FINAL SPEAKER PRESENTATIONS

The following presentations are available in the 2011 Spring Convention Proceedings package.

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Monday, April 18

PETRO CANADA OPENING GENERAL SESSION BREAKFAST
"The 2011 Outlook: Will Fiscal Drag Torpedo the USS Recovery?"
Ken Mayland, President, ClearView Economics, LLC
As the recovery approaches its second birthday (June 2011), economic growth can at best be described as tepid. The national jobless rate is hardly down at all. What headwinds have slowed the bounce back of business, and will they lighten up in the future, allowing for a more vigorous expansion? Will last year's new stimulus package be offset and negated by spending cuts? Will consumers become less tightfisted? How will all this shake out for production (by industry), pricing, and foreign trade? All good questions—but you must attend to hear the answers!

Education Track 1: Business Development and Market Trends

Raw Materials and Market Size and Segmentation Focus

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Arrival of the New ASC Market Research Reports: North America and Asia Pacific. What's New?
Dave Nick, DPNA International, Inc.
The last two years leading up to 2010 have been challenging for every North American adhesive and sealant formulator. The period has offered challenges for most and opportunities for a few. The new North American market study, promoted by the Adhesive and Sealant Council (ASC) is now available. Covered in this report is a look at the past and a glimpse into the future of the USA, Canada and Mexico markets. The separate Asia Market Study describes the status and outlook for the key Asian markets in China, Japan, India and others. These market reports will cover the time span from 2010-2013.

Global Trends with VAM, EVA & VAE – A Tale of Growth & Opportunity
Dewey Johnson, CMAI
EVA and VAE demand are growing at up to 2X GDP growth rates with application innovation and growth. High growth geographies include South America, Northeast Asia, and the India Sub-continent while North America and West Europe see GDP plus demand growth from a large demand base. Global Vinyl Acetate Monomer (VAM) demand, from which EVA/ VAE are derived from, is forecast to grow at 4.5 percent for 2010-2015 with global and regional VAM operating rates near 80 percent. VAM and VAE/EVA production economics in North America are very competitively positioned due to U.S. ethylene competitiveness from low natural gas costs. However, U.S. acetic acid production is near capacity and acetic acid price and the resulting derivatives economics are expected to exhibit volatility from methanol price variability.

Education Track 2: Technical and Government Regulations

Formulations Focus

Capped Prepolymers as Alternate Routes to Polyurethane Coatings, Adhesives and Sealants
Jay Johnston, BayerMaterialScience LLC
Capped polyurethane prepolymers have been used for many years to flexibilize epoxy resins. The flexibilization of epoxy resins has reduced brittleness, increased elongation, increased flexibility, improved toughness and improved impact resistance of many coating formulations. Capped polyurethane prepolymers can also be reacted with multifunctional amines to create products with useful properties without the addition of epoxy resins. This presentation will report on the reactivities of various amines reacted with two capped prepolymers. The physical properties of the resulting elastomers will be determined. Several two-component adhesive and sealant starting point formulations will be presented and discussed.

Development of SPUR+ Prepolymer-based Sealants for Primerless Adhesion to Damp Concrete Surfaces
Misty Huang, Momentive Performance Materials Inc.
This presentation will focus on the development of sealant formulations using a new SPUR+ prepolymer and, in particular, on the adhesion of these sealants to a variety of substrates, including damp concrete. The formulations are evaluated using both ASTM C974 and ISO 15090 test protocols, and their mechanical properties and adhesion to damp concrete are compared to those of commercial polyurethane sealants.

New Developments in Caustic Removable Hot-melt PSA
Nestor Hansen, Cray Valley USA LLC
In 2009, new additives were presented that impart caustic solubility to conventional hot-melt pressure sensitive adhesive labels. A second generation of additives has been developed that improves on this concept by reducing the negative impact on the adhesive performance. Data will be presented chronicling the development of this new additive and the performance of the system will be detailed using a conventional SIS/Resin/Oil PSA system.

Alternate Technology to C5 Tackifier Resin
Donn DuBois, Kraton Polymers U.S. LLC
Supply predictions in the hydrocarbon industry suggest C5 tackifying resin supply will remain critical, with waves of severe shortage expected for the foreseeable future. Kraton Polymers has developed and commercialized new block copolymer technologies that can substantially reduce or completely potentially eliminate the need for C5 resins depending on the application. These new technologies include an unsaturated and hydrogenated SBC product family of which Kraton has developed a number of new polymers. This session will also discuss Kraton ERS and Kraton A polymers that enable formulation with fully sustainable ingredients, and will provide an overview of several new pilot scale opportunities with promising results.

