



GLOBAL PLASTICS LETTER

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“A World of Plastics Information”

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K 2010 Issue

Dear Colleague:

Enthusiasm encourages energetic excellence ...a sustained, inflation-free recovery continues. However reports from our sources are still indicating mixed signals...specifically some manufacturers reporting slowness in recovering to pre-2009 levels, while distributors are experiencing a return to prosperity not seen since 4Q 2009. Prognosis continues to be a slow slog back to the peaks in the business cycle. As always, expense control and innovative marketing, coupled with new materials and applications is the path to the double-digit growth experienced earlier in this decade for our industry. Economic forecasts are trending as follows: GDP (U.S.) averaging 2.8% in 2010 with 2011 picking up to 3.1%; Inflation falling below 1% this year; rising to 1.5% in 2011; crude oil ending this year at \$65-\$75 per barrel.

Banks are starting to release funds and investing in business loans, although their fees are escalating generally. Of course the availability of capital is critical for a sustained recovery especially within the manufacturing sector of our industry. New materials and applications abound at K 2010 just concluded as we went to press. Some trends are clearly in the sustainable, renewable plastic materials and applications...a major leap forward since the last K three years ago. Some examples: HDPE from sugarcane used by Proctor and Gamble for packaging.

As K2010 concluded some facts are in and trends are apparent...expectations were exceeded as 220,000 trade visitors attended – only a 9% decrease over 2007 (this global trade fair occurs every 3 years). This indicates a slow but steady industry renaissance from the low points of 2009 and a strong willingness to invest in further growth of our industry. Exhibitors numbered 3,102 from 56 nations (see OUTLOOK EUROPE below for complete listing of semi-finished exhibitors). Surveys showed that materials generally were the focus of 48% of visitors, while 26% attended in order to learn more about semi-finished shapes. Attendees from the distributor sector included representatives from Cope, Curbell, Laird, Port and Total.

TRENDS: Photovoltaic polymer film, a thin yet unnamed polymer solar film containing micro spheres, could enable windows to double as power producers...being developed in the U.S. at Los Alamos Laboratories. Films of all types are poised to grow exponentially in Central Europe...applications include packaging and graphics as the region emerges to participate in global applications developed heretofore. Plastics Database from IDES expands to 83,000 material data sheets from 800 global manufacturers...go to: <http://www.ides.com/prospector>

Canada declares BPA toxic, plans to draft regulations. China's best cities in which to start a new venture are: Suzhou; Qingdao; Shenzhen; Ningbo and Dalian. (Source: *Fortune Magazine*).

OUTLOOK EUROPE.: ...introducing Ralph Ammann, our new special European Correspondent. Ralph files his first story from Dusseldorf's K2010 held in Germany where he resides (at Hann, Muenden). *Ralph was born in Dortmund and received degrees at Philipps-Universitat, Marburg. Working as a freelance journalist in the plastics industry for the last 10 years, Ralph adds his perspective to our sector of the plastics industry. Here is his report:*

Three years ago in 2007 the International Trade Fair for Plastics and Rubber 'K' in Dusseldorf/ Germany was quite disappointing – but this year the situation was a completely different. The 371 exhibitors, which are directly or indirectly dedicated to semi-finished products, were very optimistic.(complete listing follows) Thus, interesting news can be reported from this year's 'K'.

The German company Centroplast Engineering Plastics GmbH introduced a new high-temperature polypropylene, which can be used for semi-finished products for example. The advantage of this high-temperature polypropylene is the processing temperature, reaching up to 140°C (284°F). This special propylene is already used in semi-finished products for instrument trays in medical technology.

Customers were also very interested in the new blank cutting machine 'Tech88' of the Italian company Gevacril. The machine is designed to blank cut and remove adhesive residues at the fringes of methacrylate cut to size pieces, which have either been glued or processed with the well-known DeskGlue technology of the Italian company. The German Pleiger Kunststoffe GmbH focuses on polyurethanes and enlarged its range of products of polyurethane elastomers. The new Plei-Tech MT is cellular polyurethane foam available in various gross densities and with an integral structure. Its closed skin shows minor abrasion and is impermeable to water. Due to the cellular structure of the core, dynamically stressed parts made from this material show distinct progressive spring characteristics as well as high damping characteristics and good compression sets. The material can easily be processed with conventional methods.

