MARKET UPDATE

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Market Update — March 9th, 2021

Resin for Sale 9,036,844 lbs		Spot Range		TPE Index	
Resin	**Total lbs**	**Low**	**High**	**Bid**	**Offer**
PP Homo	1,809,380	$ 1.290	$ 1.480	$ 1.300	$ 1.400
LLDPE - Film	1,600,944	$ 0.820	$ 0.960	$ 0.880	$ 0.930
LDPE - Film	1,416,012	$ 0.950	$ 1.070	$ 0.980	$ 1.030
HDPE - Blow	1,045,472	$ 0.960	$ 1.040	$ 0.980	$ 1.030
HDPE - Inj	993,472	$ 0.930	$ 1.010	$ 0.900	$ 0.950
PP Copo	979,368	$ 1.360	$ 1.530	$ 1.350	$ 1.450
LLDPE - Inj	543,736	$ 0.910	$ 0.980	$ 0.900	$ 0.950
LDPE - Inj	388,092	$ 0.930	$ 0.990	$ 0.900	$ 0.950
HMWPE - Film	260,368	$ 0.940	$ 0.980	$ 0.900	$ 0.950

Spot resins continued to transact at a very rapid rate, material came and went quite quickly, and our completed volumes were again amongst record tallies as processors scrambled to procure material amid the super shortage of supplies. We saw some price consolidation at these ultra-lofty levels and some buyers expressed fierce resistance to ever escalating costs; however, others continued to procure material at seemingly any price to maintain continuity of supply. Even the most aggressive buyers have been stunned by the soaring costs, but remain committed to their businesses and providing product to their customers even if losses might be endured for this interim period of unprecedented pricing.

The mighty plastics industry showed its resilience and began powering back up after extreme winter weather stormed through the petrochemical producing gulf three weeks ago, shutting down some 80-85% of US resin production. When restarts began, there have indeed been challenges to procure and deliver the all-important gases, feedstocks, comonomers, catalysts, equipment, and repair personnel, as well as the timing of each critical component, slowing the return of production levels towards more normal levels. Consequently, dozens of plants along the supply chain have initiated restarts, while others remained largely offline due to damages sustained during the sudden shutdowns and restart complications.

In the meantime, the huge loss of resin production has been accumulating, as this last extreme disruption was only one among many freak events that have hit the industry over the past 6 months, all together dropping resin supplies throughout the supply chain to grossly insufficient levels. While the mend has begun, we are not remotely out of the woods yet. Even as demand drops off while prices rise, every day more pellets are being melted than being made and the hole in the supply trough has been getting deeper daily.

For an industry that typically holds more than a month of material on hand at each level of the supply chain, massive drawdowns are estimated to have brought inventories for many materials down to less than a 2-week supply, with some essentially at zero. We are also seeing significant shortages of related materials like gaylord boxes which have backed up resin packaging. With upstream inventories spread among thousands of specific resin grades, processors have been forced to become more liberal with substitute material / packaging requirements and plant operators more creative to make it all work. The stress and pressures are taking their toll, but we have been warmed by the compassion and feeling of community as we all work together to get past this episode.

For Polypropylene, where the resin shortage and price escalation has been more extreme, and for the better part of 6 months the import arbitrage wide open, there has been an ongoing flow of international material landing on US shores. Still, with the onset of the additional mid-Feb supply shock, wholesale Houston prices for Prime PP Copolymer sometimes leapt a nickel at a time until gravitating towards the $1.50/level with Prime PP Homopolymer trailing around a dime less.

While all PP grades are exceedingly tight, there are outliers with even larger premiums such as high flow Random Clarified and CoPP No Break grades as few promptly available pellets can be found either here in the US, on the waters or even still overseas. For HoPP, high flow grades have been most demanded in the spot market while Raffia grade orders have been revving up too as it is unlikely that this more typical export material will be initially targeted for US production as reactors come back online.

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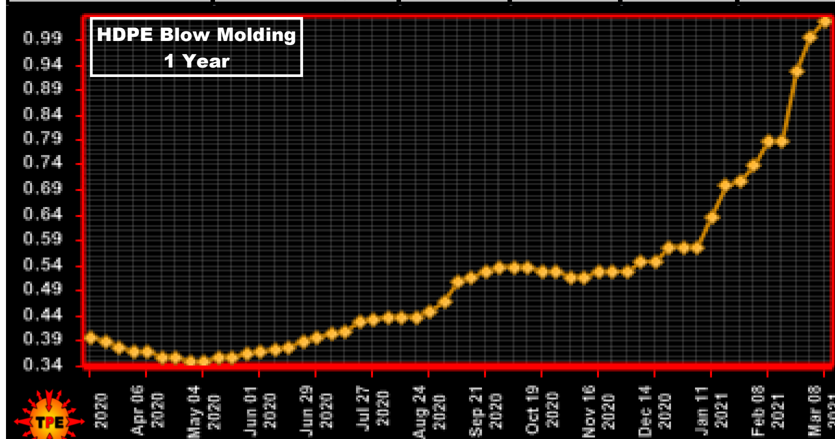

