

POLYMERPLACE NOTES

A plastics technology newsletter

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WHAT IS POLYMERPLACE.COM?

[PolymerPlace.com](#) is being developed by G.H. Associates a business development firm specializing in polymers, plastics and related industries. With over 20 years experience G.H. Associates offers commercial assessment of plastics technology, product introduction/positioning services including technical literature and case studies, market research and market channel analysis. Click on www.gh-associates.com for more information and to contact us. Learn how we can make your business development programs more effective.. Also associated in the development of the site is [Franklin Management International](#) a management consulting practice specializing in polymers and plastics.

PolymerPlace has been developed as a platform to position new plastics technology and products. We offer market research, planning and business development programs

customized to meet your needs. In the next month we plan to launch our on-line survey feature/service. Please add info@polymerplace.com to your e-mail list to receive information about your new products or services.

FEATURE ARTICLE

What's the Web doing for you lately?

Recent studies have conclusively shown that buyers and specifiers are more than twice as likely as they were a year or so ago to use the Internet as their first source in locating products and techniques. In fact, the CARR Reports, in their latest findings, indicates that 27% of buyers and specifiers prefer to visit a firm's Website after seeing a promotion for a product or service. What makes this startling is the fact that this is only two percentage points less than the buyer or specifiers preferring to call a company, with the next favored method to send back a reader service card.

We spend a lot of time on the Web. We have noticed that many companies are not getting the full value out of their investment in a web presence. Many companies have invested quite heavily in the production and design of their websites, yet make no provisions for either prompting the browser to ever come back to the site by offering something "down the road". Even more serious, they don't make any provisions to update the site on a regular basis. In doing research to find information on a company or market we are studying we often find that companies neglect to put their company's name, address and phone and fax ANYWHERE on their Web Site. Often these sites belong to large companies!

We believe that the real power of the web is its ability to connect people and information/knowledge which would otherwise not be as possible in any other interaction. When you build a website you need to take it as seriously as other ways you go to the market...

Polymerplace was conceived as a portal to practical, proactive knowledge based information. In this respect we think that we are providing a useful service to complement the direct efforts of the supplier community.

Changes in the companies who have been "big names" in Internet news.

As you probably are aware, the biggest trend in Internet operating companies is their move away from third party transaction sites to procurement and supply chain service providers. This approach offers their respective software platform as a way of connecting companies so they can interact more efficiently.

Some recent developments which support this trend:

- The sale of PlasticNet to Vertical Net. Commerx, the former owner of Plasticsnet is now offering the procurement and supplier management services to the plastics industry.
- ChemConnect in the last couple of weeks merged with Envera to offer an end to end internet solution.
- Elastomer Solutions is utilizing Elemica's service solution for its target market, rubber and thermoplastic elastomer customers
- GE Polymerland offers design collaboration services utilizing Co-Create OneSpace.
- Omnexus claims it is adding more services in addition to its catalog of products from its material and equipment partners
- Ticona has announced an alliance with Conferos to offer its design collaboration services to its customers
- Dow and Conferos have announced a medical vertical site with MDMA (Medical Device Manufacturers Association) called c-Medica.

We believe these developments in recent months are proof that the internet is moving from "E" to "C", from e-business to collaboration...

The move made by ChemConnect to merge with Envera is true sign that the market is now changed. ChemConnect, an independent trading exchange launched as a seller of spot chemicals and resin, now adds the ability to automate such functions as inventory management, order tracking and logistics inside customer and supplier walls. Before the merger, ChemConnect was hampered by the ability to do nothing more after a transaction was made. That limitation in helping customers automate orders caused many processors to hesitate to use the site.

Together, ChemConnect and Envera — started by a consortium of chemical companies — are backed by more suppliers than any other industry dot-com. The new company calls itself the first in the plastics industry to offer full-scale trading, starting with finding suppliers and ending with adjusting inventory, shipping product and tracking orders. ChemConnect claims their new site will offer the ability to connect a processor's computer system to the ChemConnect trading site, or to offer a Web-hosted option for companies unwilling to buy a sophisticated in-house system.

