineering Ph.D. student Jong Ok. The university is pursuing patent protection for the intellectual property, and is seeking commercialization partners to help bring the technology to market.

SCS building new coating center in Austin, Texas

Specialty Coating Systems is expanding its parylene coating service operations into the South United States region. Build-out is underway for a new 13,000 square foot facility located in Austin, Texas. The new coating center will begin full production operations in early 2012. Austin, Texas, is gaining national recognition as a thriving innovation hub and has attracted over 3,800 companies within the technology sector. With the addition of the Texas facility, SCS has 11 parylene coating facilities around the world. Additional locations include Costa Rica, Czech Republic, Ireland, Japan, Singapore, United Kingdom and the United States (California, Indiana, New Hampshire, Wisconsin).

Eco Building Products to expand wood coating lines

Eco Building Products, Inc., signed a five-

PCI announces COATING 2012 trade show dedicated to industrial coatings in North America

After working with NACE for two years to merge the industrial coatings world with the performance coatings world, PCI has decided to present their own event, COATING 2012. The NAI Coating show was moderately successful but PCI said it felt this combination did not have the broad appeal exhibitors and attendees were looking for. Therefore, PCI and NACE have agreed to end The North American Industrial (NAI) Coatings Show.

COATING 2012 will be held in St. Louis, Mo., at The America's Center October 9-11. PCI will roll out a new website for COATING 2012 by the end of the year. Promoting a fresh new look, the new COATING 2012 website will have features such as an interactive floor plan, online booth sales, enhanced exhibitor center, agenda builder, printable itinerary, social peer-to-peer matching (attendees can create a profile of personal interests and the system will provide matches), itinerary planner that will suggest exhibitor and educational sessions that match attendees' interests, and more.

Special events and programs to be added include an offsite hospitality event hosted at the headquarters hotel, The Renaissance Grande, to create additional opportunities for social interaction. The event also plans to include higher education programming and certification for operators as well as additional opportunities for business and social exchange on the show floor.

NACE will continue their support of PCI's event by having a booth at the show to help promote their activities in the performance coatings world.

For more information, contact Jennifer Egan, program director, 832.585.0770; jegan@powdercoating.org.

year lease to set up a mega coating facility in Salem, Ore., located in the heart of the timber producing corridor and is approximately 30,000 square feet located on a railway spur. The company plans to occupy a portion of the facility to start by deploying two coating lines with the provisions to expand up to eight coating lines. The company plans to have the facility producing production products by the end of November 2011.

"We will have the ability to purchase direct from the largest lumber mills in the world that are growing trees in our backyard, apply our coatings and supply our entire USA infrastructure without adding freight costs," said Steve Conboy, president and CEO of Eco Building Products. "This is a significant move towards total supply chain management reducing the overall impact of coating costs."

Eco Building Products, Inc. is a manufacturer of proprietary wood products treated with an eco-friendly proprietary chemistry that protects against fire, mold/mycotoxins, fungus, rot-decay, wood ingesting insects and termites with ECOB WoodSurfaceFilm and FRC technology (fire retardant coating). Eco Building Products also manufactures ECO Red Shield and ECO Blue Shield.

BASF Coatings wins award at Materialica

After its win in the Automotive Brand Contest, BASF Coatings' XFine has now received the 2011 Materialica Design & Technology Silver Award for its color innovation in the category surface and technology. Designer Mark Gutjahr and Stephan Schwarte, head of color development, accepted the prize at the Materialica, 14th International Trade Fair for Materials Applications, Surface Technology and Product Engineering in Munich, Germany. XFine is the designation for an intense metallic special-effect paint. The color appears particularly bright on the edges of the car body, while it has a very dark effect when viewed from the side. This transition back and forth from bright to dark highlights the contours of the car body. The MunichExpo Veranstaltungs GmbH has presented the Materialica De-

sign + Technology Award for eight years. The main focus of this award is on aerospace, automotive, engineering, sports and technical consumer goods.

Fine Paints of Europe launches Bridget Beari Colors

Through an exclusive licensing agreement with Fine Paints of Europe, Inc. (FPE) of Woodstock, Vt., Bridget Beari Designs (BBD) is introducing a signature paint collection. Bridget Beari Colors is a set of 76 custom wall colors created by Susan Jamieson, owner and founder of BBD in Richmond, Va. This marks FPE's first southern influence collection.

Each paint color in Jamieson's line is named after a favorite pet of her family, friends, co-workers or clients. From Emmy Lou Hoo to Lulabelle Green, there is a charming story behind each paint swatch.

The November 11th launch party was held at The Rue, a Fine Paints of Europe retailer in Richmond.

Bridget Beari Colors fan decks and paints are available through Bridget Beari Designs, Fine Paints of Europe and at Richmond's local FPE retailer, The Rue.

Bridget Beari Designs is a full service interior design firm. Jamieson's work has been recognized by the HGTV and TLC networks as well as Traditional Home, Southern Living, Southern Lady, Virginia Living, R Home, and StyleWeekly. Susan was the 2001 recipient of the Richmond-Woman of the Year for the Arts award.

Founded in 1987, Fine Paints of Europe is a privately owned company that imports and distributes paints from its manufacturing partner in The Netherlands, Wijzonol PaintWorks.

Dulux and Camelpaint form new Chinese entity

Australia's largest paint maker Dulux has expanded its presence in the growing Chinese market through a merger between its Chinese operations and Hong Kong-based Camelpaint group. Dulux will own 51 percent of the new company called DGL Camel International. Camelpaint was established in Hong Kong in 1932, manufacturing a range of coating products in Hong Kong and southern China. Dulux and Camelpaint have been joint

venture partners to produce powder coatings used in windowsills and door paints in China since 2004. Financial details were not disclosed and earnings will be accretive in 2012. Dulux recorded revenue of roughly \$700 million last year with more than 90 percent of its business coming from Australia and New Zealand. Remaining sales occur in Malaysia, China, Hong Kong and PNG.

Quest Specialty Coatings acquires coatings unit of Patriot Paint

Quest Specialty Coatings (QSC) has acquired the coatings business of Patriot Paint, Portland, Ind. Patriot Paint was founded in 1980 and is a producer of coatings systems for metal substrates. From zero VOC, anti-corrosive transportation coatings to multilayer decorative systems for metal caskets, Patriot Paint has become recognized for its specialized, environmentally sensitive, low-cost solutions for almost any metal substrate application.

Daimler introduces BASF's iGloss Clearcoat for its OEM coatings

Daimler is the first automaker to introduce BASF's new iGloss clearcoat for OEM coatings. At its plant in Bremen, the Mercedes-Benz E-Class Coupe, SLK and SL models are coated with the scratch-resistant paint.

The clearcoat is the top layer of the automotive finish and provides gloss for the body, as well as protection from stresses such as sunlight or chemicals. The iGloss technology offers all these features and additionally provides high scratch resistance.

"It offers better protection against microscratches, which can come about at the car wash, for example," said Dr. Matthijs Groenewolt, iGloss developer. "This means car owners can now enjoy that new-car effect for much longer than before."

iGloss combines the advantages of inorganic "hard" materials with those of organic "soft" materials. The hybrid material delivers improved scratch resistance without increasing brittleness. The technology does not require any significant changes in the application process. **CW**

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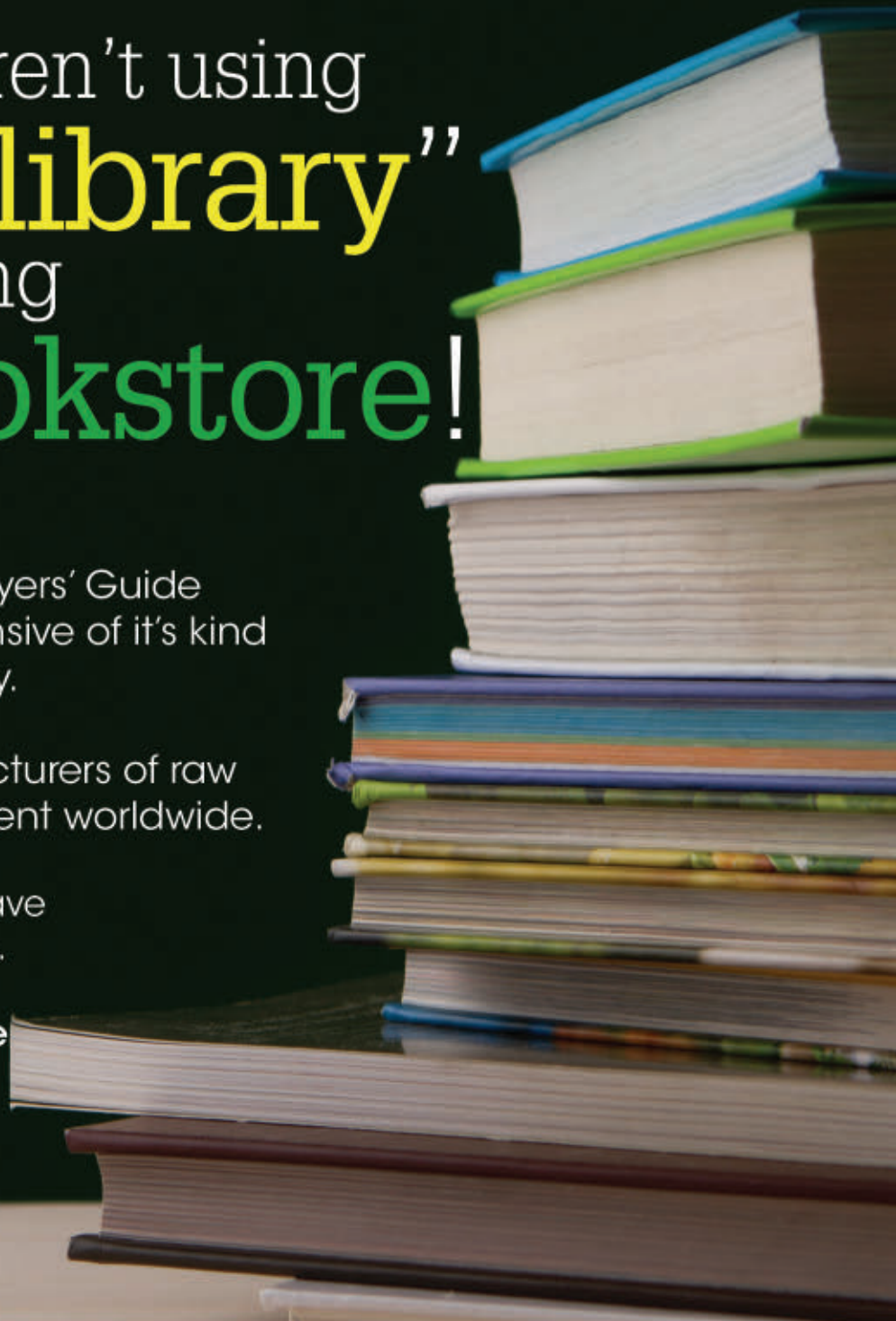
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Kansai Paint patents water-based paint

Patent No. U.S. 7,842,751 B2

Kansai Paint Co. has obtained a patent for a water-based paint composition comprised of an emulsion resin, melamine resin and hydrophobic solvent, wherein: the emulsion resin is fine resin particles having core/shell type multilayered structure composed of the core made of a copolymer obtained by copolymerization of 0.1-30% mass of polymerizable unsaturated monomer having at least two polymerizable unsaturated groups per molecule and 70-99.9% mass of other polymerizable unsaturated monomer, and the shell made of a copolymer obtained by copolymerization of 5-50% mass of vinyl aromatic compound and 50-95% mass of other polymerizable unsaturated monomer, wherein the solid mass ratio of the copolymer/copolymer is within a range of 10/90-90/10; the melamine resin has a weight-average molecular weight within a range of 1,000-5,000; the hydrophobic solvent is an alcoholic solvent; and the water-based paint composition is comprised of the emulsion resin within a range of 10-80 mass parts, the melamine resin within a range of 5-50 mass parts, and the hydrophobic solvent within a range of 10-100 mass parts, per 100 mass parts of solid resin content in the water-based paint composition.

Kronos patents high opacity

TiO₂ pigments

Patent No. U.S. 7,842,131 B2

Kronos International Inc. has been granted a patent for titanium dioxide (TiO₂) pigment particles comprised of uncoated rutile TiO₂ particles; a coating covering the uncoated rutile TiO₂ particles, the coating containing aluminum phosphate, aluminum oxide, silicon oxide, and titanium oxide, and where the specific surface area to BET of the coated particles is at least 15 m²/g.

Otsuka Chemical patents aqueous-medium dispersion

Patent No. U.S. 7,846,249 B2

Otsuka Chemical Co., Ltd. has been

granted a patent for a pigment aqueous-medium dispersion being a dispersion of a pigment in an aqueous medium, wherein the pigment is a flaky titanate obtained by treating a layered titanate with an acid, reacting the treated layered titanate with an organic basic compound to swell or delaminate an interlaminar portion of the treated layered titanate and obtain an intermediate flaky titanate, and treating the intermediate flaky titanate with a metal alkoxide in an aqueous medium to obtain the flaky titanate, the flaky titanate having an average longer diameter of 5 to 30 μm and an average thickness of 0.5 to 300 nm.

Rutgers patents flame-retardant coating

Patent No. U.S. 7,851,536 B2

Rutgers, The State University, New Brunswick, NJ has received a patent for a flame-retardant coating composition consisting of a cross-linked thermosetting polymer varnish, wherein the polymer is selected from the group consisting of polyurethane, alkyd polyester, and cross-linked polyacrylate; a metal hydroxide present in an amount from approximately 25-35% by weight of the composition; an alcohol and water.

