



GLOBAL PLASTICS LETTER

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“A World of Plastics Information”

JUNE 2004

Dear Colleague:

Persistent and Progressive Pricing... with the upward movement gaining inertia, conditions are now being set for entering an inflationary spiral for our industry. Coupled with the unbroken string of record oil prices now pervading world economies, high energy prices are here to stay. Global demand will continue to surge as China and other developing nations gulp oil and natural gas to fuel expanding industries – U.S. energy needs are also on a sharp upswing caused in part by automobile consumption and an expanding economy. Of course, continued raids by terrorists on Middle East pipelines will exacerbate the problem. OPEC's bid to boost its oil output quotas won't lower prices, which will be at the \$40 plus per barrel level for months. The only solution, albeit a long term one is to further the use of alternative fuels and hybrid electric vehicles while tapping new reserves. This crisis is single-handedly putting a lid on a recovery that may not have legs more than one or two years.

The uncertainty surrounding the oil industry and continuing terrorist activity aimed at disrupting oil supplies, coupled with inflation, now seems to be mirroring the 1970's "energy crisis," and lessons learned from that period (for those in management of their companies at that time) need to be revisited in our view. The end of the 70's crisis has been misunderstood: prices went down not because the world found new sources of oil, but because it found ways to make do with less.

During the 80's, oil consumption dropped around the world as the delayed effects of the energy crisis led to the use of more fuel-efficient cars and industrial energy usage. Although economic growth led to a gradual recovery, as late as 1993 world oil consumption was only slightly higher than that of 1979. Oil consumption did not regain its 1979 level until 1997. Since then world demand has grown rapidly – daily world consumption is 12 million barrels higher than a decade ago, roughly equal to the combined production of Saudi Arabia and Iran! Limited world supply of oil, coupled with growing world demand is a fact and we need to adapt to this in this first decade of the 21st century. The term "supply and demand" takes on a new meaning... the oil industry will **supply** excuses for not increasing refinery capacity and then **demand** higher prices. Difficult years ahead for our industry which is so driven by these conditions.

The economies of Canada and Mexico will finish the year strong (up 2.5-3%) before tailing off a bit as in the U.S. Growth in the Eurozone will top 2%, much better than 2003, and India should show vigorous growth at about 7% this year, slightly down from its brisk 8% last year.

TRENDS: It is estimated by Freedonia Group, an industrial market research firm, that Engineered plastics demand in the U.S. will increase over 4% per year to 5.5 billion pounds in 2008 – valued at US\$10.1 billion.

ABS, PC and nylon together will account for 73% of the total, with PC leading the way at a 4.7% annual growth. Among the smaller volume resins, polysulfones and PPS will exhibit the fastest growth.

In other related trends - Plastic Pipe Production in China grew 15% in 2003, ranking first in the world and primarily in PP and PE and PVC, however still lagging far behind developed countries in both production and applications – U.S. composites and plastic lumber demand estimated at US\$3 billion by 2008.

With the upward spiraling of costs of materials (resins for manufacturers and shapes for distributors) gathering momentum, it's time for our industry to plan to raise selling prices after attempting to squeeze the middle to control costs. Prices have been held at their current levels for some time because customers recoiled at the thought of rising prices with low inflation over the last three years. Look at the numbers – a 1% increase yields a 33% improvement to the bottom line (assuming a \$10 million sales company with a 3% net profit). What good sales manager can't manage a 1% increase in selling prices? Well if he or she is not that good ... try:

- Increase minimum order size
- Begin charging for value-added services
- Enforce credit terms discounts
- Raise some prices, lower others

An excellent book, and the only one on how to measure Customer Profitability that is totally oriented towards wholesale distributors, is *More to the Bottom Line* by Brent Grover.

Home Depot appears to be aggressively pursuing acquisitions of specialty industrial distributors, most recently White Cap Construction Supply and may be targeting other such companies to put under their Home Supply Depot Supply division (Laird a target?).

Check out the American Plastics Council's website: www.PlasticsAction.org - it's the only plastics industry grassroots website devoted to increasing the voice of the entire plastics industry.