Several innovations were also offered by the German Ensinger GmbH in Dusseldorf, one of them being Tecatec PEKK CW60, a thermoplastic semi-finished composite product for medical use, especially in orthopedics. The mentioned material is reinforced by its content of 60 % carbon fiber tissue. For this reason Tecatec PEKK CW60 in comparison to other reinforced extrudates shows significantly higher longitudinal and flexural strength. Together with its high dimensional stability it perfectly meets requirements for high-performance parts for the therapy of traumatic injuries. Composites based on polyaryletherketon PEKK show a higher glass transition point than PEEK, which promises higher durability for frequent sterilization with hot steam at temperatures of 134°C (273°F). A further exhibit shown by the German company was the newly developed polymers of the Tecasint 3000 and 4000 product family which expand the application field of non-melting polyimides for high-performance usage. Semi-finished products and direct formed parts of the Tecasint 3000 series are characterized by their extreme temperature resistance, toughness and good machining properties. Tecasint 4000 in contrary stands for minimal water absorption, improved chemical resistance and unmatched oxidative stability at high temperatures.

Last but not least, Evonik Industries showed its access into the production of bio-based polyamides. Currently the company offers two versions: Vestamid Terra HS and DS. Vestamid Terra HS is completely bio-based, whereas Vestamid Terra DS is 60 % bio-based. The "Terra" molding compounds are semi-crystalline and distinguished by their high mechanical resistance against chemicals and stress cracks. The molding compounds can be processed with any injection molding machine suitable for polyamides.

OUTLOOK ASIA: by Mal Binnie, our Pacific Rim correspondent reporting from Australia

The Australian market for imports is showing the results of the strong \$Aust as it reaches parity with the \$US for the first time since the 1980's. It is also reflected in outbound tourism with many plastics distributors and customers visiting K2010. I believe that Cut to Size Plastics are leading the Australian contingent with 7 of their team led by Laurie Green MD plus a number of customers. No other reports have been received from the ANZ market as business continues at buoyant levels. For the industrial plastics used in Mining a new book entitled "The Transfer Chute Design Manual" has been published, look at www.conveyortransferdesign.com website. Bulk Handling Review magazine has in its Sept/Oct edition a very useful directory of Bulk Handling Eng. Firms. ASGA and VISA will hold their National Conference and Golf Day on the Gold Coast Queensland, March 24-26, 2011. 13-15 April 2011. Gladstone Qld will host an Expo for the mining industry and suppliers. The President of the Malaysian Plastics Manufacturers Assoc. has reminded the industry that they need to set higher standards in Quality and Innovation to stay competitive in the export markets. BASF continues to expand its PU systems in China with a new unit in Jianjin. Borouge, headquartered in Abu Dhabi/Singapore, stated that China is the largest market in the world for polyolefins with an estimated consumption of 30million MT. India was well represented at K2010 and the Rajoo/Wonderpack stand was considered outstanding, Rajoo who are based in Rajkot are now a leader in blown film and sheet extrusion lines. India's HPL Additives have signed a letter of intent with Songwoon Ind. Ulsan Korea to form Songwoon HPL Additives, Songwoon also announced a further expansion in China and a capacity increase. In Hongkong an Equal Opportunity Tribunal (EOT) has been recommended to provide better access for litigants to the judicial process. A new data Access request form has been published and is available at the website of the Privacy Commissioner for Personal Data. Solvay Group is opening a specialty compounding plant in Changshu, Jiangsu, China. Mitsubishi Plastics has announced plans to open a PET film plant in Suzhou, Jiangsu province, China. This will be its first plant in China. The continued growth of the flat panel display market for TV and computers has created the demand for this plant. It will be on line by 2013 and expansion is already envisaged for 2015. Mitsubishi Engineering Plastics are actively promoting the improved features of their PC with increased flame retardency and still maintaining optical heat, impact and light resistance and formability.

PRICING: Prices of polyolefins, ABS, PS and other commodity TP resins, except PVC moved up last month. London Metal Exchange de-listed plastics contracts... futures trading began in 2005. Apparently the volume was not enough to sustain what had been an important hedging tool.

MANUFACTURER/DISTRIBUTOR BRIEFS: SABIC IP launches new Extem™ UP thermoplastic polyimide... rated for continuous use at 240C. Also has its loan restructured by parent SABIC who reports 46% jump in 3Q 2010. Evonik targets a 5% compounded annual growth over the next 5 years for its acrylic product line. Braskem commits to producing bio-based PP resin. – to be completed in 2011. A.M. Castle's Total Plastics unit reports 3Q sales resulting in a 17% increase year over year and also compared to 2Q 2010. Vycom/AIN Plastics provide 2000 HDPE sheets, further fabricated into earth boxes at World Trade Center site. European Plastics Converters Association urges its members to challenge any "suspicious" force majeure actions. Exatec and ULVAC in Japan develop plasma coatings for PC glazing. Ensinger/Penn Fibre adds long glass fiber reinforcements to its polyolefin sheet to achieve metal-like properties. Eastman Chemical's Tritan copolyester sheet adds chemical resistant protection for face shield applications... also nears EU approval for food applications. Lucite International re-introduces ShinkoliteA, continuous cast acrylic sheet in U.S. Simona Group forecasting strong double-digit global sales growth for all of 2010 after a strong first half. Arkema provides Rilsan nylon 11 in high pressure pipe markets... replaces steel. Kydex LLC introduces KYDEX 351 MB sheet... said to provide antimicrobial protection. Mitsubishi Engineering Plastics pushes ahead with extensive PC portfolio after acquiring line from DSM.