Chroma patents paint composition

Patent No. U.S. 7,851,545 B2

Chroma Australia Pty Limited has been granted a patent for a water-based artists' paint composition consisting essentially of at least one pigment in an effective amount to provide the desired pigmentation; at least one alkali soluble polymer in an amount effective to increase the open time of the composition so that the paint composition remains workable and may be blended and altered for several hours and for as long as a day, the polymer being selected from polymers soluble at ambient temperature and pressure in an aqueous solution having a pH of from about 7 to 11; at least one sub-

stituted amine in an amount effective to adjust the pH to about 7 to 11, the amine selected from C1-6 alcohol amines, C1-6 alkyl C1-6 alcohol amines and mixtures thereof; a binding effective amount of at least one water dispersible acrylic polymer; and an effective amount of at least one alkali soluble or alkali swellable thickener.

Bostik patents hot melt adhesive

Patent No. U.S. 7,838,590 B2

Bostik, Inc. has been granted a patent for a hot melt adhesive composition comprised of a blend of the following components: approximately 1-20% by weight of a styrene-ethylene-ethylene-propylene-styrene random block copolymer; 10-70% by weight of a first midblock tackifying resin having a softening point of 85°-125° C; 0-65% by weight of a second midblock tackifying resin; 5-60% by weight of a plasticizer; and 0-20% by weight of an end block reinforcing resin having a softening point equal to or higher than 115° C; wherein the components total 100% by weight of the composition, and the viscosity of the composition is equal to or less than 20,000 mPa·s at 160° C.

Axion Patents Fire Coating Process

Axion International Holdings Inc. has announced its third patent this year for a new fire-retardant coating technology. The coating formulation was patented earlier this year. Two new patents cover the process for modifying the formulation and applying the coating. The coating can be used on Axion's structural composite materials and in other applications. The new patent "gives added protection, so either Axion or an Axion-approved entity can perform the coating procedure," the company reports. The patent allows Axion to establish standards and approvals for the coating's application. The coating can be used on Axion's recycled plastic railroad ties, structural building products and other applications. **CW**

Lanco and Pintuco Do Colombia Deals

by Charles W. Thurston

Latin America Correspondent

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Lanco Paint and Pintuco are separately doing deals involving the Colombian paint market, with Miami-based Lanco targeting the domestic market and Bogota-based Pintuco targeting the Costa Rica market. The Lanco deal, a new joint venture with Corona, was not valued publicly. The \$10 million Pintuco deal, involving the purchase of Naranjo, Costa Rica-based Vastalux, will include a \$5 million refurbishment of the latter's manufacturing facility.

Lanco partners with Corona

Lanco's new joint venture with Colombia's Organización Corona will serve both as a means for the former to reach the Colombian market, and later, for the venture to serve other South American markets, according to Rubin Irizarry, a purchasing agent at Lanco Manufacturing, in San Lorenzo, Puerto Rico. Corona will hold 55 percent of the equity of the new venture, and Lanco will hold 45 percent, according to a company statement in Colombia. Among Corona subsidiaries is the Sodimac hardware chain, broadly present in the Colombian retail market.

Lanco manufactures paint in the United States and the Caribbean, including Costa Rica, the Dominican Republic and Puerto Rico. The company has 32 retail locations in Puerto Rico, its regional headquarters for Latin America. The company also maintains several distribution centers in Central America.

Pintuco acquires Vastalux

Colombia's Grupo Mundial unit Compañía Global de Pinturas, which owns the Pintuco brand, is making the purchase of Vastalux to better serve the Central American paint market, which the company estimates at over 30 million gallons per year. The company already exports an estimated \$70 million worth of paint per year to South American markets in Brazil and Peru, and Central American markets in Honduras, El Salvador, Guatemala and Panama. The company also has begun exports to several countries in Africa; the company exports to nearly 30 countries overall.

By next year, the Costa Rican facility will serve all Central American paint markets except Panama, which will continue to be supplied from Colombia, where the company has a plant at Rionegro, in Antioquia. Vastalux, which produces an estimated 1.5 million gallons per year, has a work force of about 50 employees in Costa Rica, to which Pintuco will add staff in 2012. The company estimates that the paint market in Costa Rica is over seven million gallons of paint per year.

Brazil is among markets Grupo Mundial is considering for an expansion of its Pintuco paint business.

Global de Pinturas currently manufactures 27 million gallons of paint per year and has an estimated 4,300 employees, according to one Colombian report, with manufacturing already in position in Colombia, Venezuela, Ecuador and Dutch Antilles. The company claims leadership in the Colombian, Ecuadorian and Venezuelan paint markets. Apart from its leading Pintuco brand, Global de Pinturas holds the Pica, Pintec, Terinsa, Ico, Graniplast and Mundial brands directly or jointly with local country partners. Paint represents about 25 percent of the company's sales—reported at \$862 million in 2010—alongside other chemicals and water businesses.

Grupo Mundial, which is controlled by the Saldarriaga family, has shares held by some 180 investors from various countries. While the company is listed on the Colombia stock exchange for purposes of transparency and good governance, shares are not yet traded, according to a statement made to the Colombia press by Grupo Mundial president Ernest Fajardo Pinto, in October. Future investments might necessitate a public share issue, he noted.

Brazil is among markets Grupo Mundial is considering for an expansion of its Pintuco paint business. The group already is expanding its chemical and water businesses there. **CW**

Grupo Mundial
grows its coatings
footprint.

Decorative Paint Demand Grows in Middle East's Gulf States

by Sean Milmo

European Correspondent

milmocw@rodpub.com

Fueled by oil revenues, government sponsored projects help grow paint demand.

Sales in Europe's decorative paints market have been sluggish this year and are likely to show an even slower pace of growth in 2012. Meanwhile in the Gulf area of the Middle East—close to Europe's doorstep—the decorative paints sector is flourishing in the wake of high oil prices, which soared by around 50 percent between late 2010 and the spring of this year.

Demand for decorative paints in the Gulf states of Saudi Arabia, Kuwait, Qatar, Bahrain, United Arab Emirates (UAE) and Oman tends to be heavily influenced by the rises in government revenue from oil and gas exports. This is because a high proportion of sales come from projects, including housing schemes, which are financed by governments.

As a result sales of decorative paints have in some Gulf countries been rising at double-digit rates. Although there have been short periods of sharp fluctuations in demand, the decorative paint market in the oil and gas rich Gulf has returned fairly constant increases in demand for many years.

As a result it has offered opportunities for buoyant revenues and profits for the decorative paints businesses of some European coatings companies, which among the foreign players in the Gulf have tended to be the most active in it.

In particular it has been a chance for Jotun of Norway and Hempel of Denmark, two Scandinavian coating producers, which have a relatively small share in the total European decorative paints market, to establish a strong presence in the Gulf and other parts of the Middle East.

Jotun first established a physical presence in the Middle East in 1964 with the building of a decorative coatings plant in Libya. Eleven years later it entered the Gulf market with the construction of a plant in Dubai in the UAE.

Hempel, which earlier this year considerably expanded its European decorative paints business with the takeover of Crown Paints of the UK, has been producing and selling decorative coatings in the Gulf for 40 years.

Jotun now claims to be market leader in the Gulf decorative sector with a share of around 25

percent, while Hempel is also among the leaders. Among the other international players in the Gulf area are AkzoNobel, PPG Industries and Asian Paints of India.

The Middle East market with its relatively fast growth rates and preponderance of large construction projects, usually financed by the public sector, has given international paint companies the opportunity to use the region for the development of new decorative products.

"We cooperate closely with our company colleagues in the decorative paints market in Europe," said Mohamad Baitie, Middle East regional brand manager for decorative paints at Hempel. "They take and adapt products we have developed while we take paints they have developed as well."

Jotun in fact runs out of its Middle East headquarters in Dubai two European operations in Turkey, usually classified in the paints sector as being part of Southeast Europe and Spain.

"We have a marketing and development hub at Dubai which covers 17 countries including Turkey, Spain and all MENA countries so they get marketing support from our Dubai headquarters," said Erik Aaberg, Jotun's manager responsible for the company's decorative paints businesses in the Middle East, Southeast Asia and the Far East.

Decorative paints demand in Saudi Arabia, with a population around 25 million and a GDP growth rate this year of around seven percent, will rise by around 20 percent in 2011, making it one of the fastest growing decorative markets not only in the Middle East but in the wider area covering southern and Southeast Europe. It is also by far the biggest decorative paints market in the Gulf.

Earlier this year in response to the political upheavals in Tunisia, Libya, Egypt and neighbouring Yemen, dubbed the Arab Spring, the government of Saudi Arabia pumped an additional \$130 billion into the domestic economy to boost public sector wages and benefits for the unemployed. For the construction industry and suppliers like paint companies the big benefit of the package was extra money for building 500,000 low-and-medium cost housing.

In addition the country is attracting a high inflow of foreign capital, which in 2010 alone amounted to \$40 billion. Some of this external investment goes into the building of hotels and commercial buildings.

In neighbouring Abu Dhabi, the largest and by the far the biggest oil and gas producer of the emirates in the UAE, the residential housing supply is poised to increase by 35 percent of the current stock in 2011-13, according to local real estate analysts.

In Dubai, the UAE's other large emirate, the existing housing stock is set to rise by around 20 percent as the emirate, which is the Gulf's commercial and financial center, recovers from the collapse of a property boom around two years ago.

However the decorative paints market as a whole in the UAE has been growing relatively slowly this year because of a decline in the number of public sector and commercial construction projects. Throughout the Gulf big construction schemes, like hospitals, schools, universities, sports complexes, as well as offices, large hotels and other commercial buildings, make up a key part of the decorative paints sector, accounting for as much as 20-40 percent of total sales.

With its big rise in public expenditure, Saudi Arabia's large projects market is flourishing with big sums being channelled into the building of healthcare and educational facilities. Qatar is preparing to host the 2022 World Cup, soccer's premier tournament, which with the Olympic Game's is the world's largest sporting event. Already the planning and design of five stadiums has started, with coating companies vying to be included in the list of 'specifiers' or qualified suppliers for the schemes.

"The high number of large projects is what makes the Middle East decorative paints market different from most other regional markets, particularly Europe where they are becoming comparatively uncommon," said Baite.

Bidding for coatings contracts in public sector and commercial schemes requires paints companies to form dedicated teams. These include networks of staff and agents around the world because of the high number of big projects in the Gulf, which are designed by international architects and built by international building contractors.

"You have to work long-term on these projects which means being in contact with architects and contractors long before the projects are announced," said Aaberg.

Companies like Jotun and Hempel are well positioned to win the paints con-

tracts for mega projects in the Gulf because they also have strong protective coatings businesses.

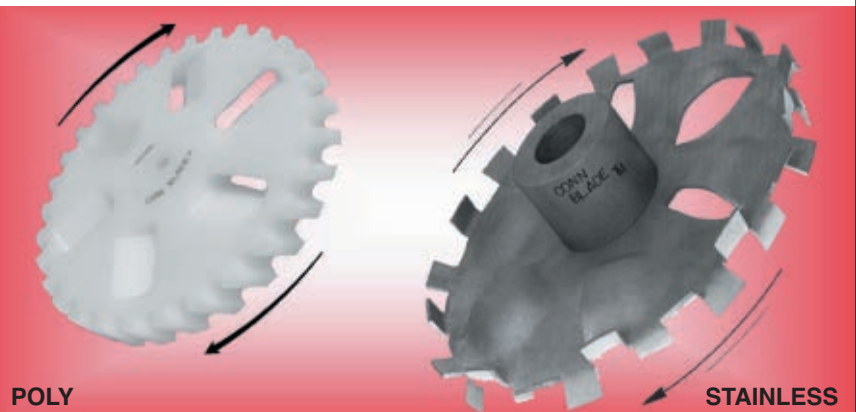
"It is essential to have a competence in protective coatings, as well in decorative paints, to win these contracts because of the need for coatings to cover materials like concrete, steel and aluminium," said Aaberg.

Jotun expects a 10 percent rise in vol-

ume sales of decorative paints in the Middle East this year. Relatively high growth will continue into 2012 as well. The region's decorative paints sector is expected to gain renewed momentum when Iraq starts using revenues from its huge oil and gas reserves to rebuild the country. The Gulf region is likely to maintain consistent growth in decorative coatings for years to come. **CW**

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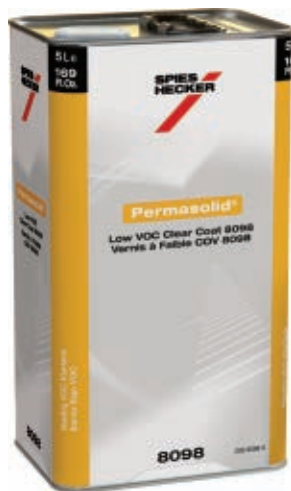
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Spies Hecker's New Permasolid Low VOC Clear Coat 8098

Spies Hecker has introduced Permasolid Low VOC Clear Coat 8098, a low VOC finish from the Spies Hecker 2K-Acrylic-System. This clear coat is designed for application over solventborne and waterborne base coats. Permasolid Low VOC Clear Coat 8098 delivers excellent vertical stability and outstanding gloss said the company. It features good overspray melt in and can be sprayed in a 1.5 coat process or in two coats, if desired. It is specially formulated for small to large body repairs in multiple environments, offering the opportunity to improve results in the spray booth. Less heat is required and less time is spent in the spray booth, equaling cost and time savings.



Permasolid Low VOC Clear Coat 8098

Unique aerosol thread locker and vibration dampener

Solid Technical Solutions (STS/Tectorius) has introduced Vibra-Stop Thread Adhesive, Sealant and Anti-Vibration compound now available in an aerosol spray. Traditionally, liquid thread-locking compounds cannot be packaged in spray applicators due to their instability. In addition, because most anaerobic thread materials will not cure until they are assembled, spray application of these materials would be messy and ineffective for 'point of use' jobs. STS/Tectorius' Vibra-Stop Aerosol spray product is a unique formula

that can be applied and used immediately or



Vibra-Stop Thread Adhesive, Sealant and Anti-Vibration compound.

allowed to dry prior to part assembly. This innovative approach allows the user to apply Vibra-Stop to all fasteners at one time and use them as needed during the project construction completely independent of time.

