



Mel Etnenson's GLOBAL PLASTICS LETTER

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Dear Colleague:

This is our first issue of the 21st century and as we begin the year 2000, when we begin writing the date beginning with 2 – for a thousand years, it's important to note that this is the first century that will start with the word "plastics" in the world's vocabulary.

Now that the uncertainty over the Y2K bug has passed, with minimum effect on the global economy, it appears that interest rates will remain stable for 1Q 2000, with a slight uptick in 2Q., if the tight labor market threatens to spark inflation. We therefore expect to see the worldwide plastics economy continue single digit growth through the first half of 2000 with a 7-8% overall increase in unit sales for all of 2000. Plastics will see stronger markets here and abroad in 2000 as domestic industry runs full out and overseas markets improve. This is a global phenomenon and will be common to all industrialized markets.

Pricing forecasts :Price increases in single digits were seen across the board in 4Q 1999, and these are expected to continue into 1Q 2000. Even PC sheet prices finally inched up in Europe after lagging North America most of the 4Q 99. Among resin increases announced, and probably implemented by 1Q 2000 are: nylon, PE,PP,PS,PVC,PET and PETG. Acetal may be next as the consolidation of acetal producers proliferates .The aforementioned commodity products followed MMA sheet increases. Overcapacity and low priced Asian competition have subsided to the point where all these increases will be effective by the time you read this or soon thereafter.

Trends: As we observed in the world wide celebrations of the new millennium, with television carrying the arrival of midnight Dec. 31, 1999 in all the world's time zones, there are no longer any geographical borders. Indeed, there are no real time zones, since all nations are communicating with each other on a 24 hour- 7 day basis. Companies are doing likewise and the line between export and import business is blurred. Truly we are experiencing a global plastics market , with the internet becoming the great equalizer – allowing instant trade between companies in all nations. Conventional supply-demand theory is falling – demand is global and the marketplace is almost infinite.

Recent mergers and acquisitions : Spartech acquires Uniroyal Technologies plastics business, including Royalite and Polycast (MMA sheet , rod , and tube). Thus Spartech changes the tactical situation in acrylic sheet, already in extruded, now adding cast. Will Plaskolite buy Laird's "continental" extruded acrylic plant next to answer Spartech? We believe so.

Huntsman Chemical announces a multibillion-dollar acquisition to take place by 3Q 2000. This follows their purchase of ICI's chemical business where they took a pass on the acrylic business which went to INEOS. The object of this major buyout has not been announced but we think it could be Aristech , whose major shareholder, Mitsubishi Chemical , is restructuring.

Rumors continue to persist that a change may be coming in sheet distribution with GE taking a position in one or more of their LEXAN® sheet distributors, either through GE Equity (see our DEC 99 issue re: Thermoview Ind. in Ky) or GE Plastics. Could accelerate e-commerce and "re-channeling". Some of

the new ideas being batted around are “disenfranchisement” – which is a direct threat to the distributor. Study this carefully before committing funds to e-commerce webpages.

Another recent announcement, also concerning Spartech , is their acquisition of Allied Resinous Products. This further solidifies Spartech in the sheet business and begs the question as to their commitment to distribution. Heretofore they have gone to market primarily circumventing the traditional sheet distributor based on a product and market mix which lent itself to OEM sales. No re-channeling needed here.

CYRO has begun a feasibility study for a world-scale MMA monomer plant in the U.S. since they have announced being out of manufacturing capacity by 2003-04. This would be a \$250 million investment for the third largest MMA producer- Rohm & Haas and Ineos (formerly ICI) are #1 and 2 respectively, although in N.America Cyro is second –only behind Atoglas. The potential to replace PC in optical discs is driving this although its affect on the sheet business is huge.

Watch for vast new opportunities in China, which will be the sixth largest importer of U.S. goods by 2010. With the advent of the internet, trading opportunities, both export and import, abound. Check this out as it represents growth for distribution that didn't exist in the last century. Start with small orders which should fit into future growth plans and ameliorate some of the restructuring going on in the supply chain. China announced the need to import 4 mio metric tons.

Speaking of the internet here are some new websites of interest :

Columbine Intl (welding equip) – www.columbineintl.com
Spartech - www.spartech.com
Commercial Plastics - www.commercialplastics.com
Strongwell Corp - www.strongwell.com

For a more complete listing of plastic sheet, rod, tube, film related sites, contact us and we will send you our free up to date listing.

New Product News : Ensinger announces 4ft x 8ft acetal plate 1”& 1 ¼” thick and soon will have thru 2” thick. DSM introduces Torlon® 7130 and Torlon® 5030 with metal-like dimensional stability and strength at over 400° F . Filled with graphite and glass fiber respectively. Another attack on metals by stock shapes!

A 5ft x 15ft composite bridge deck of pultruded vinyl ester square tube and 3/8” plate, supplied by Strongwell , has been installed on I 81 in Va. At this weigh station, 13000 tractor loads (of over 40,000 lbs each) per day will pass over this innovative application for FRP.

Enduran PBT, a glass fiber filled polymer from GE exhibits outstanding impact strength and with its smooth surface finish and heavy weight feel , is expected to challenge ceramics in household applications such as sinks, vanities, washing machines and ovens – introduced in the Australian market in sheet form recently.

A newly developed composite UHMW sheet product is expected to compete with Kevlar® in high strength to weigh ratio applications such as aircraft radomes. Look for this to come from Israel in the next 12 months!

DISTRIBUTOR/MANUFACTURER BRIEFS:

3M acquires Celanese's stake in Dyneon , PTFE manufacturer in Germany and U.S.

