U.S. Resins Industry Strengthens in 2013

The United States plastics resins industry continued its growth trend in 2013. According to the American Chemistry Council (ACC) Plastics Industry Producers’ Statistics (PIPS) Group, U.S. resin production increased 1.5 percent to 107.5 billion pounds in 2013, up from 105.9 billion pounds in 2012. Total sales for the year increased 1.5 percent to 108.7 billion pounds in 2013, up from 107.0 billion pounds in 2012.

The Economic Environment

The global economic environment has remained challenging, preventing the U.S. from escaping its persistently slow growth pattern. Business and consumer confidence was still wavering in 2013, putting a damper on investment growth and hiring as well as consumer spending. There was general weakness in manufacturing, cuts in U.S. federal spending, periods of uncertainty, and softness in demand at home and abroad. As a result, the U.S. economy grew only 1.9 percent in 2013. However, improvements are emerging and the fundamentals are in place for moderate growth in the coming year. The U.S. employment situation is steadily improving and recovery continues in the housing market. As incomes and real earnings rise and household assets strengthen, American consumers will be better positioned to spend. Domestic demand will build, driving the U.S. economy and in turn, bolstering global growth. Indeed, after just 2 percent growth in 2013, global economic growth is set to expand and this will translate to acceleration in foreign demand for North American plastics.

North American manufacturing—and the chemical and plastics industries in particular—has the stage set for robust performance. North American producers, with access to abundant supplies of competitively priced energy and feedstock, are presented with renewed opportunity. The U.S. manufacturing sector, which represents the primary customer base for resins, is pulling out of a soft patch. Manufacturing growth slowed in 2013 largely due to the federal government sequester and to weakness in major export markets. However, the surge in unconventional oil and gas development is creating both demand side (e.g., pipe mills, oilfield machinery) and supply-side (e.g., chemicals, fertilizers, direct iron reduction) opportunities. Indeed, the enhanced competitive position with regard to feedstock costs will support U.S. chemical industry production going forward, with particular strength in plastic resins.

Trends in Customer Industries

Although the demand for plastics is ultimately tied to overall economic growth, plastic resins are used in a variety of end-use markets. A discussion of performance in some of the most important end-use markets for resins follows.

Packaging is the largest market for plastic resins and historically, packaging resin use has been correlated with “real” retail sales, i.e., retail sales adjusted for inflation. According to data from the Bureau of the Census and Bureau of Labor Statistics, real retail sales grew 2.8 percent in 2013, following a similar 2.9 percent gain in 2012. Consumer spending appeared to be accelerating towards the end of the year and this trend is expected to continue as the job market recovers and household wealth advances. According to Statistics Canada, the Canadian retail sector increased 2.5 percent in 2013 after a 2.5 percent gain in 2012. As a result, output of the North American retail sector experienced a 2.8 percent gain in 2013. Packaging industry output for the region expanded in 2013 after having contracted in 2012.
Building and construction represents an important market for plastic resins. The housing market continues to recover in the U.S. and housing starts were up 19 percent in 2013. While starts are still off 55 percent from their 2005 peak of 2.07 million units, they have grown consistently for the last four years. In the U.S., housing starts increased from 783,000 units in 2012 to 931,000 units in 2013. Residential projects were the drivers for private construction spending. Public and private non-residential construction spending both declined in 2013. In Canada, housing starts fell 13 percent from 215,000 units in 2012 to 188,000 units in 2013. The Canadian construction industry grew only marginally in 2013, reflecting a decline in residential construction offset by growth in non-residential projects. Overall North American construction activity grew by 4.0 percent in 2013.

Transportation is another significant market for plastic resins. Light vehicle sales continued to strengthen in the U.S., rising from 14.4 million units in 2012 to 15.5 million units in 2013. Improvements in American incomes and the ability to take on more debt combined with pent-up demand will encourage continuation of a positive trend in vehicle sales. Canadian light vehicle sales also increased (from 1.72 million units in 2012 to 1.78 million units in 2013). According to the U.S. Federal Reserve Board, production of motor vehicles and parts in the U.S. increased 6.8 percent in 2013. This increase follows strong growth in the several years since the Great Recession (production increased 17.4 percent in 2012, 9.0 percent in 2011 and 32.7 percent in 2010). In Canada, production of motor vehicles and parts fell in 2013 after a gain in 2012. Overall North American production of motor vehicles and parts increased 5.6 percent in 2013.

Another important plastics market is that for electrical and electronics, much of which is centered in appliances. In the U.S. and in Canada, the appliance industry’s output volume grew 7.1 percent, marking the first positive year-over-year comparison since 2004. This is a good sign and reflects recovery in the housing market that was finally taking hold. Appliance production had moderated in recent years and, although it’s tied to the health of housing, it also reflected some appliance production that has shifted to low-cost manufacturing countries. Much of the production that has left the U.S. has gone to Mexico and resin suppliers in the U.S. and Canada serve this nearby market. Production of both electronic products and other electrical equipment increased in 2013, extending the trend of positive growth to four years. In 2013, production of computers and electronic products in North America rose 2.9 percent while production of other electrical equipment rose 4.6 percent.

Furniture and furnishings represent a key market for plastics. The North American furniture industry, also tied to the health of the housing market, grew 4.4 percent in 2013, marking the third year of consecutive growth. In the U.S., production in the furniture industry increased 4.6 percent, and in Canada, output grew 2.6 percent. North American production of carpeting and other textile furnishings contracted in 2013 after a small gain in 2012. The trend in these markets should accelerate with the improvements in the housing market though this connection will likely be more pronounced in furniture production.

Industrial machinery represents another important market, one aided by increased business investment needed to enhance competitiveness, and to expand capacity, both in North America and in rapidly growing emerging markets. North American production of industrial machinery rose 2.8 percent in 2013. Growth in this market has been hampered as businesses continue to face uncertainty affecting their capital investment decisions.