CeralUSA, LLC expands product line

CeralUSA, LLC (CUSA) said that its Ceral 114, an environmentally friendly corrosion and erosion preventative coating, is now being manufactured in the United States. Previously manufactured only in Europe, Ceral 114 was excluded from serious consideration in the North American market due to the high costs involved in shipping the product across the Atlantic said the company.

Ceral 114 is an aluminum ceramic coating used primarily to protect steel substrates such as those found in the compressor section of turbine engines. Ceral 114 is the "low chrome" alternative approved within PWA 595, GE A50TF1 and other OEM specifications. A topcoat, Ceral 350-1, used to enhance the surface finish of Ceral 114 and provide additional corrosion protection, is also being produced in the United States.

The availability of Ceral 114 and Ceral 350-1 brings a previously approved low-chrome alternative to the turbine coating market.

CeralUSA, LLC is based in Midwest City, Okla., near the world's largest aircraft engine overhaul facility, Tinker Air Force Base. The firm was incorporated in

2008 as the result of a US DoD initiative to eliminate or reduce the military's reliance on hexavalent chrome and other toxic substances. It has since become a key supplier to the US Air Force and the turbine support industry worldwide.

MTC expands its range of wear-resistant Diamonex coatings for the aerospace industry

Morgan Technical Ceramics (MTC) has expanded its range of Diamonex diamond-like carbon (DLC) coatings for use in the aerospace industry. The coatings can be applied to a variety of metals, plastics and glass, providing an improvement in both product life and operating efficiencies said the company. For aircraft windshields, the DiamondShield coating reduces the abrasion caused by desert sand environments. Other recent applications include a titanium landing gear bearing refurbishment program, landing lights and wing tip lenses.

Under harsh environments, Diamonex coatings provide a robust and durable solution for bearings, actuators, gears, fasteners, control mechanisms and landing gear as well as a variety of transparent products, according to the company.

In response to market demands for an environmentally friendly, corrosion protective coating, Diamonex developed its special Diamonex Crx coatings, which provide an environmentally friendly solution compared to existing hard chrome plating said the company. These coatings are deposited using a low temperature (<250°C) plasma-enhanced chemical vapor deposition process, so the underlying substrate material is not affected. The coatings are also significantly thinner than hard chromium, and do not require any post process machining. They feature excellent adhesion and a low coefficient of friction. Compared to chrome plating or titanium nitride (TiN), the Diamonex Crx coatings are significantly harder and provide additional wear resistance and reduced coefficient of friction. **CW**

Where Have All The Leaders Gone?

by Ira S. Miller

Chemark Consulting

Employee Loyalty Declines Worldwide: "...the global top five non-financial factors—respect, work-life balance, type of work, quality of co-workers and quality of leadership."¹

- Penn State sex scandal
- Special task force on debt reduction
- Corporate governance: Enron, Arthur Andersen, WorldCom

"...executives need greater flexibility to create strategic and tactical options they can use defensively and offensively as conditions change. They need a sharper awareness of their own and their competitors' positions. And they need to make their organizations more resilient."²

When was the last time you committed to lead someone through the gauntlet that resulted in developing a true leader? When was the last time someone helped you? The fact is, virtually every consistently successful leader has learned their craft from either experience, a mentor or both.

In the "new normal", there is little time to gain the experience because we're running too fast and there are less and less experienced people around to mentor the next generation of leaders.

The best place to find a mentor is inside your company, assuming there is mutual interest. They understand the company's culture and politics.

If you're going outside your company, your mentor should possess all of the following attributes:

- **Real leadership experience.** Assignments with responsibility for policy making. Positions in the C-suite (CEO, CFO, COO).
- **Ability to relate to you.** Do you understand the words he/she is using? Can they share their experiences in a way that is meaningful and/or useful to you?
- **Ability to compare psychological assessment results against best-in-class leaders.** The output of almost all psychological assessments is valid; they accurately depict the participant's capabilities/tendencies. Many issue reports that are in plain English. However, the

only real benefit is in comparison to successful leaders. Make sure your outside mentor can make this comparison or you could be misguided in your improvement efforts.

- **Has a proven approach to leadership.** There should be both philosophical and practical elements. A mentor that is not sharing successful approaches to leadership is merely helping the mentee mine their own ideas. They are not adding to the sum of total knowledge within the mentee.
- **Provides proven, successful management tools.** Leaders are managers too. A strong managerial tool kit allows the mentee to delegate more effectively, leaving more time to invest in their leadership responsibilities.
- **Will be available when you need him/her.** This has three elements. First, there should be no limit on the amount of time the mentor will spend with the mentee. Second, the mentor should be willing to discuss any topic that the mentee brings up. Finally, the mentor must take responsibility for the mentee's growth. Clearly, the mentor cannot guarantee the mentee's success at grasping the shared leadership concepts. But, like a parent, the mentor must be willing to go to extraordinary lengths to keep the mentee on track.

And one more thing, check their references. Mentees should have demonstrable improvements in business results as a result of coaching efforts.

Case Stories From Our Files

Division president, Midwest chemical company (in his own words):

I have "graduated", if one can ever truly graduate, from two years of mentoring and I have been immeasurably changed in my views and approach to business. Just as when starting a business, the change goes relatively unnoticed until you adeptly handle a crisis or business opportunity that makes you realize how much you have changed your skill set.

Mentoring and coaching mean the same to most people, but in reality mentoring implies a closer relationship and more involvement than should be expected in coaching. My division ben-

Herein we explore the growing need for mentoring senior executives. The first of a two-part series.

edited from both as I, as president, was mentored, and my management team was coached.

Benefits

1. A better focus on material margins and their impact on the business wherein more attention was given and action taken to raise prices when possible and maintain prices when raw material costs dropped, increasing the bottom line.
2. A penchant for action in all areas of the business, thus allowing the company to continually improve and free employees for other and higher level tasks.
3. Applying proprietary business models in assigning tasks to appropriate departments and functions and not to favored personnel, providing for a better understanding of the demands on the business and abilities of the personnel.
4. Developed significantly better business plans for acquisitions and increasing manufacturing capabilities.
5. Departments employing a proprietary “plan to plan” technique to keep initiatives well managed and grow personnel skills in the process.
6. Understanding the data to information (a structured report) to knowledge (personnel interpretation of information) cycle and that without the “to action” step at the end the prior steps serve no business purpose.

Nice Words But “So What?”

Of course most leaders want it boiled down to dollars and cents of each and every improvement. Almost like making it an ala carte menu that you can pick and choose from. Unfortunately, the issues are so much a part of overall operations that separation is impossible.

I will share that when my division was sold, the sales price was about 12 times EBITDA (vs. an industry average of seven times) because of the value added through mentoring activities and the perception the division created in the marketplace.

Owner/CEO Privately Held Chemical Additives Co.

The owner is the second-generation owner/CEO of his company. The company's survival was in jeopardy when their largest customer was acquired by a company with a long-standing relationship with the owners' primary competitor. The revenue loss put the company at negative cash flow even after the owner took action to reduce costs.

The owner knew his business and had excellent leadership instincts. However, he believed he was, in addition to CEO, the CSO (chief solutions officer). This isolated him in his decision-making. The owner hated conflict and avoided it at almost all cost. He also found public speaking to be very difficult.

In the owner's case, the lost customer caught him by surprise. But, he was determined not to let that happen again. He knew the answer was to have many more customers so as not to be so dependent on any one customer. The concern was could his organization handle the additional workload and still maintain their high level of customer service and product quality?

The owner really had two problems: getting the organization prepared for the larger customer base and improving his leadership skills in the area of conflict resolution and communication.

With some coaching the owner shared his vision of a larger customer base and his fears with the organization. Through a series of seminars and workshops, the management team learned about alternative organizational structures. They settled on one and went about the restructuring, becoming more market driven without losing their customer focus or manufacturing quality.

Their customer base increased significantly over the next few years. Then the Great Recession of 2008 hit. The owner's business was affected as were most in his industry.

This time he framed the situation for his management team and provided guidelines for keeping the business going. Then he let the management team come up with their solutions to meet his guidelines. They have made the changes necessary to weather the storm and accelerate to even greater success as the Up Cycle started.

The CFO tells me the owner has become more confident as a leader. By sharing the business' problems with the organization, he finds communicating is easier.

As a footnote, the owner has retired from his chief solutions officer position. Next month, we will visit specific customized mentoring programs. **CW**

References

1. Mercer's 2011 “What's Working” survey of nearly 30,000 employees.
2. McKinsey Quarterly, December 2008.

Successful Strategies for Decision-Makers



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The powder coatings segment continues to grow as paint makers turn to solvent-free formulations.

by Tim Wright, *Editor*

Stricter environmental regulations in the paint and coatings industry have benefited powder coatings. The technology has gained substantial popularity over the past several years. There are several advantages to the powder coating process, the main one being that it does not require solvents, and only minor amounts of volatile organic compounds (VOCs) are released during the cure.

The powder coating market presents rapid growth driven by the development of new material, new formulations and advancement of equipment and application processes.

Global demand on powder coatings was valued at approximately US\$X.X billion in 2010 and is expected to grow by X% in the coming years with Asia Pacific representing the highest growth region, it being the largest consumer of powder coatings. Industrial uses combined presents the largest application market, while the automotive industry is the most promising one.

Furniture and appliance markets will continue their steady and strong growth. IT and telecom is a new market where applications of powder coatings are being extensively explored.

With the disadvantages being minimized and advantages further strengthened by the development in materials and tech-

nologies, powder coatings provide a market with opportunities and potential.

For example, AkzoNobel, which is the world's largest manufacturer of powder coatings, is driving sustainable automotive topcoat solutions.

Showcased at the Cannes Surcar 2011 Congress, the Citroën DS4 is the first ever passenger vehicle in Europe to be exhibited using matt black textured powder coatings on the car body.

After initial trials with PSA Peugeot Citroën, the parent company of the Citroën DS4, a model was produced using Interpon A 5000. PSA Peugeot Citroën decided to showcase the car and its new coating system in Cannes.

"This is a great step forward for powder coatings in the automotive arena and one we are particularly proud of," said Marie Cécile Dekker, global automotive marketing manager, AkzoNobel Automotive and Aerospace Coatings (AAC). "Historically powder coatings have been primarily used on the components of the vehicle, including the wheel and trim areas, providing aesthetic value and the high performance attributes required by the auto industry. We are now able to offer exciting new finishes, like the matt black texture, that are innovative and provide a unique and exciting character change that enhances the design features of the auto body. This type of design concept really is pushing the boundaries and inspiring design teams in the automotive world to think unconventionally."

Powder coatings as a body coating alternative mark the start of a new era for automotive manufacturers who wish to reduce both their carbon footprint and their costs without compromising on technical quality or performance. Powder coatings are offering the automotive industry a sustainable alternative to liquid paints.

AkzoNobel's powder mono coat system reduces the number of process steps and enables a significant reduction in energy consumption.

"This is not the first time powder coatings have been used as automotive topcoats. We have been coating commercial and passenger vehicles for many years and have made steady advances," said AkzoNobel AAC's Kevin Hales. "A lot of hard work has gone into refining the product and application techniques, working closely with PSA Peugeot Citroën to ensure their incredibly high quality demands are met and the coating is suitable for the European passenger vehicle market."

PSA Peugeot Citroën has considerable experience in powder coating, especially for primer, which has been used at its Mulhouse factory since 2003. "This project was very exciting because it's not only a practical response to customer expectations for more innovative effects, but also it's obtained in the most simple way we can imagine, which was to apply a mono coat paint directly on e-coat with a fully automatic process," said Antoine Vieu, PSA Peugeot Citroën expert for topcoat materials.

PSA Peugeot Citroën not only wanted a powder coating for this significant new finish, they also required a matching finish for the plastic body panels.

"Our challenge was to provide a high quality aesthetic match not only for color but also in surface structure," said Regis Garcia of AkzoNobel Automotive and Aerospace Coatings. "The Citroën DS4 is evidence that AkzoNobel AAC rose to this challenge."

Another example of innovative powder technology at work can be seen at San Jose International Airport, which is the first showcase for PPG Industries' Duranar powder coatings.

The new Terminal B concourse at the Norman Y. Mineta San Jose International Airport in California is the first monumental architectural project constructed with Duranar powder coatings by PPG's industrial coatings business.

Duranar powder coatings are formulated by PPG to provide the same long-term durability as Duranar liquid coatings, but in an environmentally advanced, ultra-low-VOC powder. They are based on the same polyvinylidene fluoride (PVDF) technology as liquid Duranar coatings.

Duranar Regal White powder coatings were applied to a series of curved, perforated metal panels that arc over the main Terminal B structure. The coating was specified by Fentress Architects, Denver, Colo. Overly Manufacturing, Greensburg, Pa.,



AkzoNobel's Interpon Powder Coatings become the first full body monocoat powder coating to be used on a passenger vehicle in Europe. The Citroën DS4 is pictured here.

was the metal panel manufacturer and Spectrum Metal Finishing, Youngstown, Ohio, was the PPG Certified Applicator. Terminal B covers more than 160,000 square feet and is designed to accommodate up to 8.5 million passengers a year. The project earned LEED Silver certification from the U.S. Green Building Council (USGBC).

Consolidation in the market

There has been a great deal of consolidation over the past several years in the powder coatings market, where the major players own roughly 85 percent of the market share. Most notably AkzoNobel acquired the powder coating activities of Dow Chemical, which Dow gained from its acquisition of Rohm and Haas.

In addition, Becker sold its powder coating business in North America to Sherwin-Williams and its European powder coating business to Inver SpA, while

BASF sold its powder business for home appliances, heating and pipe coatings to Arsonsisi SpA.