Celanese, meanwhile , withdraws from its JV (inherited from Hoechst) in PVC with Vinnolit.

Solvay Group, Belgium, is expanding into PVC medical films through its U.S. subsidiary in Indiana, Alkor Draka , which in turn is acquiring Ellay Inc. in Calif . The new entity will be known as Solvay Draka BV.

Rohm Gmbh and Degussa-Huls raised prices on MMA and PC sheet effective 1/01/00.

Phoenix Plastics , a new player in cast nylon announces their entry with a facility in Wisc;
Perhaps importing from Germany? Zellamid? Licharz?

Port Plastics , part of the Amari Group in the UK that was bought by Consolidated Electric Distributors in the U.S. seems to be growing again.

Interstate Plastics opens branch in Reno, Nevada; Jim Schneider is manager.

Calsak gets Mike Johnson , formerly a Cadillac Plastic exec.

Piedmont showing solid growth with Chip Whitfield running day-to-day operations.

Laird looking at resuming growth - perhaps acquiring cast-off branches from the “ big two”?

Curbell keeps expanding west and perhaps jumping into the lead with e-commerce.

Keep an eye on CENTROTEC , a German producer of shapes of all the engineering plastics. With an 8% market share in Europe, they have alliances with Solidur in France, Rotex in Switzerland, Sitec in Italy and many others. They have announced partnerships in Australia, China and South Africa. Will North America be next? Further they are direct suppliers to international corporations such as ABB, Bayer and Bosch. Dell Computer isn't the only one promoting “direct” selling!

Dow and LG break ground for a new JV Polycarbonate plant in Korea with a capacity of 130,000 tons – will be operational in 2001. Watch for some price rollbacks in PC sheet in 2001.

Bayer has opened a new PC plant in Thailand adding 80 mio pounds ; and they are planning a 200 mio pound plant in China scheduled on stream in 2003. Again look for price adjustments in 2003 as well. Bayer in the U.S. continues to grow their Sheffield investment as a strong second to GE in the North American market. If the GE forward integration (see above) proceeds, watch for Bayer to accelerate their product offerings to distribution – especially films.

A second plastic-bodied car coming from DaimlerChrysler in 2002. Its body panels will be injection molded of Xenoy® from GE. This will be their Smart roadster with a removable top.

Check out Visgard , a PU coating from Film Specialties in NJ. This is purported to be the first coating to combine permanent anti-fog and anti-static properties with scratch resistance and formability without cracking even on thin gauge substrates. Its also supplied already coated on PC sheets from 7 mils to 1/8 thick.

INDUSTRY INTERVIEWS :

BARRY WHITE , Managing Director, Plastic Plus Ltd. UK. Barry has been in the plastics business in the UK since 1960 and formed PPL in 1991 which with 2 locations is one of the leading distributors of sheet product in the UK. We interviewed Barry by transatlantic phone, as arranged by John Douglas, formerly Port Plastics US and now with PPL.

GLOBAL PLASTICS LETTER (GPL) : What are the most significant differences between the US and UK markets?

BARRY WHITE (BW) : The European producers sell direct to end users in their own markets and are now branching out into distribution by opening distribution units in other countries and working with both the end user as well as the distributor.

GPL: What has happened to prices in Europe over the last 12 months?

BW :Pricing on materials such as PVC have started upward as has PC. The materials coming from Asia and the Indian Subcontinent have been low cost – keeping European prices down.

GPL: What do you see as the products with the largest growth potential in the next 5 years?

BW : PETG and Silicon glass Acrylic.

GPL: What products , if any, will become extinct?

BW : I see Acrylic DR having a difficult time up against PETG.

GPL: What is the future for B2B Ecommerce in Europe?How much?How soon?

BW : The future is bright and we along with others are developing websites to promote our products and services. It's in its infancy but we see a 10% growth rate per year.

GPL: Can you give us a profile of the European market place?

BW : It's different for each country – the UK is very distributor oriented but will see more closures and JV's. In Germany the producers own some distribution and sell the large users direct leaving the small ones to the distributor with better margins.France, Italy, Spain and Scandinavia have distribution tied into fabrication. We see the distributor playing a greater role in Europe in new application sales, since the producers do not have the resources to do this.

GPL: Since your markets are much more condensed geographically, has their been any movement to centralize inventory in multi-location companies?

BW : We along with other firms have decided to have fewer locations with much more stock at each. With our excellent in house transport system, we can service the UK on a next day basis. This is much more difficult in larger countries such as France and Germany.

GPL : Which suppliers do you see becoming stronger globally?

BW : The Barlo group has made large acquisitions throughout Europe. The Simona group has been very aggressive in new product development.

GPL: Which weaker?

BW : The demise of ICI Perspex shows that the large chemical firms are going back to their core business. BASF selling Resart to Barlo is an example of the same scenario.

GPL: How has the “Euro” affected your business? Are exports and imports up?

BW : Not much as business is still done with our own currencies and it will be another two years before the currency (in the form of notes/coins) arrives.

GPL: What advice do you have for someone entering our industry in the New Millennium?

BW : The UK market would be difficult without the support of producers. In the rest of Europe the relationships are established (including producers owning distribution) The other factor is obtaining good people.

GPL: What do you consider your greatest accomplishment in this Industry?

BW : In 1975, having been in plastics sheet distribution in the UK for 15 years, with only 3 distributors in the whole country, I joined a major metals group in order to expand into plastics. This was very successful and many new European manufacturers were introduced into the market.In 1991, having seen existing distribution becoming “one stop shops” for plastic, I founded Plastics Plus Ltd as a specialist offering service that was not available to the customer.