

Monitor

Chemicals & Plastics



VOLUME
306

TARIFF ESCALATION CONTINUES

MORE TARIFFS ON THE HORIZON?

The U.S. government announced preliminary tariffs to be implemented in September and December 2019

ROLLERCOASTER OIL PRICES

Uncertain global economic and trade conditions have led to fluctuations in crude oil prices

MIXED PRICE TRENDS FOR PLASTIC RESIN

Fluctuating input costs, coupled with varying supply and demand trends, lead to mixed plastic resin pricing

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Deals are a moving target. A constantly shifting mix of people, numbers and timing. We're here to simplify this process for you. Our experts are dedicated to tracking down and flushing out the values you need even on the most complex deals, so you can leverage our hard-won knowledge to close the deal.

Trend Tracker

NOLVs	Decreasing ▼
Sales Trends	Increasing ▲
Gross Margin	Decreasing ▼
Inventory	Increasing ▲
Selling Prices	Increasing ▲
Market Prices	Mixed ⬆️⬆️

- **NOLVs:** In the first half of 2019, most engagements exhibited decreases in NOLVs of one to two percentage points as compared to the prior year due to declines in gross margin and less favorable market price to cost variances for key raw materials.
- **Sales Trends:** GA observed that sales increased in many engagements, though the improvements were largely tied to specific industries or customers, as well as some instances of acquisitions bolstering sales volumes. GA also observed a number of instances where plant shutdowns (both planned and unplanned) had a negative impact on sales.
- **Gross Margins:** Gross margins decreased slightly, which was generally attributed to higher input costs that could not be passed along to customers. Gross margins also declined due to engagement-specific factors, such as changes in the sales mix, competitive market conditions, and customers seeking out alternative products based on pricing.
- **Inventory:** While inventory levels varied by engagement and industry, GA noted a general trend toward increasing inventory levels due to higher acquisition pricing, which inflated inventory on a cost basis.
- **Selling Prices:** Selling prices for a wide variety of chemicals and plastics increased for various reasons, including tariffs. While companies are often able to pass the costs along to customers, this is not always the case, which may result in margin erosion.
- **Market Prices:** Market prices were mixed over the past six months, particularly for crude oil. Following a large decline at the end of 2018, crude oil prices began to climb in the first four months of 2019. However, prices fell again in recent months due to a number of factors, including large stockpiles of oil in the U.S. and global economic uncertainty. While natural gas prices exhibited more stability, they have also declined in recent months.

Overview

Through the first half of 2019, the chemicals and plastics industries were challenged by fluctuating input costs, the ongoing trade war between the U.S. and China, and uncertainty in the global economy. While chemicals and plastics output continues to increase, experts are wary of the impacts that the complex global economic and socio-political environment may have on the industries in the future.

The ongoing trade war significantly impacted chemicals and plastics manufacturers over the first half of 2019. As noted in GA's prior *Chemicals & Plastics Monitor*, in 2018 the U.S. government implemented wide-ranging tariffs on many chemical and plastic products imported from China and other trade partners. The tariffs were met with retaliatory tariffs from some trade partners, including ongoing escalations with China, a key partner in both importing and exporting industry products.

Most recently, the U.S. government announced List 4 tariffs to be implemented on September 1, 2019, though tariffs will be delayed on certain items until December. Following the implementation of List 4, nearly all products imported to the U.S. from China would be subject to some level of tariffs. According to a press release by the American Chemistry Council ("ACC"), these tariffs will impact an additional \$11.0 billion of chemical and plastic products that the U.S. imports from China, bringing the total value of impacted chemical and plastic goods to approximately \$26.4 billion.

As the outcome of the trade war is unknown and the impact of tariffs has not yet been fully felt, the near-term outlook for both the U.S. and global economies is highly uncertain. Further developments bear watching, as they may significantly impact demand for industry products, raw material costs, and other metrics.

Despite the trade war, chemicals and plastics output continued to increase due largely to strength in downstream markets such as construction and automotive production. While neither the construction nor automotive markets are booming, both have performed steadily and created consistent demand.

The chemicals and plastics industries also benefited from general strength in the domestic economy, which drives consumer spending and consumption. According to the U.S. Bureau of Economic Analysis, U.S. gross domestic product grew at a rate of 2.1% in the second quarter of 2019, following growth of 3.1% in the first quarter of 2019. The growth was driven by household consumption and government spending, but was mitigated by slowing exports.