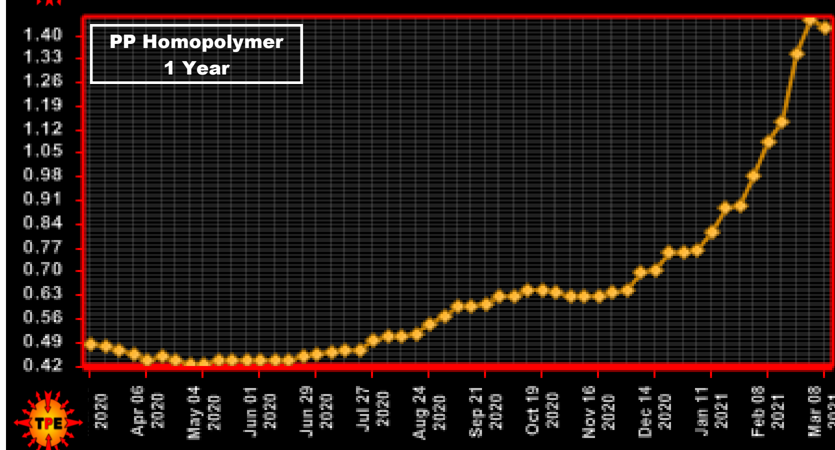

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As noted, the timing of supply chain assets all perfectly returning onstream together was unlikely and the mistiming could be misleading, particularly for Propylene monomer and Polypropylene resins. For instance, during Feb spot PGP ran up to $1.05/lb, with a couple small lots reportedly transacting as high as $1.25/lb before easing back down into the mid -90s towards the end of the month and contracts settled up "only" $.28/lb to $.885/lb. Then as March began and refineries and PDH units started to return back online, they produced PGP in higher volume than the slower to return PP reactors could consume, so with limited outlets for the monomer, spot PGP prices tumbled, and hard. Prompt PGP fell as low as $.55/lb amid heavy volume, before snapping back to end the week at $.635/lb.

One might initially see the big break in monomer as major relief for PP prices, but that would only be partially and somewhat dangerously correct. Indeed, in the unlikely event that PGP prices were to remain for the duration of the month exactly where they ended this past week, March resin contracts could fall double digits accounting for the monomer component and then somewhat offset by the next $.06/lb margin enhancing increase which will likely implement. However, only a portion of PP buyers have contracts directly tied to monomer, others to indices, and the vast majority of them are also on sales allocation, so most will also need spot resin to supplement their limited contract deliveries. Outright spot buyers will again have to fend for themselves.

The fact that monomer has fallen so sharply in early March signals that PP producers do not need all of the monomer that is being made, suggesting very low average resin reactor operating rates – not a lot of resin produced. This is also a strong indication that resin will still be exceedingly tight in March / April. Further, when PP reactors do return largely operational and are ready to consume much more monomer, we might see strong spot PGP demand and its price shoot back sharply higher again. So, if lower PGP prices are sustained, the cheaper costs will indeed pass through to contract resin buyers for limited deliveries. We are hearing plenty of prognosticators offer early guesses that are all over the board, but the month is far from over and given the complexities of restarts and other market dynamics, it is way too early to comfortably estimate March PGP and PP contract price levels.

We do expect meaningful volumes of imports to reach the US in March and April through a multitude of supply channels. These imports will help ease the undersupply burden, but most of this resin has already been committed to buyers and not expected to flood the market with material. Overall spot material should still remain very tight during this period and perhaps beyond, maintaining a bifurcated market with scarce prompt prime resin commanding a large premium to contracts. We also caution that while spot resin will begin to appear as available, there will be a lot of startup material and rougher offgrade / transitional resin that could be offered at well-discounted levels. So we advise to be a bit more careful regarding the quality on newly produced offgrade resin, the price might not be worth it for those expecting high quality offgrade and nobody wants a reject. If the price seems too good to be true, it very well might be a potential problem lurking and not necessarily indictive of high quality resin pricing.

Polyethylene supplies have been snug for months, and while prices had been consistently rising, it had not been to the extent that warranted mass inflows of imported PE resin. So, while PE has now also started to flow towards the US, any significant imports to offset lost production that has occurred since Mid-Feb is a new initiative with few uncommitted cargoes previously on the water. More substitute supply help will likely come from domestic producer inventories initially eyed for export that will ultimately remain in the US and from the lack of fresh export sales made during the shortage.

We also anticipate a level of Polyethylene supply relief to eventually come from south of the border. Last week's fire at the Pemex facility, which initially shut down additional Mexican resin and feedstock production, indeed brought the sparring supply chain partners back to the negotiating table and the three-month stalemate appears to have found resolution. Critical Ethane supplies will again flow to Braskem Idesa to enable the resumption of their resin and feedstock production and when the Pemex plant damages are eventually fixed, both producers will be operating again.

Currently, all Polyethylene grades are very shortly supplied and of course some grades more so than others; average PE prices are racing towards $1/lb and many grades are already well beyond. We are finding HDPE blow molding materials fetching the highest premiums as the vast majority of production units are located in the affected gulf region, and while LLDPE and LDPE production has also been massively shut down, there are unaffected assets producing these resins in Canada. Through the mental exercise of model building, assumptions, and estimations, we calculate that if PE reactors could quickly return to pre-storm levels, a good part of the production shortfall could be covered during the second quarter by reduced domestic demand as prices rise, the influx of imported resins and limited fresh exports. While at some point we will see significant price relief on the backend of this mess, we expect very elevated resin prices to persist for months ahead.

Not to douse the hope of eventual relief, the March $.07/lb Polyethylene should implement and some producers have nominated at least another $.06/lb increase for April. Polypropylene producers also continue to nominate more margin enhancing increases, and yet another previously unaffected PP producer declared Force Majeure this week. Crude oil prices just reached $66.42/bbl, the highest level since Oct 2018. There are also reactors, refineries and crackers scheduled for scheduled maintenance / turnarounds this spring, but hey, at least the 2021 hurricane season will not begin for several more months.

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