



GLOBAL PLASTICS LETTER

SEPTEMBER 2000

Dear Colleague:

As 3Q 2000 winds down , the direction of our industry in this first millenium (haven't seen that word for awhile) year is beginning to crystallize – sustained sales growth ; moderating inflation ; non-existing e-commerce profits ; proliferating new products and applications and more and more consolidation at the distributor level and more capacity at the manufacturer level. Looking ahead to '01 – expect lower fuel and energy costs but higher transportation and delivery fees , despite moderating energy costs due to strong demand. We expect pay raises to average 4.2% higher, same as this years average hike.

Now that growth is slowing (but is sustained)and energy prices and inflation stabilizing (exception is probably natural gas which remains in tight supply) , the Fed is beginning to switch to a steady interest rate policy and long term Treasury rates declined recently because fears of inflation decreased.

Meanwhile, resin sales hit 100.3 billion lbs for the first time , in 1999, a 6.7% increase over 1998 (source: American Plastics Council). U.S. domestic sales were up 7.8% with a 2.3% increase in export sales to the recovering economies in Asia. As might be expected , PE,PP,PS and PVC accounted for 70% of the total with LLDPE and PP at the top with double digit growth. Nylon was up 12.4% while PET grew 9%. The lower growth resins were PS,PVC,ABS and as previously noted PC's vigorous growth was due to shortage of capacity to meet worldwide demand for computer discs – now somewhat being met by new MMA resins (more on that later).

While many e-commerce sites (especially in the UK) , such as www.allplastx.com , starting to run out of funds , a new giant emerged – www.lemica.com which is a chemicals marketplace , including BASF, Dow , DuPont , Bayer , BP , Atofina , Rohm&Haas , and Shell , with a \$100 million startup investment. We are still waiting to see what GE Plastics will do with Cadillac's website – merge with www.gepolymerland.com ? The initiative seems to be converting much of the traditional brick and mortar business to b-to-b , but no announcements have been made .

Speaking of the GE/Cadillac/Commercial combination (the Comco deal had not closed at press time) – Global Plastics Letter has learned (from SEC filings) what GE paid Hanna for the Cadillac business they bought – it was \$110 million! In addition Hanna wrote off \$45 million in closing costs and goodwill- Cadillac had sales as at 12/31/99 of \$378 million. (from SEC filings).

In the 21st century it seems that the biggest profits will go to those companies that manage information , not physical assets – what is emerging is that the plastics business of the future will be about being global , about speed and about digitization. No longer does global mean exporting or having a physical presence in other countries – but seamlessly connected to the Net so far

flung employees and freelancers can work together in real time to service a global marketplace which knows no time zones or duties – imagine expanding your once local market place to include the entire planet! And speed will get you there – speed of actions, deliberations and information and the speed of these functions continues to increase almost weekly. Digitization , which means removing the costs of the time human minds and hands are devoted to the most routine tasks and replacing them with computers and networks – all lowering the associated expenses dramatically. An example is the typical bank teller transaction costing \$1.25 goes to 2 cents over the Internet! All this is just ahead.

PRICING FORECASTS: The outlook for September is mixed – PE ,PVC ,PS and PP appear to have peaked while PET, PC and ABS continue their upward spiral. As previously reported , PC has been in short supply(an outage at Bayer's Texas (US) plant exacerbated the situation) , primarily for disc production and thus PC resin prices have risen over \$.50 per pound in the last 12 months- and another price increase this fall may not be out of the question. Meanwhile there is some movement from MMA producers to fill the gap with acrylic discs and GE has just announced a major expansion in PC resin production at their Arkansas (US) facility.

In the case of PVC, pipe demand is off slightly due to a slowdown in housing starts and buildups of inventory in early spring , while in the PP market , some price increases have been trimmed back , although there is some pressure to have another single digit increase in 4Q 2000.