As mentioned in prior *Chemicals & Plastics Monitors*, the U.S. also continues to benefit from access to low-cost natural gas from shale formations. The low cost of raw materials has spurred significant investment in new chemical and plastic plants in the U.S., with the ACC reporting that over \$200 billion of new chemicals and plastics projects have been announced in the U.S. since 2010.

Feedstocks

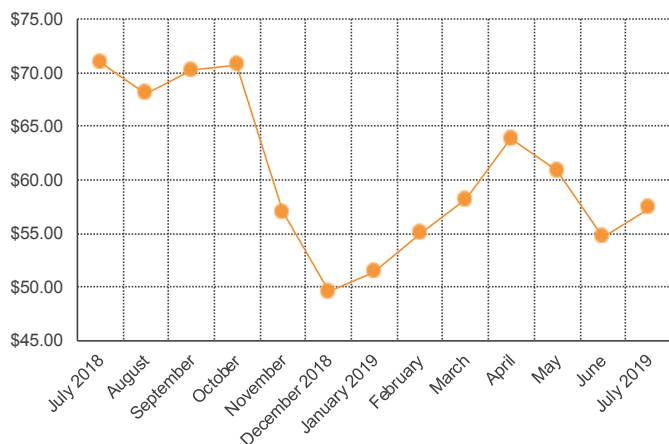
FEEDSTOCKS OVERVIEW

A majority of chemicals and plastics are derived from petroleum or natural gas. Any fluctuations in the prices of these commodities impact the downstream chemicals and plastics sectors.

PETROLEUM

Crude oil prices exhibited considerable volatility over the past 12 months. Following a dramatic drop at the end of 2018 in reaction to large stockpiles, West Texas Intermediate (“WTI”) crude oil prices began a slow rebound. According to the Energy Information Administration (“EIA”), prices climbed throughout the spring, peaking in April. However, the trend then reversed, with prices falling through late summer in reaction to the ongoing trade war, fears of falling demand, and plentiful supplies. The EIA reports that prices averaged \$56.55 per barrel for the week ended August 2, 2019.

1 Crude Oil Cushing, Oklahoma WTI Spot Price July 2018 through July 2019 (\$ per barrel)



According to the EIA, U.S. commercial crude oil inventory for the week ended August 2, 2019 totaled 438.9 million barrels, an increase of 2.4 million barrels from the previous week. The EIA notes that inventory levels are just slightly above the five-year average for this time of year.

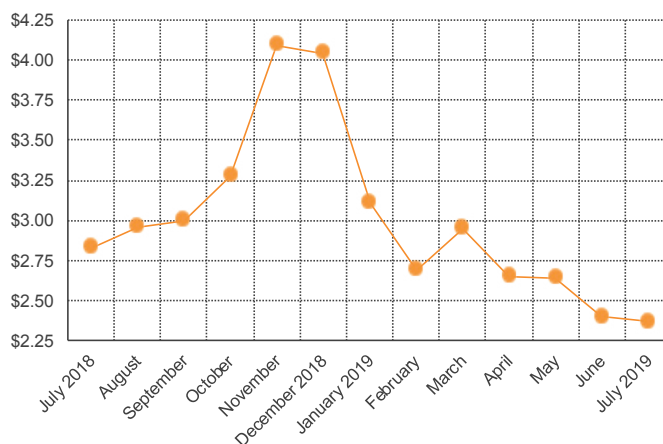
NATURAL GAS

According to estimates from the EIA, working gas in underground storage totaled 2,689 billion cubic feet (“Bcf”) for the week ended August 2, 2019, which represents a 14.6% increase from the previous year. The following table illustrates working gas in underground storage in the lower 48 states (units in Bcf):

Region	8/2/19	8/2/18	% Change
East	613	571	7.4%
Midwest	701	576	21.7%
Mountain	161	148	8.8%
Pacific	272	245	11.0%
South Central	941	808	16.5%
Total	2,689	2,346	14.6%

Henry Hub natural gas prices spiked in late 2018, which the EIA attributed to cold weather and constricted supplies. Following that period, however, prices declined rapidly and then began a slow decrease that continued through the summer. According to data from the EIA, Henry Hub natural gas prices stood at \$2.24 per million BTUs for the week ended August 2, 2019.

