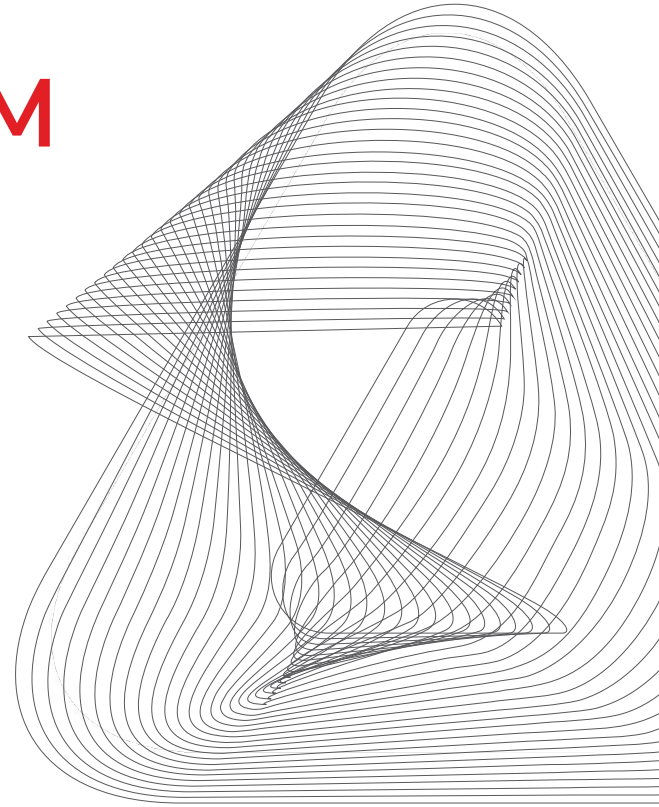


# EMENA June 2021 Raw Materials Update LPM

Release date July 2nd



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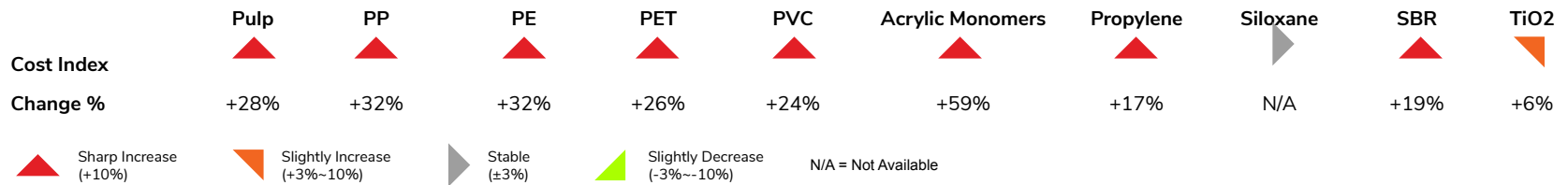
# General