Valspar Corp. recently bought a Brazilian manufacturer of powder coatings used in appliances, building products, transportation and other general industrial markets. Isocoat Tintas e Vernizes Ltda. serves customers in Brazil, Argentina and Colombia. The company, which is located in Araçariçuama, state of São Paulo, had 2010 sales of approximately \$34 million.

"Isocoat further strengthens Valspar's presence in the fast-growing coatings markets in Latin America," said Gary Hendrickson, Valspar president.

During the year Tikkurila completed the selling of its powder coatings business to Teknos Group Oy. Tikkurila divested its industrial powder coatings business, because it is not a part of Tikkurila's core business. After the transaction, Tikkurila has no powder coatings related operations. The revenue of the sold com-

pany was €2.4 million in 2010. Tikkurila is the leading decorative paints company in Russia, where it operates four paint factories after the transaction.

In other news, Australia's largest paint maker Dulux expanded its presence in the growing Chinese market through a merger between its Chinese operations and Hong Kong-based Camelpaint group. Dulux will own 51 percent of the new company called DGL Camel International.

Camelpaint was established in Hong Kong in 1932, manufacturing a range of coating products in Hong Kong and southern China. Dulux and Camelpaint have been joint venture partners to produce powder coatings used in windowsills and door paints in China since 2004.

Dulux recorded revenue of roughly \$700 million last year with more than 90 percent of its business coming from Australia and New Zealand. Remaining sales occur in Malaysia, China, Hong Kong and PNG.

In terms of infrastructure expansion, AkzoNobel Powder Coatings has been very active this past year. The firm expanded its facilities at a manufacturing plant in Izmir, Turkey as well as invested in a new powder coating manufacturing plant in Apodaca, Mexico. In addition, AkzoNobel opened a new, dedicated polymer research laboratory facility in Felling, UK. The building houses a polymer laboratory devoted to the development of novel polymers and processing technologies for AkzoNobel Powder Coatings' Interpon and Resicoat brands, as well as a powder application line.

Antimicrobial technology in powder formulations

In terms of new technology development, one growing area involves the incorporation of antimicrobial technology into new powder coating formulations.

Diamond Vogel launched a premium industrial powder coating with Agion antimicrobial protection. Sciessent, the creator of naturally occurring silver-based antimicrobial brand Agion, partnered with Diamond Vogel to offer the Peridium Powder Coatings line.

The new Peridium line brings the quality and durability that industrial customers have found synonymous with the Vogel name, with the added benefit of Agion antimicrobial product protection.

Agion technology inhibits the growth and propagation of bacteria on the surface of a product, adding an important layer of product protection to equipment and furnishings coated with the new Peridium powder coating line. Diamond Vogel makes coatings specifically formulated to the manufacturing setting and the customers' requirements.

The new Peridium Powder Coatings—including hybrid, polyester and epoxy technologies—with Agion technology is a powder coating made without water or petroleum-based solvents, and is applied electrostatically and cured through a baking process. This performance feature in Peridium powder coatings is exhibited in excellent final hardness and abrasion resistance of the coating, the company said.

Agion antimicrobial solution provides continuous product protection by releasing silver ions to the surface at a steady rate, and is designed to last the useful life of the product. Peridium Powder Coatings with Agion antimicrobial technology are ideal for healthcare furnishings, fitness equipment, furniture fixtures and many other industrial applications.

AkzoNobel Powder Coatings has teamed up with BioCote, an antimicrobial specialist in Europe, to create Interpon AM. Interpon AM is a high quality powder coating product that incorporates BioCote antimicrobial technology to offer coating protection in hygiene sensitive environments.

"AkzoNobel Powder Coatings is a world leader in powder technology, and working with BioCote we are now able to offer a coating product that combines the protective qualities of Interpon Powder Coatings with the antimicrobial properties that BioCote silver ion technology offers," said Mark Reekie, market segment manager – Europe West AkzoNobel Powder Coatings. "The possibilities that antimicrobial coatings can deliver are exciting and building hygiene protection into a coating provides a further line of defence in many diverse environments."

Interpon AM provides benefits not only in traditionally hygiene sensitive areas such as medical and catering industries but also areas where there is a high level of human contact, for example in public transport, leisure facilities and self service technologies.

The antimicrobial technology used in Interpon AM is independently tested and is shown to reduce levels of bacteria and fungi by up to 99.9 percent said the company. **CW**



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Biocides Market Report

The market for biocides, algacides and fungicides continues to show improvement from the recent economic downturn.

by Kerry Pianoforte, *Associate Editor*

The market for biocides, algacides and fungicides continues to be a mixed bag. In North America and Europe, biocides manufacturers Coatings World interviewed reported little to no growth. The Asia markets continue to register growth, albeit at a slower pace than previous years.

“The global market demand for industrial biocides for paints and coatings in 2011 overall has been subdued, with little or no growth in North America and Europe,” said David Tierney, global business manager, Lonza Microbial Control. “Growth has continued in Asia but that market has also been impacted by the economic issues in the more mature markets. Regulatory pressure on both the biocide component and the finished paint formulations continues to be the main driver for biocide selection.”

Demand for biocides has shown signs of improvement since the start of an economic downturn in mid-2008. “Of course, biocides serve many end-use segments, each with its own set of economic drivers,” said Ray Fahmy, business director, biocides North America, Ashland Specialty Ingredients. “Products required for the real estate and construction markets, for example, remain fairly sluggish in North America. We remain optimistic on total demand, given the emerging markets of India and China.”

For 2011, Dow Microbial Control reported a wide variation in demand for biocides in the paint and coatings industry. “Due to a slow down in the new construction industry, volumes growth in the developed regions—Europe and North America—grew around two to three percent on a year-over-year basis,” said Mike Sheehan, regional commercial manager North America, Dow Microbial Control. “Volumes in the developing economies were stronger and continued their growth trend.”

Meeting formulation and performance needs

Biocides makers must work hard to develop products that meet regulations, but at the same time, provide products that feature high performance characteristics. Their customers are looking to formulate coatings with biocides that maximize performance at the lowest possible use level.

“The bar has been set very high recently, however, with customers looking for biocides that offer enhanced activity to protect the newest generation of environmentally friendly, water-based paints, which may be more susceptible to microbial and fungal contamination,” said Fahmy. “Ashland has and continues to update its product line to better support performance and formulation parameters associated with today’s low-VOC, formaldehyde-free paint products.”

Environmental regulations and the trend toward low and zero VOC coatings continue to drive the market for biocides. Biocides

manufacturers are tasked with providing a compliant biocide that will protect against contamination both during production and in-can.

"Increasingly, we are being asked for zero VOC, formaldehyde-free preservatives, which will have minimal impact on the environment," said Tierney. "Emphasis is also being placed on longer term performance and reduced leaching for dry film preservatives.

The requirements for low and zero VOC coatings have increased and continue to drive the coatings market. "This trend has impacted both the selection of biocide chemistry as well as the performance criteria since lower VOC formulations are generally more susceptible to microbiological attack and therefore need more robust preservation systems," said Tierney. "Overall we have seen a significant move to aqueous-based formulations and combinations of less volatile active chemicals. As a result, paint formulators are increasingly using biocidal products."

"With environmental regulations driving substantial changes in the biocides market, paint and coatings producers now require technologies that minimize the risk of environmental impact and at the same time meet key performance requirements," said Fahmy. "An ongoing shift in biocides technology is in line with changes in the way architectural coatings will be made and sold."

Ashland has seen an increase in demand for formaldehyde-free, low and zero VOC biocides formulations and other fungicide and algacide products produced with globally accepted raw materials. "Ashland Specialty Ingredients produces novel and ef-

ficient water-based preservatives and fungicides produced with globally accepted technology," said Fahmy.

Ashland has released several new products including Nuosept 498G preservative, a globally accepted, 20 percent BIT-based product, and Nuospet BIC preservative, a water-based formaldehyde-free product with three active ingredients, BIT, IPBC and CMIT, that work to provide protection across a wide antimicrobial spectrum. "Other new products with good uptake in the market include Fungitrol 940CR biocide, a controlled release IPBC-based technology for enhanced dry film performance and Fungitrol IP24 biocide, a flowable IPBC powder," said Fahmy.

In Western Europe, alignment with the EU Ecolabel is important. "As the EU Ecolabel sets further restrictions on the use of raw materials such as formaldehyde or bronopol, European paint manufacturers are facing increasing difficulties to reach adequate in-can preservation," said Manfred Niehueser, key account manager paint and coatings, Dow Microbial Control. "This led to the development of our new in-can active ingredient, MBIT (2-Methyl-1,2-benzisothiazol-3(2H)-one). This new chemistry has a broad spectrum of efficacy and addresses the need for both bacterial and fungal control in the paint can."

Bioban 551S is Dow's new generation of in-can preservative based on its new antimicrobial active ingredient MBIT (2-Methyl-1,2-benzisothiazol-3(2H)-one).

"Formulations based on MBIT provide proven, reliable performance against a broad spectrum of organisms, including yeast

Ashland, Lonza make key acquisitions in 2011

Two mega-deals occurred in the biocides market during the year when International Specialty Products (ISP) and Arch Chemicals were bought. First Ashland purchased ISP in August 2011 for \$3.2 billion. ISP has been integrated into the Ashland Aqualon Functional Ingredients commercial unit, more than doubling the size of Ashland's highest-margin business.

An integration team with key representatives of both companies is being led by John Panichella, president of the new Ashland Specialty Ingredients business. Ashland anticipates approximately \$50 million in annual run-rate savings by the end of the second year through eliminating redundancies and capturing operational efficiencies.

"Primarily, the ISP businesses have been integrated into the Ashland Aqualon Functional Ingredients commercial unit," said Ray Fahmy, business

director, biocides North America, Ashland Specialty Ingredients. "The combined unit is now called Ashland Specialty Ingredients. With a larger range of coatings ingredients managed under the auspices of Ashland Specialty Ingredients, we will better serve formulators and marketers of architectural and industrial coatings."

In October 2011, Lonza Group AG completed the acquisition of Arch Chemicals Inc. for approximately \$1.2 billion. Arch Chemicals' products are used in a number of industrial applications including protecting wood from fungus and preventing the growth of molds and mildew in paints. The company reports that this deal with Arch Chemicals will make Lonza Group the leader in the \$10 billion market which is exhibiting growth of as much as six percent per year.

Lonza Microbial Control, a new business sector formed by the acquisition and led by Jeanne Thoma, offers a complete portfolio of microbial control solutions. Lonza will offer this complementary

range of products and actives to a broader range of customers in both established and emerging markets.

"The Lonza Microbial Control business now comprises many complementary aspects and we will have access to both interesting additional active chemistry as well as global technical and marketing resources, which will enable us to further develop our product range and service capabilities across the globe," said David Tierney, global business manager, Lonza Microbial Control.

The combined company has a significantly broadened range of active ingredients and worldwide formulated product registrations. Lonza Microbial Control now has an even stronger global service and production footprint, greatly enhancing our ability to provide our customers with the best solutions around the world," said Tierney. "In addition, the combined businesses will support increased investment in R&D and product development, bringing new microbial solutions to the benefit of our customers."

and tough to control bacterial strains, while meeting environmental, health, and safety requirements,” said Emerentiana Sianawati, senior research scientist and MBIT project leader, Dow Microbial Control.

In North America, Bioban 200 Antimicrobial, based on the DCOIT active ingredient, was launched to fulfill a need for a broad spectrum, long-lasting dry film preservative free of VOC and APEO. The DCOIT molecule also presents an economical choice for dry film protection when compared to other chemistries facing significant run-ups in raw material costs.

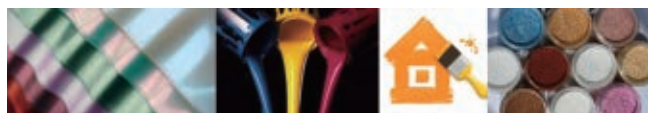
Bioban 200 Antimicrobial is designed for the protection of paint films against fungal attack. In addition to providing protection against surface molds and mildew on the paint film, the product also displays biocidal activity against algae and bacteria. The active ingredient in Bioban 200 Antimicrobial is 4,5-dichloro-2-n-octyl-4-isothiazolin-3-one (DCOIT), which is the same active ingredient used in Rozone 2000 Antimicrobial and Rocima 200 Antimicrobial. It provides the same broad-spectrum activity with improved ease of formulation and similarly can be used in both exterior and interior applications.

“Bioban 200 Antimicrobial is the result of high-class formulation development and extensive performance testing,” said Claudinei Fava, senior technical service specialist, Dow Microbial Control. “The formulation is based on the dispersion technology and patented active stabilization of Rocima 200 with negligible VOC

contribution to the paint formulations per analytical test methods currently used. Therefore, Bioban 200 Antimicrobial is a good component for new generations of low-VOC, aqueous coatings.

Lonza has developed Proxel BZ Plus Preservative, a dual active, broad-spectrum biocide for the preservation of industrial water-based products against bacteria, yeasts and fungi. “This technology is an aqueous dispersion of 1,2-benzisothiazolin-3-one and zinc pyrithione, which does not contribute to the total VOC of the finished product, can be added to product across a wide pH and temperature range and is suitable for products where formaldehyde and CMIT/MIT use is restricted,” said Tierney. “In particular, this product has been successful in preserving colorants—pigment pastes—where other preservatives have failed and is well positioned not only for today’s regulatory environment, but for years to come. Additionally we have developed the Proxel range of in-can preservatives to have suitable solutions for all critical application areas without incurring additional labeling requirements.”

“Global pressure on dry film actives such as Diuron and Carbazim has driven demand for Zinc Omadine ZOE antimicrobial, which provides protection against both fungi and algae without incurring additional labeling requirements,” Tierney said. “Further development work on dry film combinations and delivery systems is continuing in our newly commissioned global Innovation center in Alpharetta, Ga.” **CW**



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Pigment Suppliers DIRECTORY

The following pages contain a directory of select pigment suppliers and their products. For more information on the products listed in this guide contact the companies directly.