2 Henry Hub Gulf Coast Natural Gas Spot Price July 2018 through July 2019 (\$ per MBTU)



Chemicals

CHEMICALS OVERVIEW

According to a recent report by the ACC, global chemical production increased 0.8% in June 2019 versus the prior month and improved 2.5% year-over-year. Year-to-date through June 2019, global chemical production increased 1.9% versus the first half of 2018.

Within the U.S., figures were also positive, though more constrained, with the ACC reporting that chemical production increased 1.5% in June 2019 versus 2018, though production increased only 0.2% when compared to May 2019. In addition to commodity products, certain specialty chemicals have shown strength in recent months, including lubricants and mining chemicals.

Industry growth has been driven by strength in certain large downstream consumption markets, such as automotive manufacturing, industrial production, and the construction sector. The outlook for the balance of 2019 is murky due to ongoing trade turmoil and uncertain economic conditions.

PROPYLENE

An ExxonMobil Chemical Company plant in Baytown, Texas was impacted by an explosion and fire on July 31, 2019. A number of employees were treated for non-life threatening injuries, according to *PlasticsNews*, and the plant is now operating at reduced capacity. Industry experts anticipate that the incident may impact propylene markets in coming weeks, as the facility has 1.4 billion pounds of propylene production capacity, which represents approximately 5% of domestic capacity, according to Chemical Data, Inc.

PlasticsNews reports that polymer-grade propylene prices fell by approximately \$0.04 per pound in June 2019, followed by a slight increase in July.

ETHYLENE

According to ICIS, ethylene supplies in the U.S. decreased in the second quarter of 2019 due to planned maintenance at several large production facilities. Additionally, three new crackers that had been anticipated to come online were delayed. However, supplies remained high enough to meet weak demand, resulting in some price erosion.



Plastic Resins and Polymers

PLASTICS OVERVIEW

According to a recent press release by the ACC, the U.S. produced 7.4 billion pounds of major plastic resins in June 2019, which is a 4.3% increase from June 2018. Year-to-date through June, the U.S. produced 43.5 billion pounds of major plastic resins, representing an increase of 3.0% from the first half of 2018.

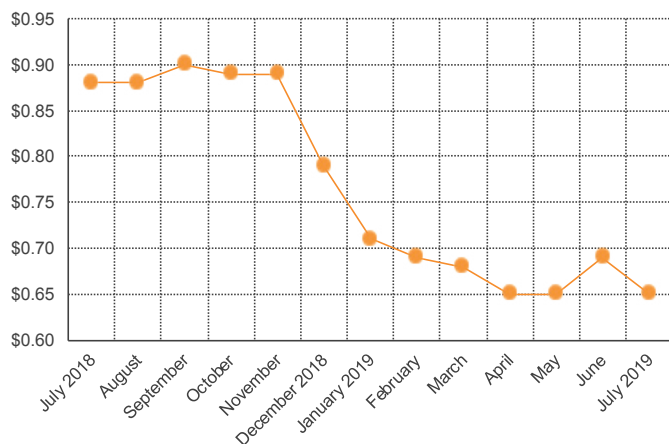
POLYPROPYLENE ("PP")

According to *PlasticsNews*, PP prices declined in late 2018 and early 2019, dropping from the \$0.90 range to nearly \$0.70 per pound by January 2019, which marked the lowest point over the previous year. *PlasticsNews* attributed the sharp decline to lower input costs for feedstock propylene.

Since that point, the PP market has shown markedly less activity. Prices declined by about \$0.05 per pound during the spring of 2019. Prices showed signs of life in June, climbing by about \$0.04 per pound, but the gain was short-lived as it was offset by an equal decline in July.

While PP production was not impacted by the aforementioned fire at the ExxonMobil facility in Baytown, *PlasticsNews* warns that constricted propylene supplies may impact pricing in coming months.