PRICING: CYRO, joined by the other acrylic sheet manufacturers, hikes prices 6% effective May 30 – this follows a 9% increase by Atoglas and others May 15 in the UK and Asia (Note: in our May 2004 issue we noted that 9% increase but neglected to add “in the UK and Asia” – we regret the error). Kuraray Co. Ltd and Kuraray Trading Co. increases both cast and extruded acrylic sheet 8% in Asia. Lucite International increased PMMA granules worldwide by 150€ per ton effective July 1, 2004

Quadrant EPP increases European prices 2% for nylon and acetal stock shapes effective June 1 – U.S. prices are expected to be raised approximately 6%, postponed from June to July. These price spikes follow BASF's upping nylon and caprolactam raw material prices.

Basell takes up PP and PE resin prices, joining the manufacturers of PC, ABS and PS, who are affected by benzene pricing which has been on a steep rise in recent months.

In other upward price moves, Ticona announces higher prices for PBT, PET, LCP and TPE resins – 6-10 cents per pound is the range of these hikes. All in all, it is obvious that the upward trends in pricing are just beginning to take hold ... and more are expected in the coming months.

DISTRIBUTOR/MANUFACTURER BRIEFS: Lucite International, one of the leaders in acrylic resin and sheet is investing in China following its turnaround in 2003. Impact Plastics, sheet extruder, will build a major new plant in North Carolina. GE Advanced Materials introduces three new Ultem® polyetherimide films targeted at the electronic industry and available in gauges from 50 – 700 microns and widths up to 48 inches. Degussa's plastics business reports 1Q sales unchanged from last year – expanding in China.

Spartech reports 15% increase in 2Q sales, year over year, with full financial results to be disclosed later this month – reports annual production capacity at 1.3 billion pounds of sheet. Kuraray has developed the globe's first manufacturing process for acrylic thermoplastic elastomer, which is reported to have the transparency and weather resistance of acrylic with the elasticity and plasticity of rubber. Initial applications are in resins

and adhesives, with sheet and film later this decade. Modern Plastics, CT. is a supplier to the Disney/SPI “Fantastic Plastic Works”. Correction – in our May 2004 issue we reported that Lucite Intl provided the 41 large panels of acrylic for the Aqua Dome in Berlin... they were manufactured by Reynolds Polymer Technology with polymer and monomer from Lucite Intl – we regret the error.

MERGERS, ACQUISITIONS, ALLIANCES, DIVESTITURES AND EXPANSIONS

Laird Group PLC of the UK late last month announced it was putting Laird Plastics, its North American unit up for sale, since it needed to focus its attention on technology and security sectors. The investment banking firm Rothschild Inc is handling this divestiture which is expected to be finalized later this year. Laird Plastics reported 2003 sales of US \$220 million and profit of \$7.5 million. Speculation abounds as to the successful bidder, be it an outside investor group or a current member of the plastic shapes industry - 29 companies have inquired to date. This will be a strategic change for our industry.

Eastman Chemical is selling its coatings, adhesives and specialty polymers business to a private investment group, Apollo Management, for US\$215 million.

Ticona, a unit of Celanese AG will expand its capacity 40% for Vectra® liquid crystal polymers (LCP) at its Shelby, NC plant, where PBT, PET, PPS and other specialty resins are produced.

Polyex invests in a new plant to produce multiwall PC sheet in the UK (Alfreton, near Derby).

They also cut to size and warehouse sheet for the construction and greenhouse markets.

Bayer spins off its ABS, PS, SAN, PBT and nylon businesses into a new company called Lanxess - Bayer bought the ABS business in 1995 from Monsanto... wants to concentrate on PC.

DuPont expands its Engineering Plastics capacity in Argentina – includes nylon, PBT and PET.

MonoSol (U.S.) and Aquafilm (U.K.) merge their water soluble PVA film businesses.

Rotuba Extruders adds sheet line to further serve the lighting market in North America.

Degussa and China's Jida New Materials have formed a jv to produce PES and PEEK.

PEOPLE: May was a sad month for our industry, one that saw the passing of some of distribution's founders and long time leaders: James Grad, owner of Almac Plastics, prior to its sale to Laird, passed away on May 20 at age 85 after a long illness.

John Amberg, owner of Gem-O-Lite Plastics in California passed away May 4 at age 75.

Brad Nicholson, founder of SouthEast and Gladwin Plastics and one of UPDA's and NAPD's (now IAPD) original officers and directors, also passed away in May.