BASF Corporation

Florham Park, NJ
800-962-7829
Fax: 800-971-1123
E-mail: coloreffectscustomer-care@basf.com
Web: www.basf.us/colorsolutions

Type of pigments: A complete portfolio of organic and inorganic pigments, dyes, preparations, dispersions and additives. Blacks (near-infrared reflective pigments, near-infrared transparent pigments, mica-based effect pigments, heat management pigments); Blues (phthalocyanine blue, cobalt aluminum oxides); Corrosion inhibiting (misc. additives); Extender pigments (misc. pigment extenders and reinforcers); Greens (chrome green, phthalocyanine green); Iron oxide pigments (transparent iron oxides); Metallic pigments (pearlescent, special effects); Reds (diketopyrrolo pyrrole [DPP], quinacridone pigments, pyrazolone red and maroon, pigment scarlet, perylene red and maroon, misc. red and maroon toners and lakes, BON red and maroon); Specialty pigments (high-performance pigments, light interference pigments, heat management pigments, low VOC pigments, misc. thickeners); Yellow and Oranges (orthonitraniline orange, dinitraniline orange, misc. yellow pigments); Whites (synthetic mica-based effect pigments).

• **Firemist Velvet Pearl EH 921 effect pigments:** Applied in architectural paints, Firemist Velvet Pearl EH 921 has the

unique appearance of fresh snow. Distinctive effects used for coatings on accent walls, wallpaper, decorative concrete or wood.

Emerald Performance Materials

Hilton Davis
Cincinnati, OH
513-841-4000
Fax: 513-841-3771
E-mail: colors@emeraldmaterials.com
Web: www.emeraldmaterials.com

Type of pigments: Blues (phthalo blue RS, NCFN); Greens (phthalo green, BS); Reds (brilliant red, 2R); Yellow and Oranges (permanent yellow x-48).

Hoover Color Corp.

Hiwassee, VA
540-980-7233
Fax: 540-980-8781
E-mail: hoover@hoovercolor.com
Web: www.hoovercolor.com

Pigments Offered: Iron oxide pigments (umber natural iron oxides)

• **Raw and Burnt Umber Natural Iron Oxides:** Umbers are one of the most versatile natural iron oxides. Hoover Color offers 22 standard grades of umbers. Despite their dark appearance, they are close in crystal structure to yellow iron oxides. In their "raw" form, this yellow crystal structure gives raw umbers their pleasant greenish undertone. Often referred to as a neutral toner when used in combination

with other pigments, raw umbers can be used to darken a color mix without significantly altering the chromaticity of the other pigments in the mix. Raw umber has limited heat stability, but this allows us to heat-treat the umber and convert it to a heat-stable red structure. The resulting "burnt" umber has a pleasing warm red undertone, along with improved heat stability. It is widely used as a basic brown in many applications. It can also be used as the cornerstone pigment in a base to produce a wide range of brown shades.

Kish Company, Inc.

Mentor, OH
440-205-9970
Fax: 440-205-9975
E-mail: infor@kishcompany.com
Web: www.kishcompany.com

Types of pigments: Blacks (carbon black, iron oxide); Blues (ultra marine); Corrosion Inhibiting; Extender pigment; Greens (iron oxide); Metallic pigments (metallic effect); Reds (synthetic/natural iron oxides); Specialty pigments (aqueous, dispersion); Yellow and Oranges; Whites

• Ultramarine Blue

Lansco Colors

Pearl River, NY
845-507-5950
Fax: 845-735-2787
E-mail: frank@pigments.com
Web: www.pigments.com

Pigments Offered: Blacks (carbon black, complex inorganic black); Blues (complex inorganic blue, phthalocyanine blue, ultramarine blue); Greens chromium, phthalocyanine); Iron Oxide Pigments (black iron oxide, red/brown iron oxide natural and synthetic, yellow iron oxide); Metallic Pigments (aluminum pastes); Reds (BON red/maroon, lithol rubine, metalized azo red, naphthol red, perylene red, quiracridone red, quiracridone violet, red lake C rhodamine, sodium, lithol/calcium lithol, barium toner, toluidine red); Whites (titanium dioxide - rutile); Yellows and Oranges (chrome yellow, diarylide orange toner, diarylide yellow toner, hansa yellow, metalized azo yellow, molybdate orange, orthnitraniline orange, dinitraniline orange)

- **1060 Azo Red 60:1:** Lansco 1060 is a bright scarlet, low cost pigment useful in powder coatings and plastics. This product is a good replacement for grades from other supplies that have been cancelled.

- **1179 Perylene Red 179:** Lansco 1179 gives cleaner, yellow shades than other pigment red 179 products and is an improvement in this color space.

Lanxess Corporation

Pittsburgh, PA
E-mail: info@lanxess.com
Web: www.us.lanxess.com

Types of products: Blacks (iron oxide); Blues (phthalocyanine blue); Greens (chrome oxide green); Iron Oxide pigments (synthetic iron oxide); Reds (iron oxide) Yellow and Oranges (azo); Whites (iron oxide).

Orion Engineered Carbons LLC

Humble, TX
832-445-3300
E-mail: pigmentblacks@orioncarbons.com
Web: www.orioncarbons.com

Pigments offered: Blacks (carbon black).

Rockwood Pigments

Beltsville, MD
800-638-4444
Fax: 301-210-4967
E-mail: info.us@rppigments.com
Web: www.rppigments.com

Pigments offered: Blacks (black/gray, complex inorganic, carbon black, lamp black); Blues (complex inorganic, ultramarine); Extender pigments (barium sulphate); Greens (chromium, complex inorganic); Iron Oxide pigments (black, burnt umber, raw sienna, Yellow/Red/Brown natural and synthetic, burnt sienna, metallic brown, ochre, raw umber, van dyke brown); Yellow and Oranges (yellow/orange, complex inorganic).

The Shepherd Color Co.

Cincinnati, OH
513-874-0714
Fax: 513-874-5061
E-mail: salesusa@shepherdcolor.com
Web: www.shepherdcolor.com

Types of pigments: Blacks (complex inorganic color pigments); Blues (complex inorganic color pigments); Greens (complex inorganic color pigments); Metallic pigments (silver coated glass flakes); Yellow and Oranges (complex inorganic color pigments).

- **Orange 10C321:** Orange 10C321 has a high solar reflectivity, so it is a powerful addition to its Arctic Infrared Reflecting Color Pigments. Orange 10C321 meets numerous regulations governing packaging, recycling and toys.

Sigmund Lindner GmbH

Warmensteinach, Germany
0049-9277-99483
Fax: 0049-9277-99499
E-mail: Erwin.pschierer@sigmund-lindner.com
Web: www.sili.eu

Types of pigments: Specialty pigments (glitter).

- **SiLiglam Type P:** Effect glitter with outstanding chemical resistance for both sol-

vent-based and water-based formulations. SiLiglam Type P shows metallic shine and gives bright spot sparkling effects.

Types of products: SiLiglam Type I

Attributes/comments: Effect glitter with outstanding chemical resistance for both solvent-based and water-based formulations. SiLiglam Type I gives iridescent spot sparkling effects.

Sincol USA

Upland, CA
909-931-9954
Fax: 909-931-9465
E-mail: customerservice@sincolusa.com
Web: sincol.com.cn

Types of pigments: Blues (C.I. 15.1-15.4); Reds; Yellow and Oranges (azo and lightfast).

Sudarshan North America Inc.

Ridgewood, NJ
201-652-2046
Fax: 201-882-8420
E-mail: usa@sudarshan.com
Web: www.sudarshan.com

Types of pigments: Blues (PB 15:1, PB 15:3, PB 15:4); Greens (PG 7); Reds (PR 122, PR 170, PR 177, PR 264, PR 48.2, PR 112, PV 19); Specialty pigments (pearls); Yellow and Oranges (PY 65, PY 74, PY 110, PY 139, PY 151, PY 154, PO 34, PO 36, PO 64).

- **Sudaperm Yellow 2935 (PY 139):** A reddish yellow isoindoline pigment with high chroma, excellent rheology and opacity. Sudaperm yellow 2935 has high color strength and is ideal for exterior applications and high performance lead-free industrial coatings.

- **Sudaperm Yellow 2903 (PY 151):** Green shade yellow benzimidazolone pigment with excellent dispersibility, outstanding fastness to light and weathering. Ideal for industrial and powder coating applications.

Sun Chemical

Cincinnati, OH

513-681-5950

Fax: 513-632-1537

E-mail:

Richard.faubion@sunchemical.com

Web: www.sunchemical.com

Types of pigments: Blacks, Blues, Corrosion Inhibiting, Extender Pigments, Greens, Iron Oxide Pigments, Metallic Pigments, Reds, Specialty Pigments, Yellow and Oranges, Whites.

- **Sunperse ECO:** Sunperse ECO aqueous dispersions offer excellent light and weather fastness, broad compatibility with waterborne systems, outstanding stability to sedimentation and drying out, good wet-rub resistance and viscosity and narrow specifications.

- **SunMetallics Polymer Encapsulated:** An expansion of the SunMetallics product line, this heavy metal-free technology protects the aluminum flakes with an

optically transparent, uniform silicate layer, offering long-term stability in waterborne coatings and excellent circulation stability.

Toyo Ink Mfg. America LLC

Teaneck, NJ

201-287-4000

201-836-4982

E-mail: sales@toyoink.com

Web: www.tima.toyaink.com

Types of pigments: Blues (phthalocyanines, indanthrone, carbazole violets); Greens (phthalocyanines); Reds (metalized azo reds); Specialty Pigments (dispersions, colorants); Yellow and Oranges (diarylide yellows).

- **No. 700-10 FG Cyanine Blue:** Special NCNC beta blue exhibiting superior dispersibility utilizing proprietary TOYO-additive technology.

- **Lionol Blue 7265-PS:** High-performance automotive-grade alpha blue with proprietary TOYO-additive technology to stabilize against flocculation and recrystallization.

Trust Chem USA LLC

East Greenwich, RI

401-398-7301

Fax: 401-398-7321

E-mail: info@trustchemusa.com

Web: www.trustchemusa.com

- **New Quinacridones:** Violet 19, Σ -type, yellow shade, mainly used in coating and tinting system. Red 202, mainly recommended for automotive paint and plastic.

- **Azo-condensation red:** Red 144, Red 166 and Red 242 are launched in this range. Their performance are very close to famous brand in the market. Main fields of application are coating and plastic. **CW**

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Floor Sealer on Steroids

Novel Green Sealer Technology for Decorative Concrete Flooring

By Steven Reinstadtler
Bayer MaterialScience LLC

Presented at the recent Polyurethanes 2011 Technical Conference hosted by the American Chemistry Council, this paper discusses the use of two-component ultra-low-VOC waterborne polyurethane sealers that can be used in conjunction with decorative concrete options to achieve both durability and aesthetic targets.

A recent trend, especially in sustainable building practices, is the use of a building's existing concrete floor as a decorative element of the structure. Architects and designers are increasingly using this ubiquitous building component in more and more aesthetically pleasing ways. Diamond polishing, stamped concrete and decorative stains are being employed as durable yet beautiful floor options in both new construction as well as refurbishment work. However, these concrete surfaces and finishes can still lose their appeal should the wrong liquid accidentally come in contact with the surface since current sealers may not resist many common staining agents. The use of two-component ultra-low-VOC waterborne polyurethane sealers can be used in conjunction with decorative concrete options to achieve both durability and aesthetic targets.

Introduction

For the use of concrete as a decorative element in commercial buildings such as retail space, large grocery chains, office buildings, and light industrial structures, there are several types of concrete flooring options that may be used. First, an existing concrete floor may be ground and polished to a high gloss using diamond

grinding equipment. Typically, the final polishing grit varies between 800-3000 grit. This method works well when the existing concrete floor is in good shape, has desirable aggregate content, size, and color, and is free of major cracks. After polishing, the floor may also be treated with a lithium silicate-based densifier, which creates a harder surface that resists micro abrasion and the subsequent concrete dust that can be generated. Additionally or separately, the concrete can be treated with a decorative stain, which imparts a desired color and look to its natural plain finish. By itself, this floor preparation method initially allows for a durable finish and good aesthetic qualities. However, over time the surface may be exposed to chemicals and foodstuffs, which can stain or even damage the concrete creating an uneven spotty look. Even with the use of a densifier, the concrete surface can remain porous enough for certain staining agents to penetrate and discolor it in places. In grocery stores, some common products can significantly alter the appearance of decorative or polished concrete if they are accidentally spilled on the floor. For instance, vinegar, pickles and relish will etch the concrete due to their acetic acid content and cause a discolored area, as well as a down-glossing of the affected area.

In order to address the staining or discoloring issue, applicators and owners have historically used acrylic-based sealers to attempt to protect their decorative concrete investment. These types of products are often generically referred to as "stainguard" or "guard" products. Many contained significant quantities of VOC and solvents which posed both odor and sustainability issues. More recent acrylic products, while reduced in VOC or solvent, often do not have the durability or chemical resistance needed for long term performance.