Education Track 3: New Technology and Application

Transportation Focus

Effect on Bond Fixture Temperature on the Severity of Bond-line Read-through, Induced-surface Distortion

Kedzie Fernholtz, Ford Motor Company

The Automotive Composites Consortium has completed a project to determine which material and process factors have the most significant impact on bond-line read-through (BLRT) severity and to develop a finite element (FE) model that can predict the severity of these distortions based on material properties and part design. A number of FE sensitivity studies were completed to determine the relationship between individual adhesive material properties and the severity of BLRT-induced distortions. This presentation will provide an overview of the lessons learned in the BLRT project and review the results of the FE sensitivity studies to provide guidance to adhesive suppliers interested in developing adhesives that are less likely to cause surface distortions in assemblies.

New Contamination-tolerant Structural Adhesives

Michael Kropp, 3M

This paper will outline new developments in contamination-tolerant, room temperature curable structural adhesives that enable epoxy bond strength and performance without surface preparation. A brief overview of the mechanism of contamination-tolerant structural adhesives will be presented. Results from bulk materials characterization and bond performance on a variety of different substrates and oils will be discussed.

Could the Transportation Industry Take Further Advantage of the Benefits of Microencapsulation Technology via Pre-applied Coatings?

Mandy Sakar, Lipo Technologies Inc.

Learn more about the benefits of microencapsulation technology and consider pre-applied coatings. Save assemblers time and money, while offering them unsurpassed quality control. Satisfy your customer's unique requirements by offering them customized solutions.

Education Track 1: Business Development and Market Trends

Wind Energy Focus

Opportunities in the Wind Energy Supply Chain – A National Perspective

Tom Maves, American Wind Energy Association

Mr. Maves will focus on the current state of the U.S. wind energy industry and the opportunities for component and material suppliers to enter the wind energy supply chain.

Development Partnering for Improved Wind Energy Products

Kevin Lambrych, Ashland Performance Materials

Today's utility-scale wind turbine blades are made from a variety of reinforcements, thermoset resins, adhesives and coatings. All of these materials must work well together for required blade performance, safety and longevity. As the wind market matures, more is known about factors that lead to successful blade design. This opens the door for leveraging technologies that optimize performance while lowering costs to the fabricator and OEM. This presentation will focus on the importance of building effective partnerships along all aspects of the wind blade value chain for adoption of new technology while minimizing risk.

Pressure-sensitive Tape Focus on Wind Energy
Cindy Stoner, Intertape Polymer Group
IPG is a leading manufacturer of a comprehensive range of tape and film based products designed for the composites industry. The program will review the specialty tape development based around various products used in the production of wind turbines. IPG will highlight its focus on developing products that work in conjunction with value add products such as semi-permanent release agents. IPG will provide an overview of its research and development alliances, which offer value from a solution standpoint to a cost reduction option.

Offshore Wind Energy Turbine Foundation
Peter Gorlitz, ITW WindGroup
Over the past 10 years, wind power has become an important factor in power production. In addition, offshore wind power is 30 percent more efficient than on shore. During the first decade of this century, Europe installed more than 2500 MW and development is increasing. This session will present an overview into the different structures, methods of installation and securing the structures to the seabed, based on a broad experience in this field. The presentation will also address logistical challenges, vessels used, driving aggregates, drills, lifting, grout installation, UHPC grout material and grout seals.

Education Track 2: Technical and Government Regulations

Research, Code, Testing and Water Focus

Gaining Industry Certification for Adhesives in Water Separation Processes
Margarita Acevedo, H.B. Fuller Company
Hollow fiber membrane applications in the water purification market increasingly follow stricter water and waste water quality rules. To shorten and facilitate customers' processes, H.B. Fuller Company developed new testing protocols for its adhesive technologies. Working with NSF, the company obtained NSF/ANSI standard 61 certification for two new potting adhesives for ultra- and micro-filtration applications.

The Role of USGBC NEXT Program and the Impact it may have on Adhesives and Sealants
Max Zahniser, Praxis\Building Solutions, LLC
This session will survey the LEED rating systems with a focus on the details of how adhesives and sealants are addressed in the standards—both now and in the forthcoming versions of the LEED rating systems. A LEED program overview, including some information regarding the committee structures and process behind LEED's continuous improvement cycle, will be followed by a look at the specific credits and their metrics that adhesives and sealants can impact on a LEED project, and the likely timing and evolution of those technical details in the next version of LEED.

