

RAW MATERIALS JANUARY 2021 MARKET UPDATE

A GLOBAL MARKET

Demand for adhesives rebounded almost back to pre-pandemic levels in Q4 20 after a sharp decline caused by Covid-19 shutdowns. Three key drivers are:

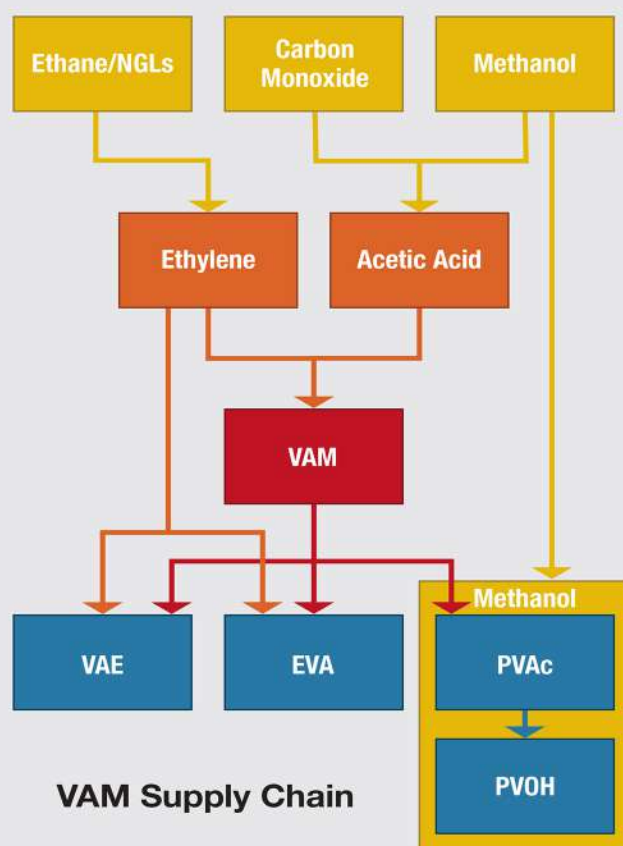
- 1 Growing hygiene demand to protect and treat new health and safety risks,
- 2 Increased packaging demand from the shift to e-commerce and
- 3 A recovery in housing and construction supported by low interest rates, work from home and moves out of dense urban areas.

The record recovery in GDP growth/demand has created shortages in many key inputs as supply struggles to recover due to Covid-19 labor shortages, the tough hurricane season and pandemic driven demand shifts. US GDP increased 7.4% (a 33.1% annualized pace and the largest single quarter of economic growth on record) in Q3 20 and by 4% in Q4 20 which is making on time delivery of finished goods and raw materials very challenging.

Demand is outpacing supply for several critical adhesive raw materials forcing our industry to pay higher prices (increases are averaging 10%-20%) as we compete with other consumers to secure supplies. Our procurement team is totally focused on leveraging our global supply position and growing demand to secure best pricing but cost pressures are being compounded by rising packaging costs (Plastics increased ~35% and Steel by ~100% in Q4 2020).



IMPACTS DOWNSTREAM



Ethylene – Ingredient for Water Based and Hot Melt Adhesives Feedstocks

Ethylene is the key ingredient for making feedstocks for water based and hot melt adhesives (see above). Each adhesive raw material has its own pricing dynamic as was painfully shown in Sep 2019 when 3 of the 4 VAM (Vinyl Acetate Monomer – the key ingredient in PVA, EVA, PVOH and VAE) plants had production issues forcing adhesives costs up while ethylene remained flat.

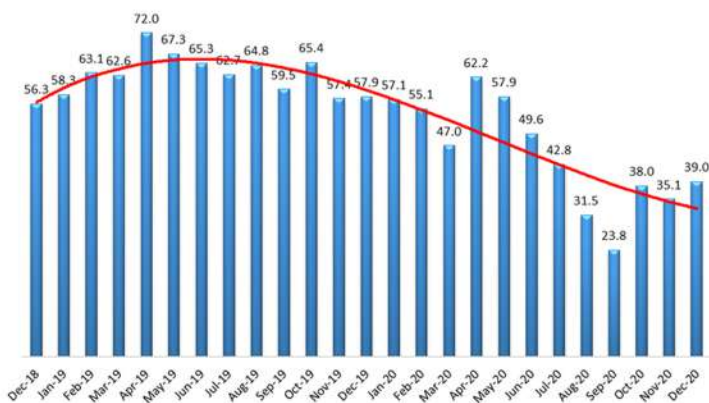


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FREIGHT COSTS RISING

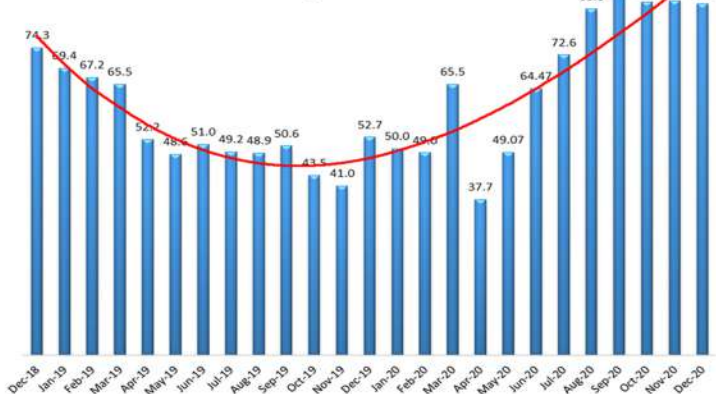
Covid-19 greatly reduced availability of drivers (diffusion index capacity was 39 and readings below 50 indicate contraction).

Transportation Capacity



Combined with the pandemic driven surge in E-commerce (up 27.6% yr/yr) Van spot prices increased 26.4% yr/yr (to \$2.35/mile excl. fuel) despite low fuel prices (down 15.4% yr/yr).

Transportation Prices



IMPACTS DOWNSTREAM

Ethylene prices fully rebounded from April 2020 lows in Q4 2020 as fewer new wells drilled in shale basins to pump oil or natural gas (driven by lower fuel demand from the pandemic) reduced supply. Ethylene is primarily made from Ethane created by those oil wells so even though US ethylene demand is expected to remain below its peak, contract prices are up almost 22%, spot prices are up 47% since Jan 2020 due to shortages.

These input cost increases combined with stronger demand for coatings as housing comes back have driven VAM up ~\$0.08/lb (~21%) since Aug 2020 (based on ICIS, IHS Markit & Tecnon). Supply will remain tight as the weaker US Dollar is spurring higher exports of US VAM to Europe at the same time Asian supply is reduced by maintenance activity.

Propylene – Key Ingredient for Pressure Sensitive, Hot Melt and PUR Feedstocks

Most propylene is a refinery byproduct with the remainder produced in steam crackers as a co-product of ethylene. Chemical crackers have also reduced operating rates and are likely to continue on that path through Q1 2021.

Propylene contracts settled up \$0.10/lb (up~27%) in Dec-20 from Nov-20 with Chemical Grade Propylene moving to \$0.47/lb due to low inventories, reduced production and strong demand. The increase is the largest month to month contract price jump since Jan-2017. Contract prices are now at their highest level since Oct 2019.

Styrene and Acrylate costs increased (\$0.12-\$0.16/lb) as Dow, Arkema and all other major manufacturers raised prices due to higher Propylene and Crude Oil input costs. These cost pressures are expected to accelerate when Lucite International stops production at their Beaumont, TX, plant March, 2021.

Call us at **800-992-GLUE (4583)**