Recent developments of waterborne polyurethane coatings and sealers address many of the desired attributes sought by the formulator, contractor, and owner such as:

- Chemical and Stain Resistance
- Ease of Use
- Low Odor
- Concrete Penetration
- Long Term Performance

By drawing on the proven power of polyurethane chemistry in many adjacent markets¹, novel two-component waterborne polyurethane technologies have been developed that meet or exceed the desired targets of this growing market segment. For decades, solventborne polyurethane coatings have been considered the mainstay for high performance coatings used in architectural, industrial maintenance, corrosion, and construction applications due to their excellent mechanical and weathering properties. But increased governmental, regulatory, and sustainability pressures have created a need for coatings technology that would reduce or eliminate VOC, HAPS, heavy metals and/or other environmentally detrimental compounds. In the past decade, the first generation of waterborne polyurethane coatings was formulated and introduced to the market. While offering the chance to replace some of the VOC and solvents with water, many of these coatings still had in excess of 250 g/L of co-solvent. In addition, these coatings often fell significantly short of the solventborne polyurethane standard in chemical, abrasion and UV resistance. As with most emerging technologies, the learning curve was steep and the second generation of waterborne polyurethane coatings was developed with the goal of meeting or exceeding the desired traits of the solventborne polyurethane coatings but with sig-

Table 1. Waterborne Resin Attributes

Properties	Units	Bayhydrol A 2542	Bayhydrol A 2546
Type		Hydroxy functional polyacrylic dispersion	Hydroxy functional polyacrylic dispersion
Solids Content	%	50	41
Equivalent Weight		630	1000
pH Content		7.5	7.5
Viscosity at 23° C cps.		2000	120
Weight/gal. @ 25° C lbs.		9.5	9.2
Use and Attributes		High gloss resin	Matte resin

Table 2. 2K Waterborne Guide Formulas

Component 1	% by weight	
	Bayer Gloss Formula	Bayer Matte Formula
Bayhydrol A 2542	45.75	15.26
Bayhydrol A 2546	--	35.60
Deaerating additive	0.31	0.32
Defoaming agent	0.12	0.14
Flow and leveling additive	0.49	--
Rheology additive	--	2.28
Water	14.2	9.61
Component 2		
Bayhydrol XP 2547	39.1	36.79

nificant reductions in VOC and solvent levels. These second generation waterborne polyurethane coatings have achieved the property goals and are “truly waterborne” – having 0-20g/L VOC levels. Due to the increased demand for higher durability concrete sealers, this waterborne polyurethane technology has been looked at as a replacement for the traditional acrylic stainguard products currently being used. Essentially, a “stainguard on steroids.”

Two-component waterborne polyurethane coatings

Experimental

Several waterborne resins were considered within the scope of this paper for use in the decorative concrete floor environment due to their desirable physical traits (Table 1). These traits include:

- Near zero-VOC formulas with excellent abrasion and chemical resistance

- No odor when applied in the field with other trades or building occupants present

- Adjustable gloss levels from high gloss to matte

- Ability to be used as a higher solids sealer for more porous decorative concrete or as a lower solids sealer for polished concrete and/or densified concrete.

Guide formulas were prepared using two Bayer waterborne resins along with the necessary additives (Table 2). The gloss levels were varied via the resins employed in the formula rather than the use of flattening aids. Bayhydrol® XP 2547, a hydrophilic HDI trimer, was used as the hardener with a NCO:OH ratio of 3:1. This over-indexing can be accomplished with aliphatic isocyanates without detrimental bubble formation². The guide formula coatings were applied at approximately 2-3 wet mils with a dry mil thickness of approximately

1-2 mils per coat. The purpose of the sealer is to penetrate the surface and should leave very little film build on the surface of the concrete. Dry times for the coatings ranged from 2 hours for the matte formulas to approximately 6 hours for the gloss formula. The trend was noted that as the formulas were made to be less glossy, i.e. more Bayhydrol A 2546 was used in the formula, the dry time was reduced. The Bayhydrol A 2546 resin is a faster curing resin than the Bayhydrol A 2542 resin.

A sample of concrete was polished to be used as a test substrate. The surface was diamond polished to a 1500 grit finish then divided off into horizontal sections using foam tape. The lines were divided vertically into 8 sections. These columns corresponded with overall resin solids levels, starting at 55% and decreasing in 5% increments to 20% resin solids. Each column was then tested using common staining agents such as those listed in Table 3.

Table 3. Typical Staining Agent Testing

	55% solids	45% solids	35% solids	25% solids
Barbeque Sauce	Pass	Pass	Pass	Marginal
Balsamic Oil	Pass	Pass	Pass	Marginal
Spaghetti Sauce	Pass	Pass	Pass	Pass
Mustard	Pass	Pass	Pass	Fail
Balsamic Vinegar	Pass	Pass	Pass	Marginal
Ammonia	Pass	Pass	Pass	Pass
Used Motor Oil	Pass	Pass	Pass	Marginal
Transmission Fluid	Pass	Pass	Pass	Fail
WD-40	Pass	Pass	Pass	Marginal
Brake Fluid	Pass	Pass	Pass	Fail
Coke Cola	Pass	Pass	Pass	Pass

Discussion

The testing revealed that the sealer prevented discoloration or gloss change of the concrete substrate when it was exposed to a variety of staining or corrosive substances commonly encountered in the decorative flooring market. Many of these staining agents would cause disbondment, discoloration, or milking of traditional acrylic sealers.⁴ The percentage of resin solids was investigated since there is such a wide range of porosity in the different types of decorative concrete surfaces – polished, stained, densified, or a combination of these treatments. For projects where the concrete has been polished to a lower grit level, for example 500-800 grit, the preference is to use a higher solids level which will fill micro pores and be more readily absorbed into the substrate. This is often the preferred method for acid stained concrete as well. For higher polished floors, 1500 grit or higher, or floors that have been densified, the standard guide formula can be modified to a lower solids content in order to help with penetration into the tighter concrete surface. This is achieved either by:

- Thinning a commercially available two-component waterborne polyurethane system with distilled water to the needed target solids content

- Purchasing a commercially prepared, lower solids two-component waterborne polyurethane system specifically formulated for tighter concrete applications

The preference of this author is for the second choice above for several reasons. First, the correct dilution rate is done by the manufacturer in a controlled environment which ensures the accurate and desired amount of resin is installed on the surface. Second, field dilution could possibly be done with water containing solids, iron, dissolved salts, or other contaminants that can affect the final properties or cure time of the system. Third and most important, a specifically formulated lower solids coating/sealer system will still contain the proper amount of the other necessary components such as flow and leveling aids, bubble breaker additives, surfactants, and other additives that are necessary to ensure an easy application, good wet out, and the desired aesthetically pleasing look, as well as the required final physical properties.

Conclusions

Polyurethane-based sealers offer a step up in stain resistance while protecting against corrosive agents such as organic acids. During application, this novel two-component waterborne polyurethane coating penetrates effectively, without objectionable odor. The sealer technology offers contractors and owners a long-term solution for protecting their decorative concrete investment while preserving the pleasing aesthetics of these ornate works of art. **CW**

Acknowledgements

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tion during the research and summary of these unique technologies: Kathy Allen, Jeanette Eastman, and Chris Sullivan.

References

1. Reinstadtler, Steven, "Intelligent Concrete Coating Solutions for Sustainable Construction", CPI conference proceedings, 2009.
2. Wuehrer, Karl H.; Allen, Kathy, "Chemical Resistant Waterborne Polyurethane Topcoats for Flooring", *Journal of Protective Coatings & Linings*, 2007 24(2), pg. 58-66.
3. K. Allen and P. Schmitt, "Greener Gambits in the Antigrffiti Game", *Journal of Architectural Coatings* May 2009, pg. 38-47.
4. Interviews with professional flooring contractors in the decorative flooring industry, 2010-2011.

Steven Reinstadtler is the industrial marketing manager for Bayer MaterialScience's Coatings, Adhesives and Specialties Division in Pittsburgh, Pa. He holds a BS degree in Chemistry with a Polymer Science option from the University of Pittsburgh. Steven joined the Polyurethanes Division of Bayer in 1987 as a chemist working on high performance prepolymers and spray elastomers. He transitioned into the Coatings Division in 2006, where he was responsible for the research activities of the Construction Coatings group as well as forward marketing activities. Steven is currently responsible for identifying new polyurethane coatings



30th Biennial Western Coatings Symposium held in Las Vegas

Symposium offered attendees a wide variety of technical presentations.

by Kerry Pianoforte, *Associate Editor*

The 30th Biennial Western Coatings Symposium, the International Year of Chemistry, was held October 24-26 at the Mirage Hotel and Casino in Las Vegas, Nev., U.S. The Symposium featured educational seminars and scientific/manufacture progress updates, as well as tabletop exhibitions from a variety of companies serving the coatings industry.

Symposium organizers were pleased with both the quality of the presentations and the number of attendees. "People were happy at the show," said Sean Feng, president, West Coast Societies and chairman of the 30th Biennial Western Coatings Symposium. "Exhibitors were excited with the waves of attendees. Attendees were pleased with the number of presentations and presenters were equally impressed that so many attendees showed up at their talks. Every keynote speakers had dozens of participants who stood to hear the talk."

The Symposium commenced with keynote session, "U.S. Economic Outlook," by Robert Fry, a senior economist at DuPont. "Where are we in terms of industrial production is about where we were in 2008," he said. "Growth is slow. The trend is still down. The recovery is being driven by China, Korea and Thailand. It started in China and spread through the rest of the world.

"Global growth reaccelerated into 2011, but has slowed again," Fry said. "This can be attributed to high oil prices and the tsunami in Japan. Growth has slowed more recently because of the debt situation in the U.S."

Recovery has been weak in the U.S. because of the poor housing market. "Housing is one weak link in the U.S. Another is U.S. employment growing slowly," said Fry. "Spending is growing a little more than disposable income. Right now consumers are rebuilding their savings and not spending as much. We are starting to see some acceleration. Motor vehicle sales were hit hard and have fallen to the lowest levels since the 80s."



From left to right: Sean Feng, president, West Coast Societies and chairman of the Western Coatings Symposium; Dr. Dane Robert Jones, associate dean and professor, department of chemistry and biochemistry, California Polytechnic State University and this year's recipient of the WCS Samson-Adler Distinguished Service Award; Eunice Leung, WCS technical committee co-chair; and Melinda Forbes the 2009 recipient of the Adler Award.

According to Fry, a U.S. recession is not inevitable, but there are risks that it could happen.

"Five times since 1960 there have been declines in U.S. stock prices of this magnitude that were not followed by a recession," he said. "That happened last summer and 2002. So there is a precedent to have these economic conditions and not have a recession. Consumers and investors have lost confidence in leaders in the U.S. and Europe. Consumer sentiment has plummeted. Stock prices are down sharply, especially in Europe. Stock price declines are both a predictor and a cause of slower growth. A U.S. recession is not inevitable but the risks have risen."

The second day of talks began with a keynote session on "The Challenges of Innovation," presented by John Gilbert, vice president of R&D for Behr.

"Today I'm going to address innovation in the workplace," said Gilbert. "To be successful in producing innovative R&D work, we need to retain our best technical employees to provide an environment in which they can innovate. Motivating your workforce is a key to innovation."

Gilbert defined innovation as "a change in a product offering, service, business, model or operation that meaningfully improves the experience of a larger number of stakeholders."

Another key to innovation is the filtering of ideas. "Innovation is not about ideas, it is about being productive with those ideas," he said. "Focus not on the idea of ideas, but the value generation. Innovation happens somewhere between chaos and control."

Innovating in today's economy can be a challenge. "There has been a decline in median household income," said Gilbert. "Nationwide it dropped 2.4 percent. How do we respond to this? Middle class shoppers are trading down. The key is to figure out how to please both the high-end and the low-end. We need to think beyond price points. Pull ahead things discovered in your innovation projects and incorporate them into your current

products. Let your product stewards innovate. Reinforce innovative behavior. Kill projects that aren't going anywhere. Load up key products with resources. Innovation is something new that creates economic value for a company and its customers."

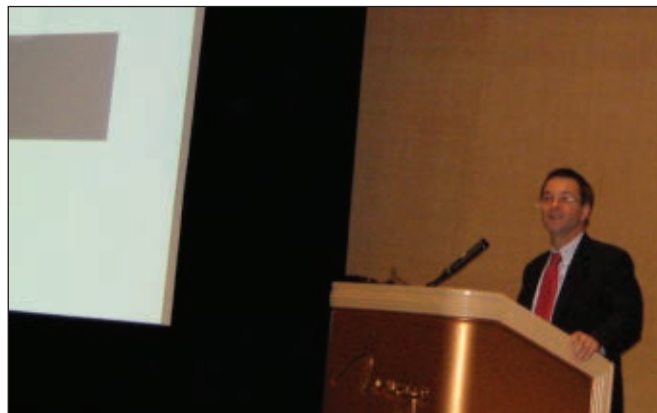
Other technical presentations covered green chemistry, environmental friendly color technologies, additives for improvement and new trends in coatings. In addition to the technical sessions, the Symposium featured student posters and an exhibitor showcase. There was also an awards presentation.

The Samson Adler Distinguished Service Award was presented to Dr. Dane Jones, associate dean and professor, department of chemistry and biochemistry, California Polytechnic State University. Dr. Jones oversaw the development of both undergraduate and graduate polymers and coatings programs for Cal Poly's chemistry department and has more than 30 years of experience in the polymers and coatings field.

"My greatest joy is working with the people in this industry," Jones said. "They have provided equipment, raw materials and most importantly expertise. I'm deeply humbled. It's been a great ride and we are going to continue to provide the industry with the best students." **CW**



John Gilbert, vice president of R&D for Behr delivers his keynote presentation, "The Challenges of Innovation."



Robert Fry, a senior economist at DuPont during his keynote address, "U.S. Economic Outlook."

BASF to move HQ for dispersions and pigments division to Hong Kong

BASF plans to establish the global headquarters of its dispersions and pigments division in Hong Kong. As of January 1, 2012, the division head and approximately 50 global positions, currently located in Ludwigshafen, Germany and Basel, Switzerland will transition to Hong Kong.

"Asia is already the largest market for our division today. We want to further participate in the dynamic growth in that region and beyond," said Markus Kramer, president of BASF's dispersions and pigments division. To this end, we want to change the perspective from which we view our customer industries."

The regional business and production units located in Europe and Asia are not affected by this move.

BASF's portfolio of the dispersions and pigments division includes pigments, resins, dispersions and additives such as photoinitiators, light stabilizers and formulation additives. Main customer industries are the coatings and paints industry, as well as the adhesive, printing and packaging industries. The division posted sales of €3.2 billion in 2010.

