



GLOBAL PLASTICS LETTER

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"A World of Plastics Information"

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IAPD Issue

Dear Colleague:

Financial fracas forecasts future ...and it is uncertain to say the least. Credit crisis collides concurrently... *credit is a latin term for believe*, and believing in the global economy to right itself is key to a swing back to liquidity in world markets. A resumption of global growth in our industry as well as other worldwide bellwether industrial markets must result from the current adjustments going on in global financial institutions. Suddenly inflation in raw materials pricing seems to be taking a back seat to the need to right some financial wrongs.

Crude oil prices, once the threat of hurricanes dissipated, have now trended lower and expectations are for about \$100 per barrel in 2009...gasoline at \$3.35/gallon and \$4.00 diesel.

This will relieve some pressure on resin prices in our industry and we should see some falling back in prices both due to oil price trends...and slowing of demand as supply catches up as always. Metal commodities will also be softer in 4Q 2008 and into 2009, thus narrowing the delta and slowing some plastic replacement application opportunities. Some other outlooks: GDP up sluggishly; interests rates down slightly; inflation moderating; productivity still growing (with "cloud computing"...more on this in TRENDS below) and overall activity pointing to a continued mild global recession into 2009-2010.

When the global financial crisis begins to ease in 1Q 2009, cash and wisdom will be king with a much less leveraged economy emerging. Financing will be with simpler products and stricter terms, higher taxes and with increased government oversight. All told, we are entering a different era of financing growth in our industry...one with little precedent for most of our managers.

IAPD held its 52nd annual convention in Philadelphia last month – some highlights: Attendance was 536 total delegates in 2008 vs 474 in 2007. Exhibit Hall day only (local company employees) attendees numbered 101 vs 137 in 2007 (note: 95% of delegates attend Exhibit Hall). The total registration breakdown between manufacturers and distributors is 55% manufacturers and 45% distributors, with 30 non-members attending Philadelphia convention compared to 16 in Dallas. As for Exhibitors, there were 79 booths in 2008 versus 72 last year in Dallas. An important new event was the first meeting of the Environmental Issues Committee, which discussed how our industry should be proactive in explaining the true environmental impact of our products. This was attended by over 100 delegates and certainly launched this initiative and showed the high level of interest. General Sessions covered forecasts for a chaotic economy and ideas to survive (prescient considering subsequent economic events) as well as a talk explaining demographics and generation gaps - four specific generations were discussed. At the Plastics Exhibition many new manufacturer-suppliers were in attendance showing new or improved sheet products. All told – an enlightening and successful conference held against the backdrop on challenging times.

TRENDS: As your business software licenses expire, consider “cloud computing”...software and information storage that’s in a “cloud” (*online instead of in-house*). Financial data, inventories, payroll and customer relationship management (CRM) can be handled with word processing, spreadsheet, database and other programs from companies that include Google, InfoStreet, Bill.com, Salesforce.com and others...it’s cheaper and cuts IT staff needs.

Recent advances in biotechnology and polymer science have resulted in biodegradable polymers produced from bio-feedstock resources such as corn, soybeans and other agricultural products. Results are PLA from corn, PHA from microbial “factories”, and TPS. There is strong interest in using them in the biomedical field such as implants...an idea whose time has come? Producers are companies such as DuPont, NatureWorks, Telles-Metabolix and Novamont. A report in the September 29, 2008 issue of *Fortune* contains an oil-depletion timetable...with the latest estimated to be Kuwait and Iraq in the year 2108! Adding fuel (pardon the pun) to the global needs for alternate, non-renewable energy resources such as biofuels.

The Extruded Sheet Business Index advanced 7% in September year over year, although forecasts from *Plastics Technology* and *Mountaintop Economics* are for a 1% decline for the entire year 2008 compared to a 4% rise in 2007. Similarly, the Film and Pipe Indices indicate a further slowing in 2008 compared with 2007...film still growing but at a slower rate with pipe showing further declines, largely due to construction activity cutbacks.

OUTLOOK EUROPE...by **Chris Parry, our special correspondent embedded in the U.K.**

The last couple of weeks of turmoil, (still not resolved) in the financial markets have cast an even deeper shadow on the European economic scene. Even before that, the UK, Spain and Germany were either already in or about go into recession. Whilst the initial cause may or may not be due to the decline, (sorry “correction”), in the US housing market; the impact is truly global. The combined effect of this banking crisis compounded by the still uncertain oil price, (September saw the largest oil price increase in a single day, following a short and gentle decline), have seen European stock markets see-saw dramatically. Whatever schemes are concocted, (if the Republicans and Democrats can get their act together), to ameliorate the impact of this situation, these problems will continue to form the backdrop to the western economies well into 2009.