3 PP Monthly Spot Bulk Price July 2018 through July 2019 (\$ per Pound)



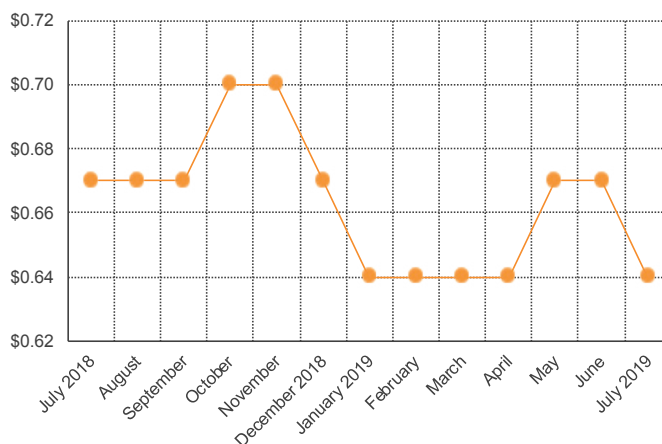
POLYETHYLENE ("PE")

Market prices for high density polyethylene ("HDPE") increased slightly in the fall of 2018, peaking around \$0.70 per pound, before falling to the \$0.64 range in early 2019. According to *PlasticsNews*, the decline was due to lower oil prices and sluggish demand for all grades of PE.

Following that decline, pricing was fairly stable through the spring of 2019. Prices increased in May, but *PlasticsNews* reports that the increase was contested by many buyers. Fairly weak demand for HDPE resulted in an equal decline in prices in July. Low density PE and linear low density PE followed very similar pricing trends.

According to *PlasticsNews*, a large amount of new PE capacity is anticipated to come online this year, with no fewer than four manufacturers announcing additional capacity.

4 HDPE Monthly Spot Bulk Price July 2018 through July 2019 (\$ per Pound)



Plastic Resins and Polymers

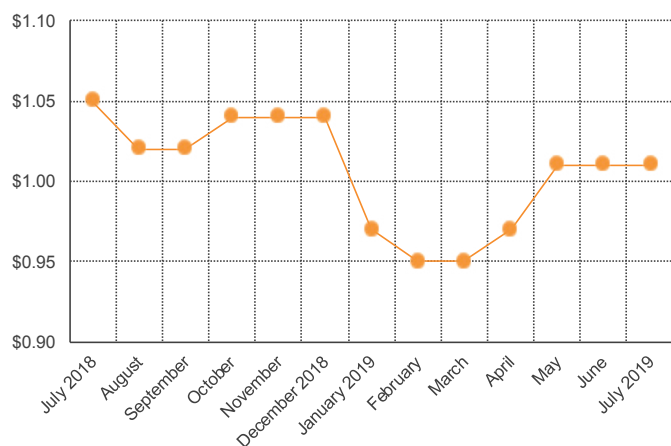
POLYVINYL CHLORIDE ("PVC")

At the beginning of 2019, PVC resin exhibited some upward pricing momentum, climbing from the \$0.88 per pound range to \$0.90 per pound between February and March. *PlasticsNews* reports that prices declined slightly in June 2019, but the loss was offset by an equal gain in July.

POLYSTYRENE ("PS")

According to data from *PlasticsNews*, market prices for PS dropped below \$1.00 per pound in January 2019, with the decline attributed to soft demand and lower input costs for feedstock benzene. PS prices remained in that trough for several months before surging back above the \$1.00 mark in May 2019. The recent increase was due to higher costs for input benzene, which has continued to exhibit climbing prices through the summer of 2019.

5 PS Monthly Spot Bulk Price
July 2018 through July 2019 (\$ per Pound)



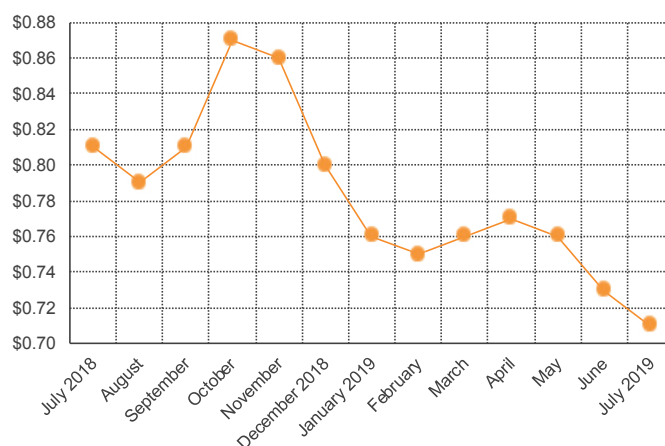
POLYETHYLENE TEREPHTHALATE ("PET")

Market prices for PET bottle resin crested at a high of \$0.87 per pound in October 2018. According to data from *PlasticsNews*, market prices then changed direction, falling fairly rapidly through the end of the year and into 2019.