IGCC as an Enforceable, Adoptable and Usable Code
David Karmol, International Code Council
Mr. Karmol will describe the development and areas of coverage of the International Green Construction Code, and give an update on its current status, as well as the outlook for federal, state and local adoptions. He will also give an overview of the changes coming in the 2012 editions of the International Codes, including the International Energy Conservation Code, and how the new code and changes to the existing codes present challenges and opportunities to industry.

Understanding Low-emitting Adhesives and Green Building Programs
Marilyn Black, Greenguard Environmental Institute
The GREENGUARD Certification Program℠ ensures products are low-emitting by requiring that they undergo independent, scientific laboratory testing to measure and identify their chemical emissions. Only products that meet GEI's stringent chemical emissions criteria can achieve GREENGUARD Certification and carry the GREENGUARD Certification mark.

Construction Chemicals and the Regulatory Environment
Michael Schmeida, Tremco
California is arguably the most progressive government in the world in terms of environmental regulation. With its large economic and political influence in DC, coupled with a progressive environmental regulatory attitude in the current administration, California is now driving national policy. It is also influencing global megatrends such as sustainable building, with specific state and local regulations referenced in popular sustainable design guides such as LEED. As such, understanding where legislation is headed is critical to understanding where sealants, adhesives and other construction chemicals need to evolve in their chemical and performance make-up in order to maintain compliance and remain marketable. Through a review of what is happening in California and DC, attendees will see where regulations are heading and be able to make decisions based upon that for their own businesses, both for the California market and nationally as well.

LEED 2012 EQ 4 Low Emitting Materials Credits – What were they thinking?
Denise Van Valkenburg, Eurofins Scientific, Inc. – Product Testing
The USGBC is working to maintain a leadership position including low emitting materials. As a result, a systems-based approach to qualify for these credits has been proposed. The discussion will include a review of the justification, general consensus of the comments received during the public comment period and the next steps. The role of international changing criteria for low emitting building products, including adhesives and sealants, especially in Europe will be discussed. The session will also include an overview of the criteria, a comparison to U.S. standards and the impact on the LEED rating system.

Education Track 3: New Technology and Application

Building and Construction Focus

An Overview of the Department of Homeland Security Advanced Materials Database
Drew Rouland, National Institute of Building Sciences
The Department of Homeland Security has established an Advanced Materials Council (AMC) to encourage the understanding and use of high-performance and advanced materials for construction by coordinating research efforts of public and private entities. The Advanced Materials Database was created as a result of AMC's desire to publicly list high-performing materials that will benefit vendors, contractors and designers in constructing sustainable and secure buildings. The session will discuss this database's format and how it will allow engineers, architects and material scientists to readily supply materials that will aid in the material selection process.

Elastomeric Polymeric by Design for Blast, Impact and Fire Protection of the Nation's Infrastructure with Emphasis on Nanocomposites
Hunain Alkhateb, University of Mississippi
In this presentation, Ms. Alkhateb will present research activities of the Nano Infrastructure Research Group (NIRG) at University of Mississippi in the area of infrastructure protection. The main focus will be on enhancing polyuria properties (blast, ballistic and fire) using nano reinforcements. Experimental and multiscale numerical results will be presented.

Bio-materials for Construction Applications: Issues and Opportunities
Jean-François Masson, National Research Council of Canada
The construction industry is very large. It generates about 12% of the gross domestic product. In this market, an estimated 100M tons of polymers are used on a yearly basis, including about forty types of adhesives for roofing, insulation, concrete and a myriad of other applications. In this era of global environmental pressure, the construction industry is trying to renew itself, which includes an expanded use of materials produced with renewable resources. This presentation will focus on the challenges and the opportunities for bio-products in the construction industry, including adhesives and other applications.

Tuesday, April 19

GENERAL SESSION BREAKFAST
Coca-Cola Agenda on Environmental Sustainability
Maury Zimring, Manager, Corporate Responsibility and Sustainability, Coca-Cola Enterprises
Coca-Cola has been a leader in the environmental sustainability space, focusing on carbon reductions, water stewardship and sustainable packaging. The program will review the environmental sustainability agenda Coca-Cola has been pursuing in North America. It will highlight the work to-date, case studies of new technologies and processes and plans for the future.