A pricing move made, as we went to press, may bear watching for a trend – extruders of acetal have announced a 5% differential in homopolymer shapes vs copolymer- copolymer commanding a premium. Could intra-resin formulation pricing differentials portend another quiet increase – based on supply/demand or product performance? – worth watching.

At a time when many petrochemical projects in China are moving forward quickly , word from Beijing is that the planned 600,000 metric ton ethylene plant planned by the Dow-Tianjin joint project has been “ put on hold temporarily”(source : Plastics Daily News) – this could impact world supply if extended and thus have PE prices move up again in 2001.

TRENDS: Each month trends are cascading – led by Internet initiatives ... the net effect is that the consumer (the business buyer) wins big-time here because everything gets cheaper forever – the ability to compare prices from hundreds of competitors rather than the traditional three will drive down prices. If you don't improve your productivity and reduce costs, you're in danger of going out of business – we believe the average price of plastics shapes worldwide will come down 10-15% in the next three years – the price of a car could come down as much as 30% in that same time period – no wonder the major auto companies are in alliances to reduce costs.

There will only be e-companies in 10 years and they will be “click and mortar” – the best of the old and new world economies. Already we are seeing websites offering shapes, such as : commerxplasticsnet(already has Ensinger , Regal , Nylatech and Newage as links) and worldwideplastics(already has PolyHi and TPI as links) and plasticlink(many manufacturer and distributor links) – for the most recent advice on these fast changing market moves , look at www.eyeforchem.com.- they are sponsoring “ebusiness for chemicals and plastics usa 2000 – Phila , Oct 9-11,2000. Meanwhile in London , E-Plastics 2000, Sep 21-22, is sponsored by European Plastics News.

Want to put your catalog on- line? www.manufacturing.net/magazine/id/develop/news.asp1.htm for more info on how to easily do this with the help of an ASP(application service provider).For even faster

service, Kinkos.com and FedX can deliver finished presentations and reports (hard copy) to 55 major US markets within 4 hours – will expand world-wide soon – its called PRINT TO KINKOS and only thru the Kinkos website.

MERGERS, ACQUISITIONS, ALLIANCES AND EXPANSIONS : Parker Hannifin acquires privately held (Charlie Carr and family) Atlantic Tubing , which will be operated as part of P-H's instrumentation group – Atlantic Tubing has sales of \$ 14 million.

Bayer has formed a jv in Mexico to produce , market , and distribute PC sheet (multi-wall and monolithic) with IMSA SA de CV to a market thought to be growing at 15% annually. This follows Bayer's outright purchase of South Korea's top PC sheet extruder Sewon Enterprise of Seoul – Sewon also produces MMA and PVC sheet. Bayer had previously acquired Laserlite of Australia , Axxis in Belgium and Sheffield in the U.S.

Gharda Chemicals Ltd of India has started up a new PEEK plant , adding to the world supply and competing with Victrex – Gharda is already the newest producer of PES and PSU (polysulfone). In China , Dalian Shide Co. will be the largest PVC profile extruder in the world with 200 lines and a capacity of 480,000 tons per year, with PVC pipe to follow with a 500,000 ton capacity by 2002.

Laird Group PLC of the UK (parent of Laird Plastics (US) has acquired several companies that produce EMI (electromagnetic interference shielding) products – sold into the electronics and telecommunications industries – the most recent buyout was Instrument Specialties based in Pennsylvania (US) and with annual sales of \$109 million . The purchase price was \$257 million. Does this mean a shift in emphasis from plastics for Laird Group PLC or a blending of the two businesses?

DISTRIBUTOR/MANUFACTURER BRIEFS:

Clarification: In a previous issue of this publication , we speculated that Port Plastics and Amari were in play for possible ownership changes – we have learned that this is untrue and sincerely regret the misstatements – as always we rely on trade sources we consider to be reliable – this was not the case here and apologize for the inaccuracies.

Ticona and DSM have formed a jv to produce PBT in Europe.

GE Plastics has increased capacity for Noryl PPO resins in Europe and the US as well as 130,000 metric ton addition at its PC plants in Spain(Cartegen) and in the US (Arkansas).