The previous discussion examines the primary end-use markets which ultimately drive demand. The plastics products industry (NAICS 3261) is the key immediate customer industry for plastic resins. In turn, this industry supplies these important end-use markets. During 2013, North American plastics products production rose 5.9 percent, reflecting improving demand among the end-use markets and the competitiveness of American producers. There have been improvements in trade flows as well. Following a contraction in 2009, North American trade in plastic products recovered and has grown steadily. Both imports and exports of plastic products and other finished goods incorporating plastics resins continued to expand in 2013 and the pace of growth in exports has surpassed that of imports. North American exports of plastics products grew to $15.5 billion in 2013.

The economic outlook for the North American resins industry is quite optimistic. For the most part, demand from domestic customer industries is strengthening and foreign demand is expected to improve as well. This positive outlook is driven by the emergence of the U.S. as the venue for chemicals investment. With the development of shale gas and the surge in natural gas liquids supply, the U.S.
moved ahead as a high-cost producer of key petrochemicals and resins globally. This shift boosted export
demand and drove significant flows of new capital investment toward the U.S. As of early 2014, nearly
149 projects have been announced with investments totaling more than $100 billion through 2023. New
capacity for petrochemicals and resins will significantly expand production when those investments start
to come online in 2015 and beyond.

Trends for Major Resins

North American polyethylene (PE) sales extended an upward trend in 2013 with a fifth consecutive year
of growth. Total sales of PE were 38.6 billion pounds, a 2.1 percent increase over 2012. Export sales
drove this increase, rising 4.6 percent from 2012, with sales of 7.9 billion pounds. PE domestic sales grew
by 1.4 percent, ending the year at 30.7 billion pounds.

Low density polyethylene (LDPE) sales rose to 6.9 billion pounds in 2013, up 2.2 percent from the prior
year. This sales growth was helped by export sales of 1.6 billion pounds, an increase of 9.7 percent.
Domestic sales of LDPE were nearly flat in 2013 at 5.4 billion pounds, and production of 6.9 billion
pounds was up a half percent from 2012.

Linear low density polyethylene (LLDPE) sales rose 3.5 percent from 2012, ending 2013 at 13.8 billion
pounds. Domestic sales reached 10.6 billion pounds, an increase of 2.3 percent while export sales
jumped up 7.4 percent. Domestic market segments in films for food packaging and agriculture saw
increases in 2013 (up 6.6 percent and 19.9 percent, respectively). Production of LLDPE reached 13.9
billion pounds in 2013, up 3.0 percent over 2012.

High density polyethylene (HDPE) finished the year with total sales rising to 17.8 billion pounds, an
increase of 0.9 percent from 2012. Domestic sales grew 1.3 percent while exports slipped by 0.6 percent.
A few domestic HDPE market segments saw solid gains in 2013, including gas distribution pipe (up 10.3
percent), other non-corrugated pipe applications, and caps and closures (up 12.4 percent). Production of
HDPE grew just 0.9 percent from 2012.

Total polypropylene (PP) NAFTA sales finished 2013 at 16.4 billion pounds, slipping 0.8 percent from
2012. The loss was driven by slow domestic sales (up 0.9 percent to 15.9 billion pounds), countered by a
continued falloff in exports, down another 35.3 percent from 2012.

A few bright spots for PP sales in 2013 were domestic markets for appliances (up 19.8 percent from
2012), crates and totes (up 20.0 percent) and housewares (up 9.6 percent). The large market for various
PP textile applications also grew slightly (up 1.5 percent). Sales fell in some PP market segments
including caps and closures (down 6.7 percent). Of the 15.9 billion pounds of sales within the NAFTA
region, 84 percent was consumed in the United States, 12 percent in Mexico and 4 percent in Canada.

2013 production of PP in the NAFTA region inched up to 16.4 billion pounds, a 0.6 percent increase
versus 2012.

Polystyrene (PS) sales to the NAFTA region were 4.5 billion pounds in 2013, down 1.3 percent from
2012. Sales were down in exports (off 1.3 percent) but showed modest growth in some segments,
including PS for food packaging and food service (up 1.5 percent), electrical/electronic (up 3.0 percent)
and consumer/institutional (up 1.7 percent). PS production in the NAFTA region slipped to 4.5 billion
pounds, a decrease of 1.3 percent from 2012.

Shipments of expandable polystyrene (EPS) were up in 2013, with domestic sales gaining 3.1 percent,
though exports dropped 1.8 percent from 2012. Production rose to 890 million pounds in 2013, an
increase of 1.3 percent.

Polyvinyl chloride (PVC) production and overall sales volumes were flat in 2013. Domestic production,
at 15.4 billion pounds for the year, was up just 0.4 percent from 2012. Total sales and captive use was
15.3 billion pounds in 2013, a decrease of 0.1 percent. Domestic PVC demand grew to 10.0 billion
pounds, a 4.3 percent rise from the previous year, countered by a drop in PVC export volumes, down 7.5
percent from 2012.
Among the biggest domestic market gainers for PVC in 2013 were rigid pipe and tubing (up 6.6 percent), wire and cable (up 11.7 percent) and film and sheet (up 12.1 percent).

The figures are based on primary data for selected major plastics materials as compiled by Veris Consulting, Inc., for ACC’s Plastics Industry Producers’ Statistics Group.

Note: The ACC Plastics Industry Producers’ Statistics Group makes available detailed reports (including monthly production and end-use sales figures for major thermoplastic and thermoset resins) to subscribers of its various services. For more information about subscription options and to place an order, please call ACC at 202-249-7000 or visit www.americanchemistry.com/resin-report-subscriptions.

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