Education Track 1: Business Development and Market Trends

International Markets Focus

Adhesive Industry Trends in China
Sushant Hegde, Celanese Emulsions Polymers
This presentation will focus on various industry trends in China and their impacts on the adhesives and building products industries. Sub-topics will include the general market size and project growth rates in China, the impact of new regulations for tobacco adhesives in China and trends in building materials. These will also be contrasted with prevailing regulations and sentiments in North America. The information presented will be gathered from both marketing managers in the Americas as well as China for Celanese Emulsion Polymers.

Emerging Markets Lead Global Consumer Spending Growth: A Comparison of BRIC Countries
Antonia Prlic, IHS Global Insight
An overview of the key economic and demographic factors that are supporting consumer market growth in key emerging markets. This will include a comparison of the BRIC countries, with an emphasis on India and Russia.

Global Consolidation in Adhesives & Sealants
Thomas Blaige, Blaige & Company
Mr. Blaige will cover the global consolidation in the adhesives and sealants sector, with a focus on the increase in international participation. Blaige & Company proprietary research indicates that over the past decade, more than half of the top 50 companies in major chemicals and plastics segments have been eliminated or changed in ownership. A major driver in this trend is the increased participation by non-U.S. parties in M&A transactions. Mr. Blaige will give the audience the facts and resources to improve their knowledge of M&A and its effects on the industry as a whole.

Are Our Neighbors to the South Ready for Another Look? A Focus on Brazil
Dave Nick, DPNA International, Inc.
January 2011 saw the inauguration of a new President in Brazil. Market confusion still surrounds Venezuela, and Columbia is slowly recovering from its drug-controlled economy. Will these events lead to new growth in Central and South America? Covered in this presentation will be an assessment of opportunities and problems to overcome in this lucrative region.

Education Track 2: Technical and Government Regulations

Formulations Focus

Waterborne Polychloroprene Technology
Jeff Dormish, Bayer MaterialScience LLC
Solvent-based polychloroprene adhesives have been the standard technology for high performance contact adhesives for many years. Waterborne polychloroprenes have been developed as an environmentally-preferred alternative to the older solvent-based technology and have developed a strong market position for foam bonding adhesives. Information will be presented on new technology using carbon dioxide activation of waterborne polychloroprenes to generate high performance adhesives. Waterborne polychloroprenes with improved storage stability will also be discussed.

Reactive Hot Melt from Polyols Recovered from Disposed Polyurethane Wastes by Liquification
An Mao, Mississippi State University
Flexible polyurethane foam wastes from automobile shredder residue are liquefied with ethylene glycol as solvent and sodium hydroxide as catalyst at a certain condition. The liquefied polyols are reused to prepare polyurethane reactive hot melt adhesive (PUR) with polymeric methylene diphenylene diisocyanate, polymeric component, tackifying resin, catalyst and other additives. Physical and mechanical properties including viscosity, setting time, percent elongation, bonding and tensile strength are evaluated as a function of [NCO]/ [OH] ratio, polymerization condition, and additives content. Crystallinities of the cured PURs are determined through X-ray diffraction measurement. Thermal analysis, such as Dynamic Mechanical Analysis, Thermogravimetry and Differential Scanning Calorimetry are conducted to examine the dynamic rheological characteristics of PUR.

Education Track 3: New Technology and Application

Paper Board and Related Products Focus

High Barrier Lamination Films and New Applications in Flexible Packaging
Masakazu (Mack) Nakaya, Kuraray America, Inc.
Kuraray is one of the leading high barrier material suppliers in the plastic industry. In this session, key properties and performance characteristics of EVAL™ (ethylene vinyl alcohol film) and KURARISTER™ (barrier-coated biaxial oriented PET film or biaxial oriented polyamide film) lamination films for flexible packaging will be introduced. Additionally, a new application will be shared.

Recycling Protocol for Adhesives
Michael Schedler, NAPCOR
An overview on the initiative by National Association for PET Container Resources and several major supermarket chains to facilitate the recycling of PET thermoforms, the critical issues surrounding the adhesives used on these packages and the development and issuance of a test protocol to identify recycling friendly adhesives.

Packaging Trends
Ben Miyares, President, Packaging Management Institute, Inc.
This presentation will discuss the five packaging trends impacting the adhesive market..

GENERAL SESSION LUNCH

Where is the Chemical Adhesive and Sealant Sector Going?