INDUSTRY INTERVIEWS: Mike Batky, Vice President, Business Answers International, Palm Beach Gardens, Florida

Mike started in our industry in 1961 at the fabrication division of Commercial Plastics in NY (now SABIC IP) His long career continued in management positions at Pro Plastics, Almac Plastics (now Laird Plastics) and AIN Plastics before joining BAI. Mike has 2 daughters and one grandchild. We interviewed him at his office in Florida.

Q. How long have you been in and how did you start in our “plastics shapes” industry...probably called something else when you first started?

A. My dad had small plastic fabrication business in the 1950's and I worked for him part time while attending high school. My first full time position was with Commercial Plastics and Supply. I was actually hired by Mort French in 1961 as an estimator for their Comco fabrication division in Queens, NY.

Q. How has the industry changed over the years?

A. Two of the most significant changes have been the consolidation of both distributors and manufacturers and the evolution of technology. From a distributor's point of view, most of the larger distributors have changed ownership. For example, Cadillac Plastic and Chemical, Commercial Plastics and Supply, Almac Plastics and Piedmont Plastics were the industry leaders when I began my career. All of these companies, with the exception of Piedmont Plastics have changed hands on multiple occasions. Cadillac was acquired by M.A. Hanna then by GE and is now owned by SABIC Innovative Plastics. Commercial was also acquired by GE and they too are now owned by SABIC Innovative Plastics. Almac was acquired by the Laird Group and is now owned by the Blackfriar organization.

From a manufacturer's point of view, consolidation has been even more dramatic. The leading companies at the time were Rohm and Haas, DuPont, Polymer Corp., American Cyanamid, Allied Resinous, A.L. Hyde, Carmer Industries, Westinghouse, KSH, Cast Optics, Chemplast, General Tire and more. It would be interesting to see how many of your readers can identify the ownership of these companies as they exist today. From a technology point of view, advancements have been mind-boggling. The internet provides lightning speeds for gathering all types of information and has transformed our industry by providing instant information internally and to our customers.

...to be continued in the December, 2010 issue

Information contained in this newsletter has been taken from trade and statistical sources that we consider reliable but we cannot assure its accuracy or completeness. Any opinions expressed reflect our judgement as of this date and are subject to change.

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K2010 SEMI FINISHED SHAPES EXHIBITOR LIST