# Material Cost Trends - Index Q2 2021 vs Q1 2021

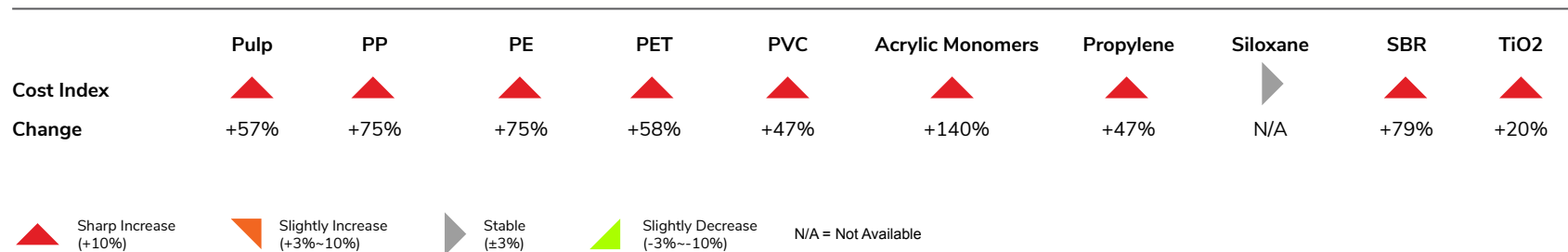
- We continue to closely monitor the inflationary cost and price increases impacting raw materials throughout our industry. These are a result of continuing **strong demand** across multiple sectors, severely constrained supplies and logistics, as well as challenges across the entire supply chain. This unprecedented situation that started in Q1 has intensified and led to sharp cost increases for films, paper, glassine liners, monomers and adhesives, resins and silicone, as well as domestic and international freight. As a result, suppliers have increased costs by **+15% to +60%** in Q2 and Q3 of this year, while simultaneously limiting supply in some areas .
- When compared to our update from May 6 and looking at our Q3 forecast, the root causes and macro dynamics remain the same. However, experts underestimated the magnitude of the cost effects associated with **limited production capacity** and flexibility, in addition to the domino effect across industries and geographies in a world with reduced mobility and sustained strong pressure on the demand side.
- In several areas, raw material price increases have not been limited to additional costs for raw materials plus freight. Commodities are still reaching higher levels as a result of strong demand across regions, while competing industries try to recover stocks and secure required supply in the second half of 2021 with a high level of uncertainty due to longer lead times.
- We are continuing to leverage our scale, global reach and relationships with direct suppliers, as well as their suppliers and logistics partners, to minimize the impact and mitigate supply disruptions experienced by the whole industry. Figures below show index movements in Q2 versus Q1 this year.



# Material Cost Trends - Index June 2021 vs Q4 2020

- **Pulp** prices rose by +56.6% by the end of June vs Q4 due to high demand and constrained supply. Price increases in the +10% range were announced for most paper products in Q1 and another wave took place in Q2. Increases were more aggressively pursued in paper commodities where supply is tightest (Glassine, MC papers)
- Prices for **filmic resins** soared to extreme heights by the end of Q2, with June reaching +75% vs Q4. These historically high levels are driven by intense demand combined with capacity and freight constraints (unforeseen maintenance, force majeure and the extreme weather conditions in the Gulf of Mexico in February).
- **Adhesive** component prices for both acrylics and hotmelts soared vs Q4, reaching +139.7% and +78.3% respectively. Just like with filmic resins and other petrochemicals, adhesive components have been hit by a combination of strong demand vs severe supply limitations and freight constraints.
- **Packaging** costs saw double digit increases driven by wood availability in Europe. Similarly, freight costs have gone up dramatically due to container shortages, port congestion and higher fuel prices which continued rising in June.

Figures below show cost index levels in June 2021 versus Q4 2020.





# Paper and Pulp



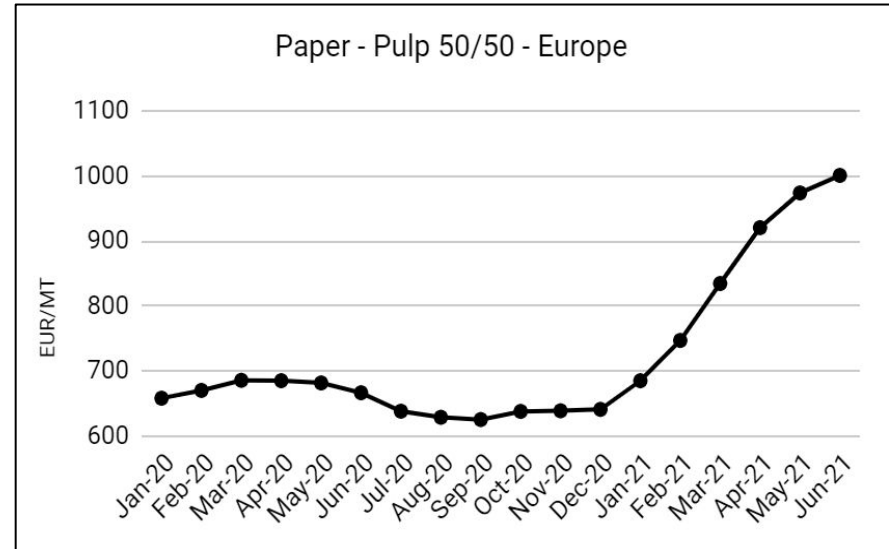
## Pulp 50/50 NBSK: BHKP

Due to strong demand in Europe, pulp prices rose steeply again during Q2. June price levels are now higher than in the previous historical peak in June 2018.