Following a brief resurgence in pricing in March and April, PET prices continued their descent, ultimately falling to the low \$0.70 range in July 2019.

PlasticsNews attributed the falling PET prices in much of 2019 to an oversupplied market. The decline is off trend from most years, as PET resin prices tend to increase in warmer months when consumption of bottled water and soft drinks increases.

6 PET Monthly Spot Bulk Price
July 2018 through July 2019 (\$ per Pound)



Reference Sheet

Chemicals and plastics pricing trends for July 2019 versus 2018 are as follows:

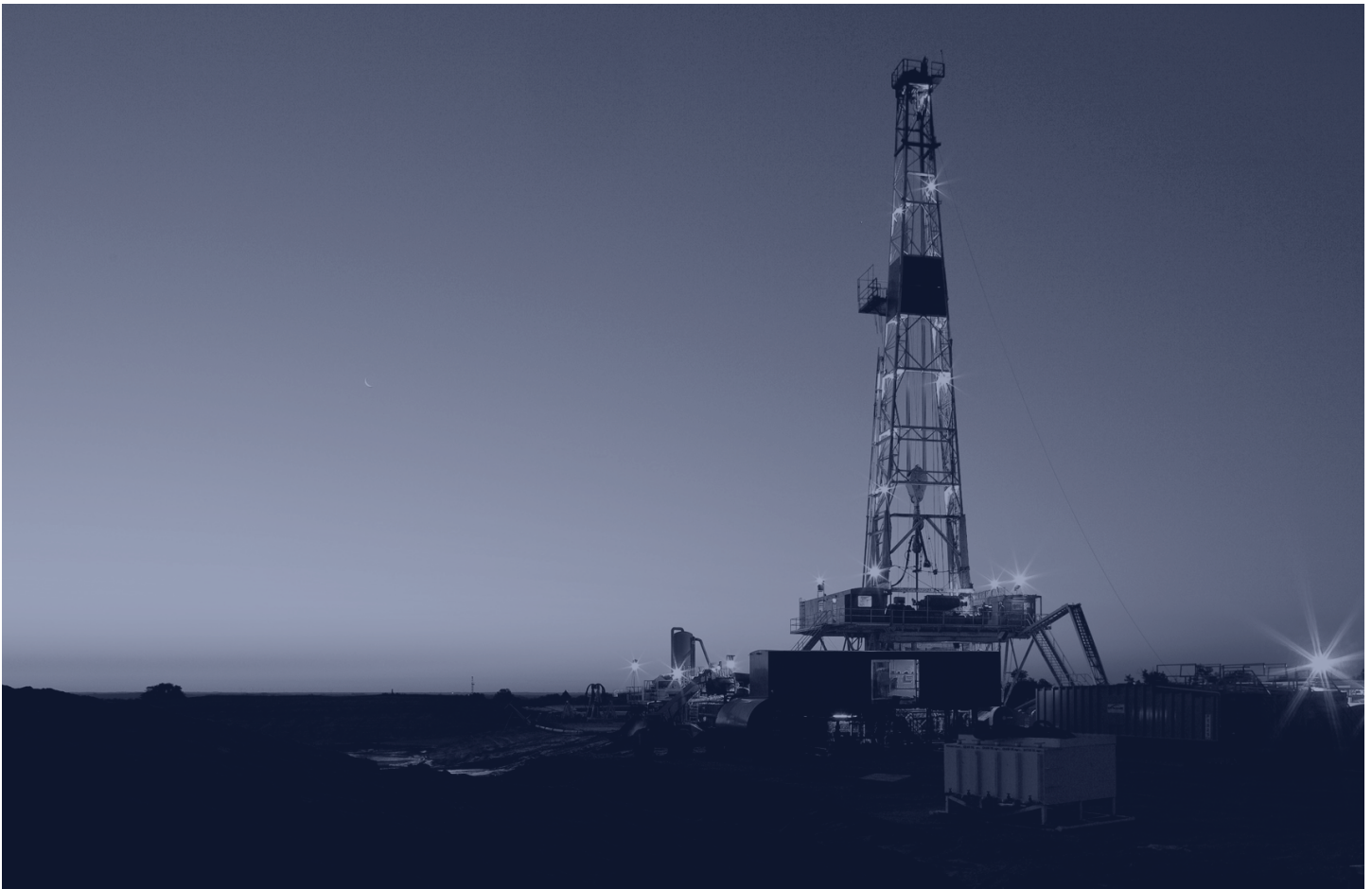
	% Change
Commodity Plastic Resins	
PP	(25%)
LLDPE	(10%)
LDPE	(10%)
HDPE	(5%)
PS	(5%)
PVC	0%
PET	(10%)
Feedstocks	
Oil	(20%)
Natural Gas	(15%)