In addition to this disturbed economic environment, the plastics industry, (in common with many others), is getting a double hit from huge price hikes in raw materials, (90% in PE, 63% in PP, 70% in PS all since January 2008), and in energy; with the cost of European gas and electricity likely to rise by up to 100% on current contract prices when contracts are due for renewal. Despite the doom and gloom, however, business continues, and many healthy businesses are taking the situation as an opportunity to expand and grow.

Mitsubishi Rayon and Saudi petrochemical company Sipchem are the front runners in a possible acquisition of Lucite International for a figure anticipated to be around \$2bn. Sabic IP have appointed Twinwall Fixings (UK) Ltd, (Twinfix), as the UK distributor for their multiwall polycarbonate panel system “Thermoclick”. Twinfix have developed a unique glazing bar system for the installation of Thermoclick panels, and have the capability to undertake installation contracts if required. Concern continues over the possible health issues around the use of BPA, (bisphenol A). This is impacting the use of polycarbonate in applications that are food or drink related, (including baby bottles), due to fears, (not necessarily grounded), of BPA residues being present in the plastic. Nudac have announced the installation of a new “optical quality” extrusion line at their facility in Barcelona, Spain. The new line will extrude APET, PETG and other polymers in thicknesses from 0.5mm to 15mm and up to 2050mm in width. The line will be fully up and running in 2009.

OUTLOOK ASIA...by **Mal Binnie, our special correspondent embedded in the Pacific Rim**

Throughout the Pacific every business is spending considerable time and effort ensuring its business is protected from the credit crisis spreading from the USA to the rest of the world. Most Pacific countries are expected to withstand the pressure but many plastics businesses will find it difficult to raise new money for

expansion plans. China is proposing to enact an Emergency Economic Stabilization Act to assist financial organizations in trouble. Further price increases have been announced in Asia by Acrylic Producers. There is no sign of cutbacks in production even though oil prices continue to be erratic. Now that the Olympics/Paralympics are over China business activity can return to normal levels and it is expected that rapid growth will take place during the Oct/Dec quarter. Makrolon PC from Bayer continues to celebrate the 36000 sq metres of PC sheet used in the various Olympic facilities. Ticona will build its 4th plant on its Nanjing site by 2010 to produce 15.4 million lbs of its Vectra LC engineering polymer. Intriguing ... Chinese motorcycles now being assembled in Mexico City ... what next??? International Automotive Components Group from Detroit broke ground on its new manufacturing and engineering operations in Pune, India. This will provide many opportunities for plastics manufacturers in India. Indian flexible packaging manufacturer Uflex Ltd is investing in a new polyester film plant in Altamira, Mexico. Taiplas, Taiwan's 11th International Plastics and Rubber exhibition reported more visitors and exhibitors than in previous years. However concern was expressed that the credit squeeze in the USA may affect the flow on effects from the show. Seoul has been named the 2010 World Design capital by the International Council of Industrial Design, designers in Korea are attracting attention from the world markets. For Australia October present 2 exhibitions Ausplas held in Melbourne October 7-10 and Visual Impact Expo in Sydney Oct 30 - Nov 1. Celmac, Australia announced the launch of Foamalite Eco expanded PVC sheeting for the digital and screen printing markets. Visitors from Australia attended the IAPD meeting including Arnold Mouw COO of Mulford Plastics. Singapore which has always been a model for Asia is seen to be heading for tough times with the major problem being lack of its major resource ... People.

EDITOR'S NOTE: Our newest correspondent, Bill Shields, will introduce OUTLOOK NORTH AMERICA in our November issue.