On a happier note: Tim Brown is now General Manager Sustaplast America, replaced Mark Bogin. Adrain Niggli is new chairman of Quadrant AG of Switzerland.

John Douglas joins Perspex Distribution, Lucite Intl's new distribution venture in the U.K. – will head up marketing and new product development.

Joanne Keenan appointed inside sales and distribution services manager at Sheffield Plastics, a Bayer Company. At GE's Structured Products group, Craig Nikrant becomes General Manager, Americas. Andre Fischbach promoted to Director of Operations, Poly Hi Solidur Americas.

INDUSTRY INTERVIEWS: Rick Wagner, Consultant, special projects, Sustaplast is a 40 year veteran of our industry, with management and ownership stints at Polymer Corp and Penn Fibre following a BS in Chemistry at LVC College in 1960. We interviewed Rick by email at his office in Exton, PA.

Q. You've said "...the old crowd is retiring... they should bronze me...but I don't see distribution changes..." What changes do you see happening to our industry for the balance of this decade?

A. First, that is not exactly what I said. It was suggested that Trokey and I be bronzed and placed at the entrance to future IAPD conventions. My guess is that either eggs or paint-ball guns would be issued to convention participants for the obvious reasons. As to distribution changes, I reacted to the comment that “buy low, sell high, collect early, and pay late is no longer true” by saying that I didn't think this mentality would ever go out of vogue.

The biggest changes or lack thereof are in the raw material supply arena. The margins have been decimated

at all levels in the stock shape supply chain, thus R& D just doesn't happen. Yes, there are glimmers of hope here and there, but the frenzy of development we saw in the 70's and 80's is essentially over. Close the patent office? No, but keep watching! "Lowest cost producer" is the battle cry at all levels. I believe this, unfortunately, will continue for the near term.

I also believe there will be rationalization of capacity (nice term for reduction of suppliers) in both manufacturing and distribution. The served market is fairly static so competition among participants will become even more severe. In manufacturing, there will be some fall out and the emphasis on productivity will continue. Distribution will continue to expand by location extension and acquisition. The ankle biters will fall on hard times as serious manufacturers make ever-stronger partnerships with serious distribution chains and strong individual companies. Market share preservation and value-added products become ever more important.

Q. How long did you spend in manufacturing/distribution? What changes did you see take place during your 40 plus year career?

A. My exposure to stock shape manufacturing/distribution began in 1969 when I joined The Polymer Corporation as a technical service representative. Before that I spent a few boring years working in a laboratory. I am still active today so 2004 -1960 = 44 fleeting years.

I still remember "The Graduate" and recall as a young chemist, how excited I was to be part of the plastics industry. In those early days, product development and application extension/metal replacement were the order of business. Distributors were really active in these efforts as well. The ground was very fertile. Plastics were relatively new and selling was fun.

Both the manufacturing and the distribution entities have really matured. The distribution business has morphed from many mom and pop operations to very sophisticated chains. Distributors have made OEM's abundantly aware of product availability and competition has become really severe on both levels. Many distributors have recognized the "value added" feature of selling plastics. Machine shop/distribution relationships have become very strong. Distribution has placed pressure on manufacturers to discontinue producing "fabricated parts" for obvious reasons. Unfortunately, what were specialty products early on have now become near commodities. Manufacturers have focused on very high performance engineering thermoplastics to help preserve margin. Distributors have expanded their product offerings beyond basic shapes and see-throughs.

Q. Who are the up and coming leaders in manufacturing? Distribution?

A. I respectfully refuse to answer this question on the grounds that it may incriminate me. Obviously, there are excellent manufacturing and distribution companies and I am associated with one.... a very sophisticated stock shape manufacturer... Sustaplast.

Imitation is still the sincerest form of flattery and the copying of products and services from outstanding manufacturers and distributors continues. I refer to this as "plastic entropy." (Entropy #4. The tendency for all matter and energy in the universe to evolve toward a state of inert uniformity.)

The up and coming leaders in both segments are those which make partnering really a household word. Not surface partnering, but serious partnering. Partnerships can and should result in application development/application extension. This effort is always the mother of invention and results in identifying new requirements for existing and modified product lines. Leaders offer more than just price and delivery.

Simply pounding the supplier chain both at the manufacturing and raw material supplier level for better prices destroys margins at e-v-e-r-y level of this business. This is industry destructive.

... to be continued in the July 2004 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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