POLYMER END-USE MARKET TRENDS

Transportation

BASF color experts recently presented their forecast to automotive engineers and designers in Detroit. BASF introduced what it calls its new Constellation Color, which is a coating that becomes visible at night and was designed for safety and is expected to stimulate new designs.

For the future in North America, BASF's manager of color development, Jon Hall, sees "a trend that continues to be dominated by metallic, and that's not exclusive to silver. There needs to be some additional color influence or modified effects for silvers. What's coming are highlights of turquoise, green and red, as well as grays with many color influences and highlights." Hall also believes that new pigment effects in copper and gold metallic colors will continue to emerge each year. The dominant silver look will also be "counter-balanced," according to Hall, with strong colors like "juice and concentrate." Versions of turquoise, ink blue, wine, raw green and other colors that have a transparent, rich color look will reappear as new trends, making up a new middle ground between very light and very dark, Hall predicts.

In the July newsletter we will cover color trends in Europe and Japan...

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Honda of America president Koki Hirashima spoke to the Dayton Chamber of Commerce recently and there are a few points from his speech that we have included. Hirashima and his company have an interesting philosophy and strategy on how to succeed.

"Honda does intend to remain an independent company. To assure this, our goal is to combine the speed, the flexibility and the efficiency of a small company with the elements of a large company — global reach and technological strength."

"At Honda," he continued, "We have always known that difficult times present the best opportunities for growth, as long as we stay focused on the customer." Hirashima's last line sounds to be an effective strategy for growth and one that few companies have truly embraced. According to Mr. Hirashima, all of Honda's North American plants are operating at full capacity and he expressed little concern over Honda's 3% sales dip in April, noting that he did not think it was a trend.

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Packaging

US shipments of caps and closures will advance nearly 3% annually through 2005 to 157 billion units. That's according to the Freedonia Group who has just completed a study entitled "Caps & Closures." According to the study results, there will be continued

market penetration of closure intensive plastic packaging and most of that will come at the expense of items like metal drink cans. Freedonia also expects to see gains made in the development of novel closure applications such as aseptic liquid food packaging and the rise in use of dual closure packaging configurations.

Plastic closures are pegged to remain the largest and fastest growing segment of the closure market. Technological advances are allowing plastic closures to compete more effectively in glass packaging applications such as wine.

Freedonia's study indicates that there will be new opportunities for composite plastic metal closures as well. Already popular for hot-fill PET food jars and upscale personal care items this segment is expected to grow. Beverages will continue to represent the largest market for closures with major benefits seen in the trend away from metal cans to PET and glass bottles.

Cap and Closure Shipments	% Annual Growth				
	1990	2000	2005	90/00	May-00
Total Shipment (billion units)	107.1	136.1	157.1	2.4	2.9
Plastic	53.2	91.5	114.4	5.6	4.6
Metal	53.9	44.6	42.7	-1.9	-0.8
Total Shipment(\$million)	2275	3825	4955	5.3	5.3

Study cost is \$3,700.00 For more information on the "Caps & Closures" study contact Freedonia at 440 684-9600.

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Ticona is much better known as a producer of engineering thermoplastics or molding resins and has never been a big player in the packaging films market. However, the company is making some significant inroads into packaging with its COC (cyclic olefin copolymer). COC is being used by New England Extrusion, Inc. in a new line of LLDPE packaging films sold under the Inflex name. New England uses Ticona's Topas™ COC to improve stiffness, clarity, sealing behavior and slip and the new four sealant-layer blends are believed to have increased line speeds, reduced rejects and allow for thinner sealant layers.

Inflex M0466 is reported to have 18% better gloss and 27% less haze than non-COC LLDPE films in four-sealant layer constructions. The grade also has a 72% higher secant modulus in the machine direction, which Ticona says improves package handling, feel and performance and allows for down-gauging. Heat seal initiation is also reduced and a wider heat seal range is gained.

Inflex M964 and M0086 blends also improve stiffness and sealability in stand-up pouches and also allow for down-gauging and possible replacement of more costly laminated or co-extruded films. Hot tack strength is excellent, as well as sealability and clarity when compared to MDPE or HDPE stand-up pouch films.