Evonik establishes R&D center for coatings additives in Asia

Evonik opened its first research and development center for additives for paints and coatings in Asia. The company reported a single-digit million U.S. dollar amount has been invested to set up the Tego Innovation Center in two locations, Singapore and Shanghai, as part of the global Evonik innovation network.

The Tego Innovation Center will cater to manufacturers in the paints and coatings industry in India and Asia. Collaborations with regional customers and research institutions aim at providing individual solutions to strengthen the competitiveness and innovative capabilities of Evonik's Asian customers. Research is geared to meet regional demands and centers on developing cutting-edge, environmentally-friendly

coating systems to accommodate the megatrend of resource efficiency.

Together, three laboratory groups installed in Singapore and Shanghai will cover all research and development activities relating to additives for paints and coatings: The synthesis laboratory will develop chemical structures for potential new products, the laboratory for formulation development will perform screening and preliminary product design, and the laboratory for strategic market development will be responsible for developing and marketing end products.

Dow Chemical and Saudi Aramco form Sadara Chemical Co.

The Dow Chemical Company and Saudi Arabian Oil Company (Saudi Aramco) announced the official formation of Sadara Chemical Company (Sadara), a joint venture between the two companies. Also announced were Sadara's Board of Directors and its senior officers.

The Sadara Board is comprised of eight members, with Abdullatif A. Al-Othman, senior vice president, engineering and project management, Saudi Aramco as Board chairman and James D. McIlvenny, Dow senior vice president, as the deputy chairman.

"Today's announcements mark another exciting and significant step forward for Sadara as it fulfills its commitment to building and operating a world scale, fully integrated chemicals complex in Jubail Industrial City," said Andrew Liveris, Dow's chairman and chief executive officer. "I'm truly delighted to see the progress that we've made, and I'm most impressed with this line-up of outstanding leadership for Sadara. I have no doubt they will bring this premier partnership between Dow and Saudi Aramco to life and build a venture that is well positioned to create value on every front."

Once complete, the JV complex now being built in Jubail will be one of the

world's largest integrated chemical facilities, and the largest ever built in a single phase. First production units are expected to come on line in the second half of 2015. All units are expected to be up and running in 2016.

Sadara is expected to deliver annual revenues of approximately \$10 billion within a few years of operation. The JV and related investments are expected to generate thousands of direct and indirect employment opportunities. For the JV alone, by the end of 2011, Dow and Saudi Aramco are aiming to recruit hundreds of Saudi nationals for the first batch of technical trainees for competitive and unique manufacturing and engineering training programs.

Utilizing Dow's cutting-edge product technologies and Saudi Aramco's world-class project management and execution capabilities, the manufacturing units will produce a wide range of performance products such as polyurethanes (isocyanates, polyether polyols), propylene glycol, elastomers, linear low density polyethylene, low density polyethylene, glycol ethers and amines. Sadara will market products within a regional zone consisting of Middle Eastern countries, including the Kingdom. Dow will leverage its global marketing know-how to market and sell on behalf of Sadara to the rest of the world.

Saudi Aramco and Dow announced their respective Board authorizations to form Sadara in July 2011 and signed a joint venture shareholders' agreement in October 2011.

Dow Performance Monomers increases capacity of crude acrylic acid

The Performance Monomers business of The Dow Chemical Company has increased crude acrylic acid (CAA) capacity at its Deer Park, Texas facility by 15%. This capacity increase is a result of various improvement projects implemented in the CAA Oxidation facility.

These projects not only increased capacity, but enhanced process safety and improved technology and reliability.

Lubrizol to purchase Merquinsa

The Lubrizol Corporation has signed an agreement to purchase Merquinsa, a leader in specialty thermoplastic polyurethanes (TPUs). This acquisition will expand Lubrizol's Engineered Polymers business and strengthen its ability to meet the needs of its global customers. Located in Barcelona, Spain, Merquinsa products are used in a wide range of applications, which serve a variety of industries, including automotive, sports and leisure, furniture and textile coatings.

Key Merquinsa global brands include: Pearlstick, Pearlthane, Pearlthane Eco, Pearlbond and Pearlcoat.

The move ensures that Merquinsa's existing customers will continue to be supplied with the company's products. Lubrizol will be assuming approximately 100 Merquinsa employees. Once the transaction closes all Merquinsa products will be integrated with Lubrizol, combining the product offerings under the Lubrizol Engineered Polymers business.

DSM Coatings Resins plans organizational alignment

DSM Coating Resins has outlined plans to align the organization with its strategic focus on its core coating and graphic arts resins markets. As part of these plans, the business unit will merge two business units (formerly known as DSM Powder Coating Resins and DSM NeoResins+), which was announced earlier this year.

The company reported that DSM aims to further improve the financial

performance of this newly formed business unit, which is necessary also due to the challenging economic circumstances and weak building and construction markets especially in Europe and North America. As a result of the alignment, the number of worldwide positions at DSM Coating Resins will be reduced by 150 full time employees.

"DSM Coating Resins will continue its drive to develop resins for innovative, sustainable coating solutions, such as water-based, powder and UV coating systems," said Patrick Niels, business unit director, DSM Coating Resins. "In order to do that, we need to ensure sufficient financial returns. This organizational alignment will address our cost base, as well as sharpen our focus on developments in our core technologies and segments. This will allow us to continue to invest in developing innovative sustainable resin systems for our customers, while at the same time safeguarding our returns also in an economically challenging environment."

Taminco launches new websites

Taminco has launched redesigned websites for the company's coatings additives Advantex and Vantex-T. Visitors to the websites (advantexamine.com and vantex-t.com) will be able to find product brochures, technical and performance data and research papers and scientific presentations that are all available for immediate download.

"By integrating user-friendly design, easy-to-read pages and simple navigation, these websites further our goal of making it easier for customers and potential customers to find the information they're looking for," said Kurt Buyse,

Taminco's Performance Products business director.

Michelman acquires Licomer floor polish additive business from Clariant

Michelman has acquired Clariant's European-based Licomer business. The purchase includes the Licomer line of floor polish additives, associated intellectual property, equipment and assets. Michelman will integrate all related customer support and technical service into its offices and labs in Luxembourg and Belgium. The company has named Vladimir Nuñez business manager, Licomer. Clariant will continue to sell and service the Licomer line in Central and South America and the Caribbean under a trademark license from Michelman.

Licomer is a line of water-based polymer dispersions and wax emulsions for the manufacture of dry-bright emulsions intended specifically for the care of floors. The range of solutions numbers more than thirty grades including acrylic and styrene-acrylic dispersions, both free of metal salts and containing metal salts, and emulsions of polyethylene and montan waxes. The various grades are designed for household, industrial, and institutional use on surfaces including terrazzo, marble, PVC, linoleum and parquet.

Celanese acquires product lines from Ashland Inc.

Celanese Corporation is set to acquire certain assets from Ashland Inc., including two product lines, Vinac and Flexbond, which will support the growth of the Celanese Emulsion Polymers business. Revenues of Vinac and Flexbond were approximately \$45 million in 2010.

PNWSCT issues call for papers

The Pacific Northwest Society for Coatings Technology (PNWSCT) has issued a call for papers for the PNWSCT Coatings Fest 2012, which will be held October 10-12 in Semiahmoo, Washington. Topics of interest for the conference include: new product applications, substrates, modernization of equipment and safety/environmental/sustainability. The audience for these presentations is technical professional personnel in R&D and manufacturing. Presentations should be at a technical level of interest. For further information please contact technical chairs, Thelma Longakit (tlongakit@cloverdalepaint.com) and Vernon Lo (vlo@debros.com) or go to www.pnwsct.org.

"This acquisition will accelerate the growth of the emulsion polymers business throughout the Americas in key segments such as adhesives, textiles, coatings and paper," said Phillip McDivitt, general manager, Celanese Emulsion Polymers. "The addition of Vinac and Flexbond will expand our product portfolio while building upon Celanese's emulsion process technology at our Enoree, South Carolina, and Boucherville, Quebec, Canada, manufacturing facilities."

Vinac branded products are used to make a variety of adhesives for use in woodworking and paper packaging and converting applications. These vinyl-based polymers can be used to make water-resistant wood glues and adhesives suitable for use with various craft and coated paperboards. Flexbond branded products are used to make interior and exterior architectural paints. These paints exhibit characteristics such as scrub and stain resistance in interior paints and weather resistance in exterior formulas.

Cristal Global forms TiO₂ partnership with Outotec

Cristal Global, Jeddah, Saudi Arabia, has partnered with Outotec of Espoo, Finland to build a new fully scalable ilmenite-processing plant for Cristal Global in Yanbu, Saudi Arabia, estimated to become operational in Q4 2013. The plant will be constructed on a turnkey basis, will require 800,000 tons of ilmenite ore to produce 500,000 tons of 85 percent titanium dioxide slag with 235,000 tons of high purity pig iron as a co-product.

Wacker expands its technical center in India

Wacker, the Munich-based chemical company, has expanded its technical center in India. This center of excellence located in Goregaon, a suburb of Mumbai, now also includes laboratories, applications technology and test equipment for polymer dispersions for coatings and paint applications. These dispersions are needed for interior and exterior paints in the coatings industry. The expansion not only enables Wacker to support its Indian customers to develop new and locally adapted formulations, but also encourages the exchange

of know-how and promotes internationally recognized quality standards in India.

The expansion was made necessary by India's strong economic growth, particularly with regard to sophisticated coatings applications. This measure will help Wacker to further bolster its position as the market and technology leader for vinyl acetate-ethylene copolymer (VAE) dispersions used as binders for demanding coatings and paint applications.

"The expansion of our technical center is another milestone in our growth strategy," said Raman Trikala, managing director Wacker Chemie India. The company therefore continues investing in its Indian technical center to augment and refine its applications technology and customer service in the region. "Our top-notch equipped technical center here in India's economic hub Mumbai sets new standards in service, advice and transfer of expertise, offering our customers and business partners considerable added value."

The expansion has focused on dispersions based on vinyl acetate-ethylene copolymers used as binders for interior and exterior paints in the coatings industry. The dispersions marketed under the brand name Vinnapas have an enor-

mous application and performance range. Depending on the product, they enable the formulation of dispersion silicate paints, silicone resin emulsion paints and synthetic resin plasters as well as plasticizer-free interior and exterior paints without the addition of solvents. In coatings, special grades ensure high wet-scrub resistance and resistance to dirt pick-up and water. Further, specific Vinnapas dispersions are manufactured without the use of alkylphenol ethoxylates (APEO) or formaldehyde and enable the formulation of high-performing coatings with a low (<5g/l) or even very low (<2g/l) content of volatile organic compounds (VOC).

Horn opens new corporate facility

Now known as Horn—formerly E.T. Horn—a distributor of specialty ingredients and materials, the company has brought its business units together to work collaboratively in a new corporate facility. Celebrating its 50th anniversary this year, employee-owned Horn opened its new 120,000-square-foot facility in La Mirada, Ca., providing a consolidated site for cor-



Horn's new 120,000-square-foot facility in La Mirada, Ca.

porate leadership while retaining and supporting individual manufacturing or warehouse sites for each business group. Horn's focus on selected industries mirrors the six groups into which its business is organized: Nutraceuticals, Coatings and Building Materials, Advanced Materials, FoodTech, Essentials, and Animal Wellness.

Konica Minolta Sensing launches new corporate website

Konica Minolta Sensing Americas, Inc. (KMSA), a leader in the industrial measurement of color, light and shape, launched their new corporate website to better serve its customers in the Americas.

KMSA departed from its past web structure and pushed their website forward in one giant leap; incorporating the latest web technology and completely rethinking how to connect with existing and new customers. Overall navigation is much improved with graphical icons being used throughout the site as well as providing several different easy to use filters to help guide users to the correct products.

"Our web visitors are extremely important to us and we want to make it easy for them to find a solution," said Lou Carulli, marketing manager for KMSA. "The site was designed with 2 types of visitors in mind. Type one is a new visitor that has identified a problem within their company but may not be familiar with the existing technology that's available. Type two is a visitor who is experienced, knows the science behind how our products work, and is looking for something specific. Both will come to find a solution which could be the same instrument, but each will take a different path to arrive to that solution."

In addition to improved navigation, a new area called "The Learning Center" was added to educate visitors on the science behind the instruments and how a solution from Konica Minolta Sensing can improve their business. An expanded "On Demand Webinar" section now includes support for Spanish and Portuguese languages, allowing visitors from Latin America the ability to educate themselves. In this virtual environment guests can

move at their own pace with complete control to pause, fast forward, rewind or skip to specific topics.

Perhaps the largest addition to the new sensing.konicaminolta.us website comes from the complete catalog of accessories available for each category of instrument. "Log on to <http://sensing.konicaminolta.us/> to experience the new site.

Introducing EAG Coatings Solutions

Effective November 15, 2011, CAS-MI announced that it is renamed EAG Coatings Solutions. This rebranding emphasizes the commitment to coatings product development and analytical problem solving, while also reflecting the company's recent inclusion as one of Evans Analytical Group's 20 worldwide laboratories. At EAG Coatings Solutions, clients benefit from a virtual research and development laboratory supporting new product development from concept to commercialization. This independent analytical laboratory also offers an array of problem solving services, including reverse engineering, contaminant identification, failure analysis and chemical analysis.

Initially established in 1943, the Detroit area facility has long been a trusted partner supplying both analytical and development services to large and small entrepreneurial companies in the paints and coatings industries. The company became CAS-MI Laboratories in 2004, and launched the CAS-MI Innovation Center in 2009 after moving to a new 11,000 sq. ft. facility in Ypsilanti, Mich. It was acquired by Evans Analytical Group (EAG) in April 2011. Headquartered in Santa Clara, Ca., EAG has an international network of laboratories, focused on all aspects of materials characterization and electronic testing, enabling customers to accelerate their R&D, deliver their products to the marketplace more quickly, and to provide third party independent verification of materials.