Dr. David Crowe, Chief Economist & Senior Vice President, National Association of Home Builders

Hear what NAHB's chief economist and forecaster thinks about the outlook for the housing industry, one of the largest market segments ASC members sell into. This session will drill down into this critical sector and complement the macroeconomic overview presented in Monday's keynote session.

Education Track 1: Business Development and Market Trends

Small Business Focus

Government Project Opportunities: Finding a Way In

Jackie Santisteban, Government Sales Advisors

Looking to expand your market reach and generate incremental revenue? Have you considered selling to the federal government, purchaser of over $700 billion in products and services annually? This session will provide a review of the federal government market and the federal procurement process with special focus on the best way for small to medium companies to enter or expand business. Topics will include: government business opportunities, how to market to the military and government, contract vehicles, what it takes to be successful in the government market, GSA schedule information, and a DoD FY2011 budget review—where is the money going, prime vs. subcontractor, and the current administration's small business focus.

Education Track 2: Technical and Government Regulations

Regulatory and Safety Issues Focus

The Implications of Nanotechnology and Applications

John DiLoreto, NanoReg

Nanotechnology has enabled the enhancement of products in a wide variety industry sectors. In adhesives and sealants, the unique characteristics of nanoscale substances can not only improve the physical characteristics of existing products, but it can also allow the creation of products with new functionality. As with any new technology, there are many challenges. Creation of nanoscale substances will necessitate a new look at how producers and users provide a safe working environment. Regulatory action can be expected from state and federal government agencies, which will also necessitate participation by several stakeholders including industry, non-governmental organizations, scientists and the academic community. This presentation will explore those important applications of nanotechnology and outline the regulatory issues that could impact the further growth and development of nano-enhanced products.

Control of Electrostatic Hazards Associated with Containers and Packages for Liquids and Powders

Vahid Ebadat, Chilworth Technology, Inc.

This presentation will discuss the practical approaches for eliminating/controlling electrostatically initiated flash fires and explosions during the use of containers and packages for flammable liquids and powders including flexible intermediate bulk containers (FIBCs), metal and fiberboard containers, plastic containers, and plastic liners for use in containers. Selection of appropriate containers and packages will also be discussed.

Status Update on EPA Chemical Action Plan on MDI

Lee Salamone, Center for Polyurethanes Institute

CPI will provide an update on the status of the EPA's planned Chemical Action Plan. Discussions will include how and why CAPs are developed, what implications a CAP might have for the adhesive and sealant industry, and how companies can prepare.

Education Track 3: New Technology and Application

Supply Chain, Testing and Equipment Focus

Weathering 101: The Right Choice Natural and Accelerated Weathering Test Methods Compared
Sean Fowler, Q-Lab Corporation
This presentation compares two accelerated weathering test methods: fluorescent ultraviolet and xenon arc. Mr. Fowler will describe the strengths and limitations for both techniques due to: simulation of the forces of weathering including sunlight, temperature and moisture, mounting of test specimens, control of test parameters and operational considerations. Common test methods for adhesives and sealants will also be reviewed.

Closed Loop FIBC Reuse: Safe and Sustainable Supply Chain Alternatives
Tyler Alexander, Process Packaging & Control, Inc.
This presentation will address the bag and process requirements for the safe re-use of FIBC packaging. Topics will include manufacturing recommendations, transportation practices, proper filling and discharge of FIBCs, storage, and finally, appropriate cleaning and refurbishing processes of FIBCs for safe re-use. This session will further discuss the economic and environment benefits associated with FIBC re-use for both fillers and dischargers.

EXCLUDED PRESENTATIONS
At the speaker's request, the following presentations are not available for publication, and therefore, are not included in the 2011 Spring Convention Proceeding package.

Innovation Influences and Challenges in Cosmetic Formulation
Amitabh Bansal, Avon Products, Inc.

MDI Worldwide Isocyanate Supply & Demand
Ron Coifman, ICIS

Advanced Lawsuit Protection, Tax Reduction and Estate Planning Strategies
Larry Oxenham, American Society for Asset Protection

Best Practice in Supply Chain Management
Dawn Pearcy, Eastern Michigan University

Making Silane-modified Polymers Sealants "Greener": Low Moisture Functional Fillers
Rehana Syed, Omya International AG

The Compostable Sunchips Bag – a new arena for PepsiCo
Kimberly Assaad, Principal Engineer, Sustainable Packaging, Frito-Lay North America