

Raw Materials Update

Q3 2016

Macro-Economic Overview

The US economy continues to grow, though more slowly than many expected. Consumers are cautiously optimistic. Most aspects of the world economy are expected to either hold steady or improve slightly for the rest of 2016. Some commodity markets are continuing to rise gradually as global supply adjusts to pace demand. While we may see some month-to-month price volatility driven by short-term demand shifts and financial investor involvement, most raw material markets will be stable in Q4 and into 2017.

Adhesives & Silicones

Acrylics: General market prices for both propylene and acrylic monomers increased in Q2. Propylene is forecasted to be stable over the next few quarters. We expect some moderate volatility in these markets based on global economic supply/demand balances and the downstream effects of crude oil pricing. We continue to see upward pressure on solvent economics in the last quarter and expect this to continue into next year.

Hot Melt: Components and tackifiers have remained stable and are forecasted to continue this trend.

Silicones: Silicon metal and platinum pricing has rebounded from Q1 lows and are forecasted to continue a moderate upward trend.

Paper

NBSK remains below \$1000/ton. Pulp forecasts indicate price will decline slightly in Q4.

Overall global demand for coated papers is declining, largely driven by C2S. However, specialty coatings, specifically direct thermal, continue to grow. Globally, direct thermal capacity is limited with

most suppliers at full capacity. The focus is on securing volume, not just price.

Glassine remains tight in Europe but is no longer critical; and new capacity is entering the Asia Pacific market.

Film

Polypropylene

Demand continues to push manufactured tightness. Pricing will continue to elevate and then stabilize by the end of the year. Near-term tightness is driving prices upward but markets will stabilize as supply improves later this year. Pricing was down \$.01/lb in July, flat in August and is expected to be a \$.04/lb increase in September.

Polyethylene

Tightness continues driven by slower new capacity onboarding by Braskem and numerous unplanned outages. As a result, PE markets are tighter for the 2H - starting to decouple from oil prices as the supply demand imbalance continues. Pricing remained flat in July and August, but an increase of \$.05/lb is scheduled for September.

Polyester

Supply remains plentiful due to a robust influx of packaging-grade PET from about 20 countries each month. Brazil, for one, has emerged as a major exporter of PET to the U.S. in 2016. M&G Chemicals' 2.4-billion-lb/yr PET complex under construction in Texas is due on stream in the first quarter of 2017 and will be the world's largest PET plant. Pricing is forecasted to remain flat in the near term.

PVC

The price dip midyear was short lived due to sluggish demand in June. Strong upward movement continues as volume runs ahead of last year's rate.