For that reason, all major EU-based paper suppliers announced further price increases of 10% to 25% in May and June. These came on top of the double-digit increases in March and April.

### Outlook

Pulp price increases are expected to come to a halt and level out throughout the end of Q3 as demand slows in China. Overall paper prices are expected to remain at a high level for the foreseeable future due to demand and suppliers only **partially recovering the increased costs they have seen throughout the year,** which will continue pressuring prices in Q4.





## 2021 Q2/ 2021 Q3 Market News - Paper

Mar 3	<b>Sappi</b> to increase prices for all its packaging and speciality paper grades by 7% to 11 %, valid for deliveries from 1 April.	Apr 30	<b>Lenzing Papier</b> increases prices by €50/ton for its premium recycled papers as of July 1.
Mar 14	<b>South Korea's Hansol Paper</b> to increase CWF, UWF, thermal and label paper prices by 10%, effective in April.	May 11	<b>Crown Van Gelder</b> increases prices for all its paper grades by 12% to 15% for all deliveries from July 1.
Mar 11	<b>Feldmuehle GmbH</b> to increase prices for wet strength label paper by 8% as of April.	May 12	<b>Mitsubishi HiTec Paper</b> increases coated speciality paper prices by up to 10%, effective June 1.
Mar 15	<b>Zanders Paper</b> to adjust prices for all products by 5% to 10% from April 19, and on May 6, goes into liquidation.	May 19	<b>Koehler Paper</b> increases prices for its flexible packaging paper by up to 15%, effective July 1.
Mar 15	<b>Lecta</b> to increase its specialty paper prices by 10%.	May 31	<b>Drewsen Spezialpapiere</b> significantly increases prices for UWF papers from July 1.
Mar 24	<b>Fedrigoni Group</b> increases prices for its uncoated and coated papers by 5% to 10% in all European and overseas markets from May 3.	June 14	<b>Lecta</b> increases prices for new orders of its thermal and carbonless papers by up to 15%, effective immediately.
Mar 25	<b>Iggesund</b> hikes paperboard grades by €85/ton in May.	June 17	<b>Mondi</b> increases prices for UWF papers by 8% to 15% from July 1.
Apr 6	<b>Burgo</b> increases prices for its woodfree grades by 10% and coated mechanical grades by 15% from June 1.	June 22	<b>Jujo Thermal</b> increases prices for its full range of thermal and speciality coated one-sided papers by up to 15% in Europe, effective immediately.
Apr 12	<b>Lecta</b> increases prices for its two-side CWF and UWF grades in sheets and reels by 8% from June 1.		