MANUFACTURER/DISTRIBUTOR BRIEFS: Evonik Industries/CYRO develops a new manufacturing process for MMA under the name of Avener – said to be a pioneering method to produce lower cost monomers and polymers... a possible inflation fighting tool for acrylic sheet. Boltaron announces its 9915 FSTH sheet, decorative composite (combined with Lexan XHR6000 sheet from SIP) – said to meet flame, smoke toxicity specs for aerospace industry. Quadrant EPP reports first half year results showing a slight 3% increase, despite weakening economies in North America, Europe and Asia – during this period it acquired Global EPP, Mexico. Westlake Plastics announces availability of Zelux M PC sheet up to 6 inches thick. Arkema presents Kynar® RX PVDF for the pharmaceutical industry. Ticona adds Vectra LCP polymers at the Nanjing site in China of its parent Celanese. JSC SafPlast opens Russian PC sheet (to be called Novattro Plant) employing technology from Japan's Asahi Kadei Chemical Corporation.

MERGERS, ACQUISITIONS, ALLIANCES, EXPANSIONS AND DIVESTITURES:

Erie Plastics files for bankruptcy protection after Crawford and Park Ohio acquisition talks fail. Lucite International is in play to be bought by either Mitsubishi Rayon and Saudi petrochemical giant Sipchem – said to be a \$2bn deal to be finalized by December 2008. Mitsubishi recently sold its Aristech unit to an investment group, with Lucite's Wyndham Draper at its helm and just announced its acquiring of Thomas & Betts PVC pipe and conduit business, formerly Lamson's. Spears buys CPVC pipe extruder Coastline Plastics. Highline Polycarbonate signs supply agreement with Teijin to supply PC sheet and film to North and South American markets. Gehr Plastics Inc. USA, announces the appointment of Sebastian Gehr as President – third generation Gehr will be interviewed in a future issue.

INDUSTRY INTERVIEWS ... Ed Westlake, Jr. President, Westlake Plastics. We interviewed Ed by email and by phone at his office in Lenni, Pennsylvania.

Q. How is business this year so far? How does it compare with 2007?

A. *Our business at Westlake Plastics in 2008 is quite brisk. This mirrors our trend in 2007 and would attribute the majority of this activity to our commitment of our strategic partners. All our employees, new and*

long term, are diligently working for the benefit of our global customers. As you have seen, change is coming at a much faster pace than ever before. Service and knowledge are critical components to being an integral component in the supply chain. We have a talented team that is empowered to make swift and well informed decisions necessary to respond to customer requirements, when ever or where ever that may be required.

Q. How has Westlake's product line changed since the turn of the century?

A. Since 2000 and even before in the late 90's, we were working with specialty resin formulas and polymer alloys. Our product line continues to focus on engineering thermoplastics which push the limits of temperature and strength for unique, critical applications.

Q. What are the key products for the balance of this decade?

A. We see our key products as those materials that meet stringent application requirements and accomplish that at a price performance ratio that is acceptable to the end user. A low cost material does not always equate to a good solution. Conversely, a more expensive material does not equate to a poor solution if the criteria and design parameters are properly met without affecting any long-term gains or replacement costs.

Q. What are the key markets and applications you see for the near future?

A. We see strong interest and activity in many markets that have critical design parameters, such as chemical processing, semiconductor, aerospace, medical products and related equipment, industrial material handling and specialty films.

Q. How much of your product lines is sold thru distribution? How much direct?

A. We sell approximately two-thirds of our volume through distribution and the balance is sold directly to end users. That ratio has been consistent over the last five to seven years.

Q. Should distributors continue to inventory specialized products or should manufacturers help subsidize?

A. We notice that our stronger distributors are ones that select products which separate them from their competition. Whether they specialize in certain materials or product sizes that others choose to ignore, these distributors are making a conscious decision and effort to service their customers. They are willing to commit themselves to be responsive to the requirements of a variety of unique and profitable applications.

Q. Who are your key resin suppliers?

A. We have strong relationships with all the major world-wide resin suppliers. We value their technical knowledge and they value our manufacturing knowledge in conjunction with our reputation for confidentiality.

Q. Besides your medical products, what are some of the keys to differentiating your company from its competitors? Who are they?

A. Our employees have extensive industry knowledge and constantly apply that to customer situations world-wide. Our ISO Certification is a natural extension of our focus on customer service; it provides a level of qualification for our materials that helps our customers differentiate themselves from the competition.

Q. What do you consider your greatest accomplishment?

A. Our greatest accomplishment is our longevity. Westlake Plastics Company is closing in on 60 years in the plastic industry and we feel that is significant. It is not necessary to be a behemoth manufacturer to make a difference or provide unique materials. We can be flexible and responsive to our customer's needs, something a larger corporation or conglomerate will not make the effort to execute effectively.

Thank you.

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.