Inflex M927 offers 22% higher gloss and 125% and 163% greater secant modulus in the transverse and machine direction respectively than the company's standard pouch film. Once again, this film can allow for down-gauging and improved yield without sacrifice in stiffness and seal strength.

For more information on Topaz COC, contact Ticona at 800 833-4882 or visit their web site at <http://www.ticona.com/> For more information on the Inflex films, contact Melissa Gardiner at New England Extrusion (413 863-3171) or visit the company's web site at <http://www.nex-films.com/>

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APPLIANCE

According to reports from AHAM (Association of Home Appliance Manufacturers), total shipments for the first three months of 2001 were 15,886,000 units, down 9.9% from the same period a year ago. Taking the largest hit were home comfort appliances, shipments of which were down 21.8% for the quarter. Cooking appliances suffered an 8.8% drop, home laundry shipments fell 6.2%, kitchen clean-up dropped 8.1% and food preservation appliance shipments fell 5.5%.

Appliance manufacturers were encouraged when housing starts increased in February and through March in response to reduced interest rates, but thus far there is no sign of a recovery in appliance shipments, which started to dive last October and have remained depressed since then.

The affect of the lower shipment figures on plastics manufacturers has been somewhat muted by an increase in US-sourced parts by appliance makers. Commerce Department figures indicate that appliance manufacturers are sourcing 71.2% of their parts and components domestically. That's up from 68.7% a year ago. Based on an average of 16.1 pounds of plastic per appliance, consumption of injection molded parts used in appliances dropped 6.6% during the quarter.

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TELECOMMUNICATIONS

Automotive OEMs and Tier 1 first quarter earnings may not have been something to write home about, but the results were generally better than expected. An industry that was moving at an even more robust pace, appears to be experiencing an even greater slowdown and radical restructuring -Telecommunications.

The first signs that there were problems in the telecommunications industry appeared when Nokia announced that it was ceasing mobile phone manufacturing operations at its Ft. Worth plant and moving those operations to sites in Korea and Mexico. These are cost cutting moves in an effort to remain competitive in the mobile phone market. .

Meanwhile, also in an effort to cut costs, Sweden-based Ericsson announced even less encouraging earnings figures later this week and with that announcement there is speculation the company could ax as many as 30,000 jobs worldwide. The company has already cut 3,300 jobs in European operations and there will be another 3,500 jobs lost in the US when the company begins outsourcing handset production to Flextronics.

In the case of Ericsson, the decision to outsource handset production was good for plastics custom molding and Flextronics. But in Ft. Worth, Nokia's decision to halt production has crippled Triple S Plastics, a company that invested heavily in operations to get the Nokia business. Triple S announced profit warnings to its stockholders immediately after the Nokia decision was announced.

The future of telecommunications production, particularly in the US, carries with it more doubt than the automotive industry. While forecasts for growth in sales of mobile phones and palm tops remain very high – some say sales will quadruple over the next five years – where these products will be manufactured in the future remains a big question.

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CONSTRUCTION

Polyurethane chemicals makers have spent millions on R & D over the last two decades to develop polyurethane-based systems for producing wood and other natural fiber composites. While there have been some success stories, the penetration of polyurethane as a binder in these composites has been less than what was hoped for by the chemical makers.

Now Dow Chemical aims to give it some help. Dow Chemical's Canadian-based unit, Dow Pipeline Ltd. recently agreed to acquire a majority of the Manitoba assets of Isoboard Enterprise, Inc., a manufacturer of wood replacement products. The acquisition includes a manufacturing facility in Elie, Manitoba that produces a product called Isoboard, which is described as an engineered strawboard product produced from finely-chopped wheat straw and polyurethane resins. Dow hopes to combine its process know how with the Isoboard experience in manufacturing composite board to improve and grow the composite panels business.

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New Polymer Developments

New from ETP compounder RTP Co., Winona, Minn., is a line of flame retardant high impact polystyrene resins that meet a range of UL flame ratings. More over, the new grades are said to have excellent colorability and they are fully recyclable.