# Film



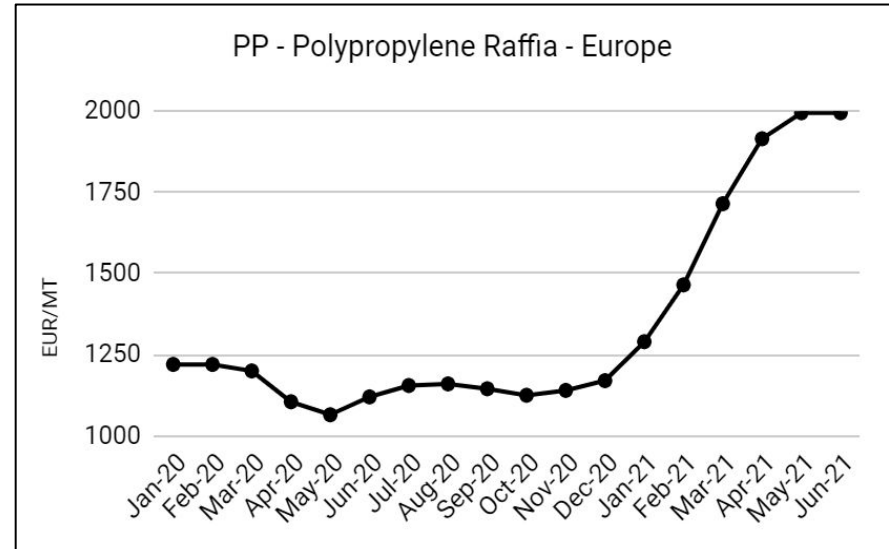


## PP - Polypropylene

Resin PP prices continued rising and reached historical levels in Q2. Main drivers continue to be severe supply constraints and higher than expected demand. Force majeure as well as the aftermath of the extreme weather conditions in the US Gulf of Mexico continued playing a role. Additionally, challenges and added costs for ocean freight have significantly slowed down the ability to rebalance material availability across regions, which is expected to hamper any improvements this year.

Market dynamics now and going forward:

- Demand continues to be strong
- Imports start arriving but not at the needed levels
- Cracker maintenance period to end imminently
- Tight supply easing



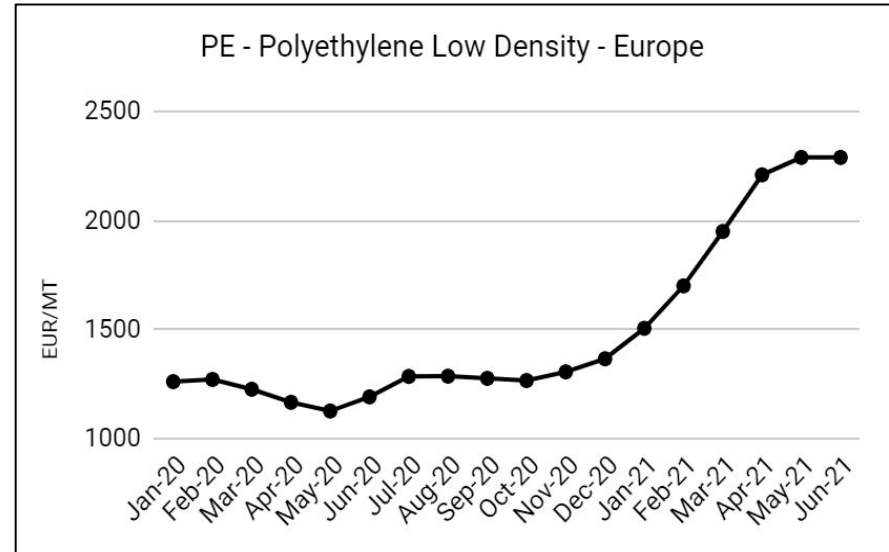


## PE - Polyethylene

Resin PE prices continued rising and reached historical levels in Q2. The main drivers continue to be severe supply constraints and higher than expected demand. Force majeure as well as the aftermath of the extreme weather conditions in Q1 in the US Gulf of Mexico continued playing a role. Additionally, challenges and added costs for ocean freight significantly slowed down the ability to rebalance material availability across regions, as used to be the case.

Market dynamics now and going forward:

- LDPE supply still tight while HDPE easing
- Sentiment could start to change in the EU due to arrival of first imports in the second half of 2021