"EAG Coatings Solutions has successfully assisted entrepreneurs and international companies in product development for innovative paint and coating technologies for many years," said Stephen Hall, vice president and general manager of EAG

Coatings Solutions. "Our new name emphasizes both our development capabilities and our analytical support services."

Lonza forms manufacturing license agreement with Sumitomo Seika Chemicals

Arch Chemicals Inc., an indirect, wholly owned subsidiary of Lonza Group Ltd. operating within the Lonza Microbial Control business sector, has reached an agreement pursuant to which Sumitomo Seika Chemicals Co., Ltd. of Japan has licensed Arch under certain patents in the United States, Europe, Japan and China covering an advanced method of manufacturing 1, 2 benzisothiazolin 3-one (BIT). Under the agreement, Arch has the right to sub-license the technology to third parties, and to enforce the licensed patents against direct and indirect infringement.

"We are pleased to come to this agreement with Sumitomo Seika," said Mark Kenline of Lonza Microbial Control's Materials Protection business. "BIT is widely used as a preservative in our key market segments, where it is sold under the Proxel trademark, and this licensing agreement enhances our ability to provide our customers with global registrations, security of supply, unparalleled product support, and products manufactured by the best available technology."

Lanxess launches a fully revised website for its colorants products

Effective immediately, Lanxess' business unit Functional Chemicals (BU FCC) is presenting its business line Colorants on the internet on a fully revised website. All information on products, industries and applications is now presented under www.colorants.lanxess.de and www.colorants.lanxess.com.

"We want to provide our customers with comprehensive information through the new website," said Dominik Risse, head of marketing colorants in the BU FCC. "In revising the site, we compiled extensive information on our products. We are also offering direct search tools that make navigation easier for the user. In addition, we placed great emphasis on an attractive presentation." **CW**

Hamamatsu introduces deuterium light source units with ultrahigh brightness

Hamamatsu's L11798 and L11799 deuterium light source units offer ultrahigh brightness and ease of use for a wide variety of UV applications such as semiconductor inspection, film thickness measurement, UV-visible spectroscopy, and environmental analysis. These light sources consist of an air-cooled H2D2 deuterium lamp head unit attached to a power supply unit via cable. The H2D2, Hamamatsu's brightest deuterium lamp to date, is 6X brighter than our conventional L2D2 lamps. The improved brightness enhances equipment sensitivity and throughput. In addition, these air-cooled lamps are more convenient and easier to use than water-cooled light sources.



Hamamatsu recently introduced the L11798 and L11799 deuterium light source units.

The L11798 series emits UV wavelengths at 115-400 nm, while the L11799 series emits at 160-400 nm. Both types feature an aperture diameter of 0.6 mm and the choice of fan cooling or compressed air cooling. Other features include long service life (1000 hours guaranteed) and excellent short- and long-term stability. The deuterium lamps exhibit a maximum fluctuation value of 0.05% peak-to-peak (short-term stability) and maximum drift value of $\pm 0.3\%/h$ (long-term stability).

Omnova Solutions launches a new emulsion for the concrete floor market

Omnova Solutions has launched Pliotec SC55, a self-crosslinking all acrylic latex for the concrete sealer market. This APE-free and formaldehyde-free resin has ex-

cellent UV stability, blush resistance and adhesion to concrete said the company. Clear concrete sealers based on this resin prevent hot tire pick-up and can be formulated at less than 100 g/L VOC.

Emerald Latin America introduces Antarol FJ601

Emerald Latin America, a subsidiary of Emerald Performance Materials, has introduced a new defoamer—Antarol FJ601—for low-VOC waterborne architectural coatings. Antarol FJ-601 is tailored to meet the needs of coatings manufacturers in the Latin America market. It is based on a hybrid synthetic/mineral oil-based vehicle, is especially effective in providing rapid initial foam knock down, while ensuring persistent foam suppression over time said the company. This defoamer has sufficient stamina to be effective in both the high sheer grind and low sheer let down stages. It is designed for enhanced compatibility in acrylic, acrylic co-polymer and poly vinyl acetate systems. Compatibility is particularly important to avoid the formation of fisheyes and other unsightly defects in the finished coating. Emerald Latin America, SRL is headquartered in Buenos Aires, Argentina.

Sartomer's CN9026 oligomer imparts hardness and yellowing resistance

Sartomer USA, LLC has unveiled CN9026, a highly functional aliphatic urethane acrylate that demonstrates outstanding weatherability in exterior hard coat applications compared to traditional urethane acrylates said the company. This oligomer is suited for coatings used on automotive finishes, auto accessories made of plastic or metal and window films for automotive and structural applications. Its scratch resistance also makes it suitable for sensitive electronic devices and their component parts.

CN9026 is a clear liquid oligomer

that has high hardness, high scratch resistance and excellent resistance to yellowing. It offers lower crosslink density than other highly functional urethane acrylates and is, therefore, more flexible at higher coat weights. For example, testing showed that a 10-micron coating was completely immune to 5,000 hours of QUV accelerated weathering exposure, showing no signs of cracking said the company. A similar thickness industry standard urethane failed the same test after just 1,000 hours.

Wacker presents novel VAE dispersion for high performance coatings

Wacker has introduced a novel dispersion specifically developed for high performance architectural coatings. The new Vinnapas EF8300 is a vinyl acetate-ethylene-based copolymer (VAE) characterized by excellent performance properties, including good block resistance, scrub resistance and wet adhesion to alkyd substrates. Further, the new dispersion has a reduced environmental impact, as it is manufactured without the use of alkylphenol ethoxylates (APEOs) and formaldehyde donors, and enables formulations with lower solvent levels. This makes Vinnapas EF8300 ideal for formulating high performance interior coatings at low levels of VOCs.

Specifically designed for the requirements of interior architectural coatings formulations, the new Vinnapas EF8300 offers high performance, a reduced environmental impact and a cost-competitive alternative to existing coatings based on vinyl acrylic, pure acrylics or vinyl acrylic/acrylic blends. The new product is an aqueous copolymer dispersion based on vinyl acetate and ethylene. It has a low glass transition temperature (T_g) and minimum film formation temperature (MFFT), which provide the polymer with a very low to no co-solvent demand for proper film formation. **CW**

Dur-A-Flex names David Hughes vice president of marketing, research and development

Dur-A-Flex has named David Hughes vice president of marketing, research and development. Hughes is a former business director of BASF Corporation and a business line vice president for Ciba Specialty Chemicals.



David Hughes

In his new role, Hughes will direct research and development with a focus on new innovative applications and product rollouts. He will also oversee Dur-A-Flex's marketing efforts, which include the tradeshow channel, lead generation program and product management.

While at BASF, Hughes' role as business director included overseeing market-

ing, sales, business development and technical service. He also served over 12 years with Ciba in various roles from business vice president, procurement, new business development, sales and supply chain in a variety of businesses focused on the coatings and related markets.

Dur-A-Flex is a privately held manufacturer of epoxy, urethane, methyl methacrylate and colored aggregates offering a complete line of high performance polymer flooring and wall systems.

Victor Stolbchenko has been appointed Empils' general manager

Victor Stolbchenko has been appointed the general manager of Empils, one of the largest Russian manufacturers of paints and varnishes. Previously Stol-



Victor Stolbchenko

bchenko was employed at Rostselmash where he worked his way up from manager of coordination, sales department, to director of sales, spare parts and maintenance.

Archway Sales welcomes Kip Peterson

Kip Peterson has joined Archway Sales, Inc. as a technical sales representative for the Northeast Region. He brings to Arch more than 12 years experience in sales. He will be responsible for growing sales in southern New England and eastern New York State. **CW**

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2012

Jan. 23: Coatings for Concrete Conference, Las Vegas, NV. *More info:* www.paint.org/events/lac-series.

Jan. 24 - 27: World of Concrete, Las Vegas, NV. *More info:* www.worldofconcrete.com.

Jan. 30 - Feb. 2: SSPC 2012, Tampa, FL. *More info:* www.sspc.org.

Feb. 6 - 10: Polymers and Coatings Introductory Short Course, San Luis Obispo, CA, U.S. *More info:* www.polymerscoatings.calpoly.edu.

Feb. 13-17: 39th Annual Waterborne Symposium, New Orleans, LA. *More info:* www.psrc.usm.edu.com.

Feb. 19 - 22: PDCA 2012, Las Vegas, NV. *More info:* www.paintinganddecoratingexpo.com.

Feb. 22 - 24: Smart Coatings, Orlando, FL, U.S. *More info:* www.smartcoatings.org.

Mar. 11 - 14: SSCT 2012 Annual Meeting, St. Augustine, FL. *More info:* www.ssct.org.

Mar. 11 - 15: Pittcon 2012, Orlando, FL, U.S. *More info:* www.pittcon.org.

Mar. 12-14: Middle East Coatings Show 2012, Dubai, UAE. *More info:* The Coatings Group, www.coatingsgroup.com.

Mar. 13-14: Professional Paint Formulation, Hampton, Middlesex, UK. *More info:* www.pra-world.com.

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Las Vegas, Nev., USA
www.worldofconcrete.com

Jan. 30 - Feb. 2: SSPC 2012
Tampa, Fla., USA
www.sspc.org

Feb. 13-17: 39th Annual Waterborne Symposium
New Orleans, La., USA
www.psrc.usm.edu.com

Mar. 27 - 29: WESTEC 2012, Los Angeles, CA, U.S. *More info:* www.westeconline.com.

Apr. 3: PSCT Technical Symposium, Horsham, PA, U.S. *More info:* The Philadelphia Society for Coatings Technology; www.psct.org.

Apr. 11-12: Electrocoat 2012, Orlando, FL, U.S. *More info:* www.electrocoat.org.

Apr. 15 - 17: ASC Spring Convention, Denver, CO, U.S. *More info:* www.ascouncil.org.

Apr. 17-20: PaintExpo, Karlsruhe, Germany. *More info:* www.paintexpo.com.

Apr. 30 - May 2: RadTech UV & EB Technology Expo & Conference 2012, Chicago, IL, U.S. *More info:* www.radtech2012.com.

May 8 - 10: American Coatings SHOW, Indianapolis, IN/USA. *More info:* Vincentz Network; www.american-coatings-show.com.

June 4 - 6: ETCC - European Technical Coatings Congress, Lausanne, Switzerland. *More info:* SVLFC; www.etcc2012.ch.

June 4 - 6: FATIPEC, Lausanne, Switzerland. *More info:* www.fatipec.com.

Oct. 23-27: parts2clean, Stuttgart, Germany. *More info:* www.parts2clean.com.

Sept. 18 - 21: World Adhesive and Sealant Conference 2012, Paris, France. *More info:* FEICA, www.feica.eu.

Sept. 19 - 20: Asia Pacific Coatings Show, Jakarta, Indonesia. *More info:* www.coatingsgroup.com

Sept. 24 - 26: Polyurethanes 2012 Technical Conference, Atlanta, GA, U.S.

Oct. 7 - 9: ASC Fall Convention, Louisville, KY, U.S. *More info:* www.ascouncil.org.

Nov. 28 - 30: CHINACOAT2012, Guangzhou, China. *More info:* www.chinacoat.net. **CW**

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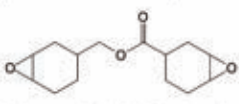
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Tnemec names 2011 Tank of the Year

This year's Tnemec Tank of the Year winning entry comes from Hollywood, Fla. The one-million gallon torospherical-bottom, ovaloid-style welded steel tank had 10 legs, making it the first legged design to win Tnemec Tank of the Year since the competition was initiated in 2006.

"Judges in this year's competition were impressed by the tank's colorful artwork with its conservation theme depicting loggerhead sea turtles, which are an endangered species," said Doug Hansen, director, Tnemec Water Tank Market. "The elegant graphics are enhanced by the dramatic lighting that illuminates the landmark at night, calling attention to Hollywood as both a tourist destination and a vibrant community."

The graphic design for the water tower was developed by Hunter, Hamersmith & Associates Advertising out of North Miami and funded through the Hollywood Community Redevelopment Agency. "Utility Service completed the repair and refurbishment of the tank in May," said city spokeswoman Raelin Storey. "The work included structural repairs, sandblasting and recoating both the interior and exterior of the tank and the addition of tank lighting for nighttime visibility."

Hundreds of loggerhead sea turtles return to Hollywood Beach each year to lay their eggs at night. In Broward County, nearly 2,000 sea turtle nests have been counted during nesting season from March to October.

Located along Interstate 95 on the western side of Hollywood, the water tank is one of the most visible landmarks in South Florida. "I-95 between Fort Lauderdale and Miami is one

of the most traveled roads in the country, carrying thousands of travelers directly past this water tank," Tnemec coating consultant Mike Kendig said.

The tank's interior and exterior coating systems were applied by Utility Service Co., Inc., which was general contractor for the project. The exterior artwork required 19 different colors ranging from white, to different shades of blues, greens and browns.

Assisting Utility Service on the project was Jim Kelly, of Industrial Commercial Signs, who painted the mural and lettering, and an electrical contractor who lighted the tank's exterior. Due to the high volume of traffic underneath the tank, work on the project was performed under a draped containment system.

Tnemec's 2011 Tank of the Year Award will be presented by Hansen in early 2012. The Hollywood tank was chosen from more than 140 Tank of the Year nominations. **CW**



The winning tank's exterior coating system consisted of a prime coat of Series 135 Chembuild, a modified polyamine epoxy and an intermediate coat of Series 1075 Endura-Shield II, an aliphatic acrylic polyurethane. The finish coat was Series 700 HydroFlon, an advanced fluoropolymer topcoat that offers outstanding resistance to ultraviolet (UV) light and unprecedented long-term gloss and color retention. Two coats of Series 700 were also used for the lettering and mural.



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