RTP says it can custom compound the HIPS grades to meet UL 94 V-0 and V-2 or the IEC 695-2-1 Glow Wire test that is commonly used in Europe. RTP doesn't reveal which FR technology it is using in the new line, but it says the chemistry minimizes the impact on physical properties, even when achieving the V-0 rating.

RTP has performed extensive research on the recycling characteristics of products using this FR technology and recyclability is excellent. The products comply with the German Hazardous Substance Ordinance and meet the substitution requirement of the latest draft of the European Union WEEE/ROS directive on recycling. This directive calls for the substitution of brominated type FR systems.

For more information, contact RTP at 507 454- 6900 or visit their web site at www.rtpcompany.com.

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At the recent MDM show in NY, Teknor Apex introduced three new thermoplastic elastomer (TPE) compounds to enable manufacturers of medical tubing to replace latex or avoid the plasticizers commonly used to make PVC flexible.

Monprene™ Grades MP 1580L1 and 1871-R, with Shore A hardness ratings of 37 and 35, respectively, are formulated to replace latex, which has been observed to cause allergenic reactions in some healthcare workers and patients. The 1580L1 grade meets requirements for USP class VI; the 1871-R, for ISO IO993.

Grades MP1848(Shore A hardness of 75) is designed to replace flexible PVC in tubing ad molded components and provides comparable clarity and kink-resistance. Monprene MP 1848 is inherently elastic and does not contain plasticizer.

The 1580L1 and 1871-R grades are quite clear in contrast to the inherently milky-white or yellowish translucency of latex. The TPE compounds are easily processed a high rates of extrusion, whereas latex is based on thermoset rubber and requires curing or vulcanization.

Monprene products contain ingredients approved under FDA 21 CFR.

For more information, visit the Teknor Apex web site at www.teknorapex.com. Fax 401-729-0166

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NEW PROCESS DEVELOPMENTS

American Leistritz Extruder has introduced a sheet downstream system suitable for use with its Leistritz ZSE-27 twin-screw extruder for compounding, devolatilizing, and reactive extrusion in combination with direct sheet extrusion in a laboratory or small production system. The unit is capable of producing film/sheet 10 to 125 mil thick and up to 12 inches wide.

The three-roll stack design has been also been upgraded, according to Leistritz, in order to accommodate the higher output rates capable of the ZSE-27. Anyone interested in evaluating the system can see it operate at the Leistritz process laboratory in Somerville, NJ. Call 908 685-2333 or send e-mail to cmartin@alec-usa.com.

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Sandretto USA is taking the wraps off an entirely new line of thermoset injection molding machines. Called the Series Nine Thermoset, the machines are offered in 75, 110, 140, 240, 330, 440 and 550 ton configurations. The machines are similar to their Series Nine counterparts for thermoplastic molding utilizing a modular, two-piece machine design with the clamp and injection units manufactured separately and resting on individual steel beds.

Sandretto says these machines can be converted over to thermoplastic machines very easily and in 30- 40 minutes. A BMC configuration is also available with a specially designed screw and barrel and a continuous stuffer mounted at the feed throat.

For more information contact Carole Firth at 724 779-7635.

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NEW TECHNOLOGY DEVELOPMENTS

RTP Corp., Winona, Minn., has concluded a licensing agreement with Finland's Panipol Ltd. to manufacture and sell thermoplastic compounds containing inherently Conducting Polymers (ICPs). RTP says it was the first company in the world to commercially offer ICPs, which are capable of providing surface resistivity values in the range of 10E6-10E9 ohms/sq. with minimal effect on other properties such as shrink rate or specific gravity.

RTP's manager of conducting polymers says the new compounds fill a long-awaited need for the electronics industry. "ICPs fill a void in the industry for thermoplastic compounds in this particular surface resistivity range – one that many people consider the best for dissipating charges."

The compounds are reported to be all-polymer with no carbon particles and the physical properties follow those of standard PP, PE and PS neat resins. RTP says they are less expensive than carbon fiber filled compounds, they come in six standard colors, and they can be formulated for injection or blow molding, blown film or sheet extrusion.

For more information, contact Connie Hawkinson at 507 454-6900.

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