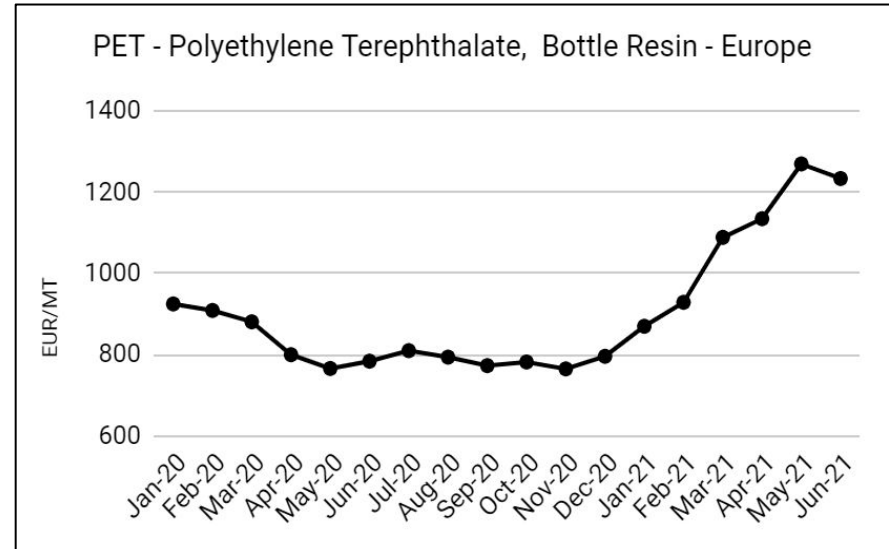


## PET - Polyester (Actual)

PET resin rose further in Q2, following significant increases in Q1. Resin prices have not been this high since the historical peak of 2018.

This increase is driven by the continuous rise in naphtha and oil prices, and the strong market demand. The force majeure on PTA and European resin producers and the lack of imports due to rising shipping costs created an overall tightness of supply which pushed up prices and are expected to continue.

All PET producers implemented a second round of price increases which were even higher than the ones executed in Q1. Additionally, volume allocations were put in place in order to cope with the growing demand and market tightness.





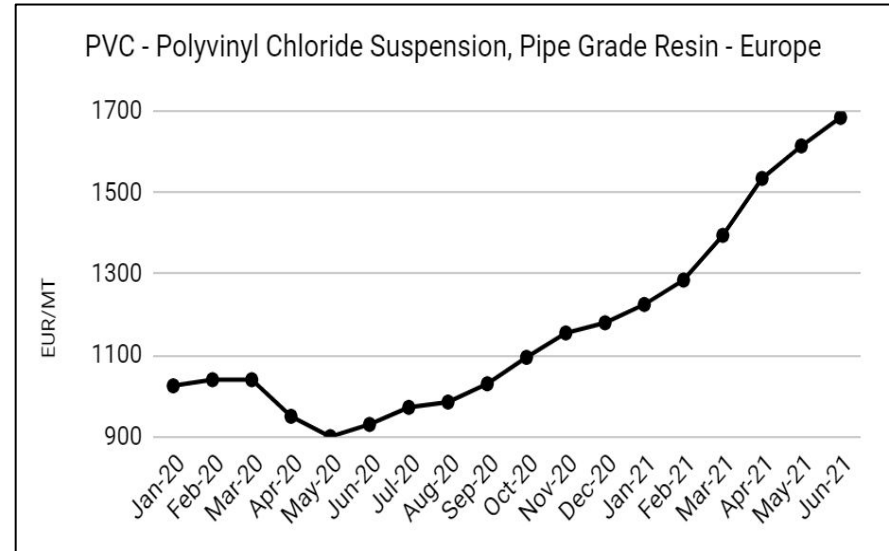
## PVC - Polyvinyl Chloride

PVC resin and PVC prices in general have increased significantly in Q2 compared to the previous quarter.

European supply has tightened, with demand unbalanced on the back of production issues and maintenance turnarounds reducing capacity. There are five force majeure declarations still in effect, which led to severe tightness in the market.

Strong demand from various industries beyond PSL, such as construction, also further squeezed availability, creating longer lead times and increased price pressure.

Market prices are expected to further increase during Q3 in this context.