Monitor Information

The *Chemicals & Plastics Monitor* relates information covering many chemicals and plastics, including industry trends, market pricing, and their relation to our valuation process. Due to the commodity nature of certain chemicals and plastic resins, timely reporting is necessary to understand an ever-changing marketplace. In addition, pricing trends are impacted by a number of macroeconomic indicators that should be monitored, and GA strives to contextualize these indicators in order to provide a more in-depth perspective of the market as a whole. Please feel free to utilize our contact information shown in this and all *Chemicals & Plastics Monitor* issues.

The information contained herein is based on a composite of GA's industry expertise, contact with industry personnel, liquidation and appraisal experience, and data compiled from a variety of well-respected sources believed to be reliable. We do not guarantee the completeness of such information or make any representation as to its accuracy. GA does not make any representation or warranty, expressed or implied, as to the accuracy or completeness of the information contained in this issue. Neither GA nor any of its representatives shall be liable for use of any of the information in this issue or any errors therein or omissions therefrom.



Experience

GA has worked with and appraised numerous companies within the chemicals and plastics industries. While our clients remain confidential, they include well-known and significant global, national, and regional producers and distributors of commodity and specialty chemicals, chemical intermediates, plastics, and resins for uses throughout the construction, automotive, oil and gas, food and beverage, manufacturing, and agricultural industries.

GA has appraised companies such as the following:

- A global manufacturer of chemicals and plastics, a refiner of crude oil, and a significant manufacturer of fuel products, with annual sales of nearly \$20 billion;
- One of the largest global manufacturers and distributors of high-performance polymer resins and resin-based products, with locations throughout the world and sales exceeding \$3.5 billion annually;
- A manufacturer and distributor of plastic packaging such as containers, closures, tubes, and bottles, with revenue of \$3.5 billion annually;
- Two of the world's largest producers of integrated fibers and polymers, with annual sales of \$1.4 billion and \$3 billion, respectively;
- One of the nation's leading specialty chemical producers, with annual revenue of over \$1.5 billion;
- A distributor of crop input products to customers in the mid-southern regions of the U.S., including herbicides, various agricultural chemicals, insecticides, defoliant, surfactant, fertilizer, seed, and similar goods;

- One of Europe's leading specialty chemical producers; and
- A producer of specialty chemicals derived from renewable resources serving the pharmaceutical, rubber production, and agricultural markets, among other industries.

GA also maintains extensive appraisal experience with a variety of plastic bottle and plastic container manufacturers, as well as foam and foam product manufacturers. GA has also appraised a variety of small and middle market commodity and specialty chemical manufacturers and distributors. GA has been involved in the asset disposition and valuation of many plastics processing facilities involving injection molding, blow molding, extrusion, thermoforming, and more. Recent transactions include: Cincinnati Milacron, Collins & Aikman, Essel Propack America, Fortis Plastics, Home Products International, Hunjan Group, ILPEA Industries, Interbath, Jodee Plastics, Kamco Plastics, MedPlast, Mullinix Packages, Packaging Plus, Rantoul Products, Royal Dynamics, Thomas Plastics, and United Plastics Group.

Given our experience in both the valuation and disposition of chemicals and plastics processing equipment, GA is uniquely qualified to not only render value opinions, but to also serve your liquidity needs through the sales of surplus and/or idle chemicals and plastics processing assets. In addition to our vast liquidation and appraisal experience, GA maintains contacts within the chemicals/plastics industry that we utilize for insight and perspective on recovery values.



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About Great American Group

Great American Group is a leading provider of asset disposition solutions and valuation and appraisal services to a wide range of retail, wholesale, and industrial clients, as well as lenders, capital providers, private equity investors, and professional services firms. In addition to the *Chemicals & Plastics Monitor*, GA also provides clients with industry expertise in the form of monitors for the paper and packaging, metals, food, and building products sectors, among many others. For more information, please visit www.greatamerican.com.

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