COMPANY	COUNTRY	COMPANY	COUNTRY
3A Composites GmbH	Germany	IKS Schön GmbH	Germany
3P- Performance Polymers Products SAS	France	Ilpa MP3	Italy
AGRU Kunststofftechnik GmbH	Germany	Indiana Gummi GmbH	Germany
Allied Supreme Corporation	Taiwan	Industrial Plastics Belgium	Belgium
ANGLO -American Vulcanized-Fibre Ltd.	Great Britain	Industrie Plastiche Lombarde S.p.A.	Italy
Arkema	France	Inometa Technologie GmbH	Germany
Arla Plast AB	Sweden	Isoflon P.T.F.E. Products	France
Axial Srl.	Italy	Isosport Verbundbauteile	Germany
Baoding Lida Plastic Industry Co. Ltd.	China	ISO-Tech Kunststoff GmbH	Germany
BASF Polyurethanes GmbH	Germany	ISOKON d.o.o	Slovenia
Bauku Troisdorf GmbH	Germany	Isovolta AG	Austria
Bayer Materials Science	Germany	Italian Gasket S.p.A	Italy
BEN Kunststoffe GmbH	Germany	Italplastics GmbH	Germany
Biesterfeld Plastic GmbH	Germany	Kin Tat Rubber Technology Ltd.	Hong Kong
BIW Isolierstoffe GmbH	Germany	KRD Sicherheitstechnik und Coatings	Germany
Blik 99 Ltd.	Bulgaria	Krempel GmbH	Germany
Bond-Laminates GmbH	Germany	Kunex GmbH	Germany
Brandenburger Isoliertechnik GmbH	Germany	Licharz GmbH	Germany
Brett Martin Ltd.	Great Britain	Lucobit AG	Germany
Centroplast Engineerings Plastics GmbH	Germany	Luen Tai Rubber Manufactory	Hong Kong
CeraCon GmbH	Germany	Manifattura Cattaneo S.p.A	Italy
Cho Chen Industry Co.	Taiwan	Marubeni Europe Plc., Chemical Group	Germany
Cifra	France	Maxflex Corporation	Korea Republic
Cossa Polimeri S.r.l.	Italy	Mayser GmbH	Germany
Dimontionate Floccati S.p.A	Italy	Merquinsa	Spain
Distriplast Flandre S.A.S	Belgium	Mikro-Technik GmbH	Germany
D Plast a.s.	Czech republic	Mitras Materials GmbH	Germany
DR-Pack II.kft	Hungary	Murdotec Kunststoffe GmbH	Germany
Durotherm Kunststoffverarbeitung GmbH	Germany	Murtfeldt Kunststoffe GmbH	Germany
Durplastics S.A.	Spain	MVQ Silicones GmbH	Germany
EC Pack Industrial Ltd.	Hong Kong	Nanjing Hujiang Composite Materials	China
Eder - Siebdruck K. GmbH	Germany	Novotex Italiana S.p.A	Italy
Eder - Wojciech Eder	Poland	Nowofol Kunststoffprodukte GmbH	Germany
Elektro-Isola A/S	Denmark	Nudec S.A.	Spain
Engineered Polymers PVT ltd.	India	Ongropack Ltd.	Hungary
Ensinger GmbH	Germany	Optimum Rubber & Plastics Ltd.	China
Erhard Hippe KG	Germany	Orbilan GmbH	Germany
Eurofoam S.r.l.	Italy	Ottensteiner Kunststoff GmbH	Germany
Evonik Industries	Germany	Otto Bock Kunststoff Holding GmbH	Germany
Excel Composites GmbH	Austria	Pali Polymers	India
Exsto	France	Palram Industries Ltd.	Israel
Fi-Plast S.r.l.	Italy	Palziv	Israel
FLXT GmbH	Germany	Paneltim B.V.	Belgium
FoamPartner, Reisgies Schaumstoffe	Germany	Plazit 2001 - Panchim	Israel
Fothergill Coated Fabric Ltd.	Great Britain	Pleiger Unternehmensgruppe	Germany
Frank GmbH	Germany	Polimersan Polimer Kimya	Turkey
FSK Schaumkunststoffe und Polyurethane	Germany	Polypres Mediterraneo S.L.	Spain
Gammacril S.r.l	Italy	Polytech Klepsch & Co	Germany
Gehr Kunststoffwerk	Germany	Porex Technologies GmbH	Germany
Gevacril	Italy	Profilan Kunststoffwerk GmbH	Germany
Global EPP Limited	Great Britain	Profine GmbH, Kömmerling BU Platten	Germany
Guangzhou Yisitong Electronic I. F.	China	PU1Tec Dichtungen und Kunststoffe GmbH	Austria
Arthur Habermann GmbH	Germany	Reca plastics GmbH	Germany
Hagedorn Plastic GmbH	Germany	Reiff Elastomertechnik GmbH	Germany
Igus GmbH	Germany	Reinert-Ritz GmbH	Germany

K2010 SEMI FINISHED SHAPES EXHIBITOR LIST cont.

COMPANY	COUNTRY
Rhodia Polyamide	France
Riwisa AG	Switzerland
Rodeca GmbH	Germany
Röber Kunststoffe	Germany
Röchling Engineering Plastics KG	Germany
SABIC	Saudi Arabia
Schwartz GmbH	Germany
Schwarzpunkt Schwarz GmbH	Germany
Sekisui Chemical GmbH	Japan
Seletec Plastic Products GmbH	Austria
Senoplast Klepsch & Co. GmbH	Germany
Shakti Polyweave Private Ltd.	India
Silex GmbH	Great Britain
Simona AG	Germany
Sojitz Europe plc	Germany
Solvay S.A.	Belgium
Späh Karl GmbH	Germany
Specchidea S.r.l.	Italy
synthetica Drehteile und Fördertechnik	Germany
Synthetic Packers Pvt. Ltd.	India
Taconic International Ltd.	Ireland
Taiwan PU Corporation	Taiwan
Technamation Technical Europe	Germany
Tecnoelastomeri S.r.l.	Italy
Teku GmbH, Fluorkunststoffe	Germany
Ten-Fluid S.r.l.	Italy
Terbrack Kunststoff GmbH & Co. KG	Germany
Thieme GmbH	Germany
Toray Industries Inc.	Japan
Tovo Gomma S.p.A.	Italy
Traid Villarroya Hnos S.L.	Spain
Triplex Kunststoffe GmbH	Germany
Vapla S.A.	Spain
Veka AG	Germany
Viappiani Printing S.r.l.	Italy
VitasheetGroup, Metzeler Plastics	Great Britain
Von Roll Deutschland GmbH	Germany
Walla GmbH	Germany
Wefapress Beck + Co GmbH	Germany
Weiss Chemie + Technik GmbH	Germany
Wolf Kunststoff-Gleitlager GmbH	Germany
Yangzhong Haiteng Fluorine PPF	China
Zakłady Azotowe w Tarnowie Moszczach	Poland
Zell-Metall GmbH	Austria