Rohm GMBH has shipped the first truckloads of optical quality MMA for replicating audio CD's and DVD's Atofina is also entering similar markets with their MMA , and along with CYRO US see great potential because of a shortage of optical quality PC.

Torres Film Plastic, S.L. of Spain has excess PE film and bag capacity and is looking for US distribution(fax is 96 158 86 25).

Aristech has given Morton Custom Plastics exclusive distribution rights to its Altair Plus thermoformable continuous cast acrylic sheet with an ABS substrate on one surface – offering excellent gloss with good structural properties.

Mitsubishi Gas Chemical has transferred all of its stock in Kashima Polymer to Mitsubishi Engineering Plastics which will be responsible for all sales and marketing of PC resin .

PERSONNEL NEWS: Greg Adams was named President of Cadillac Plastic , now a unit of GE Plastics – he had headed the integration team ... is scheduled to also be President of Commercial Plastics when that deal with GE closes sometime in September 2000.

Bayer Corp promotes William Gaughan to VP , E- business and Information Technology for the Polymers and Chemical Divisions.

Spartech has promoted Randy Martin to Exec VP – Acrylic Products and CFO. He will be responsible for the Polycast sheet , rod and tube business obtained from Uniroyal Technology.

INDUSTRY INTERVIEWS :

Continuing our interview with Earl Wester, VP Worldwide Marketing for DSM's Engineering Plastic Products. Earl joined DSM in 1986 to manage sales and marketing for Sheffield Plastics and Polymer Corp. divisions of DSM .Prior to that he was with GE Plastics in a number of marketing management positions. We interviewed him via e-mail from his office in Reading , PA.

GLOBAL PLASTICS LETTER (GPL) : Would you pay a distributor a fee for cutting-to-size and delivering locally orders placed on your website? Would that distributor continue to stock for you?

EARL WESTER (EW) : *That's a sustainable model if the distributor can do the cutting and delivery cheaper and faster than a manufacturer can – but we all know about the drop-ship monster. As far as local inventory goes, there will be value in local service and account relationships. But for how much of the market? Nobody's talking about what they might have to give up – and the risk is that someone with no ties to today's rules just might take some of it away. The opportunity is to think in terms of a sales and delivery process that links the best capabilities of the manufacturer and the distributor – and the internet. That will help clarify their true value-added roles relative to the users. Here's the interesting part : this opens up a whole new set of rules around mutual business planning , loyalty , number of mutual partners, etc .*

GPL : What will be the biggest changes in the plastics model for manufacturers in the 21st century?

EW : *There's no doubt the internet will have a significant effect. World prices to shapes consumers will be transparent – transaction costs will drop and speed will increase ...but does nothing for market growth and that puts pressure on the existing system to figure out how to add value. We and our distributors can lead this change, or get ready to follow it quickly – or get lost in the dust of someone who could care less about the old rules.*

GPL : You have written and spoken about the need for a global availability of stock shapes – how will this change what you do today?

EW : *The change has occurred – we set global product quality standards based on the requirements of the toughest regional market...we have also made our global brands more consistent to help reinforce our image in all regions – of course the global internet forces global brand consistency – we were fortunate to see that coming.*

GPL : What advice would you give a plastics marketing person starting out today in the plastics business?

EW : *First understand and work to deliver against customer values – Jerry Thurston used to say “ find out what customers want and give it to them – find out what they don't want and don't give it to them” – good way to think about your business plan. And drink red wine – it's better for you than most other things.*

GPL : What do you consider your greatest accomplishment?

EW : *I'll resist the obvious tendency to claim my family as accomplishments. Diane was pure luck. My luck. I have three great grown-up kids who are earning a great living doing what they love, and two more growing up nicely – but they own their accomplishments. For me , I'd say it was and is the opportunity to help build healthy businesses by helping build good teams of people who go on to make their businesses better . And now I get to do it globally!*

GPL : Thank you.