# Chemicals





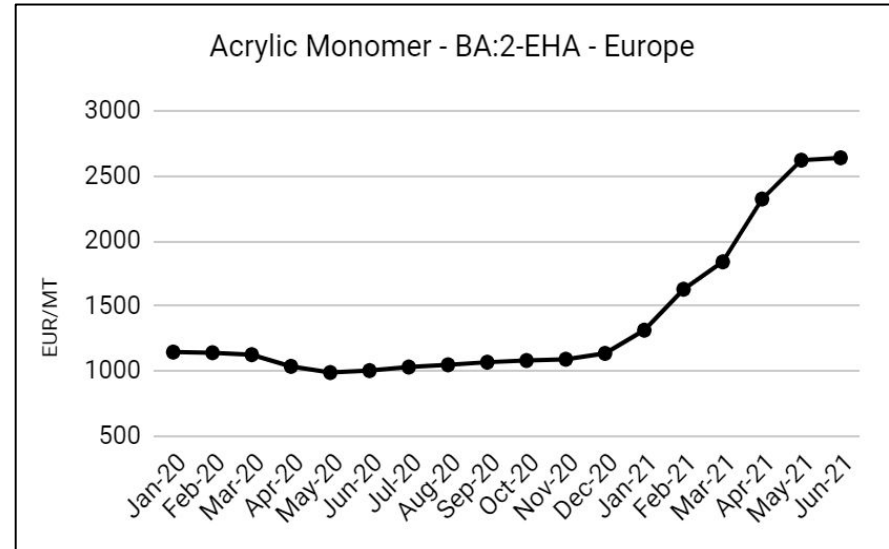
## Acrylic Monomer

High demand and critically tight supply kept prices escalating above cost index developments in Q2. Contracts have been restated closer to spot prices, with buyers prioritizing access to materials.

Demand for acrylate esters is unlikely to soften in the summer months. Producers expect a good Q3 and that some of that momentum will be carried into Q4.

Supply is expected to gradually improve. Asian imports should support domestic supply but they are very unlikely to relieve the tightness in the market due to high sea freight costs, longer lead times and risk of delays.

With high demand supporting prices in Q3, a period of restocking throughout the supply chain is only expected if demand weakens in the last part of the year.

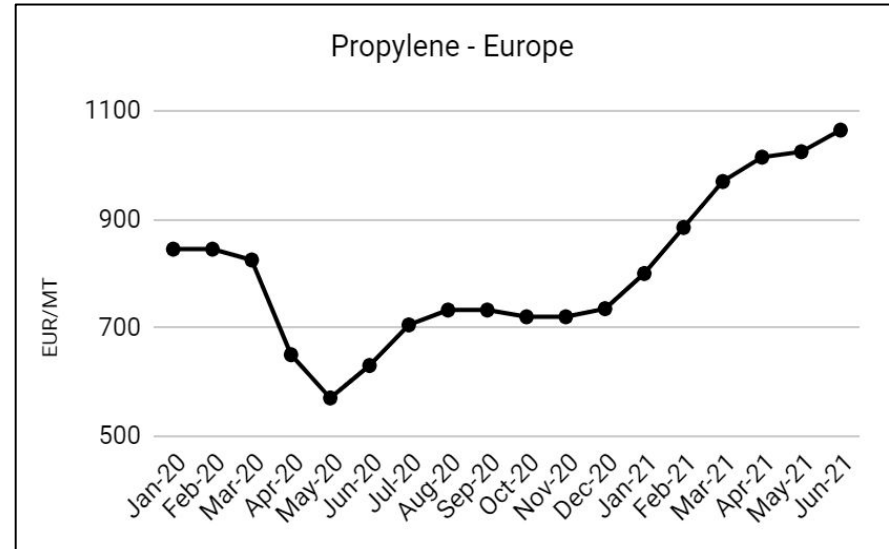




# Propylene

June Q2 propylene prices increased another €95/ton vs May 2021. The current price levels are the highest seen since October 2018. Demand continues to be strong as supply is curtailed. Several planned outages, combined with a lighter feedslate, have limited propylene availability and pushed prices upwards.

Looking forward, prices are expected to peak in July and August as supply and demand fundamentals will be firm due to cracker and refinery maintenance and healthy offtakes from consumers across all derivative chains. After a long rally of increases, prices could see an initial downward trend starting in September and continuing through the rest of the year if capacity returns online.





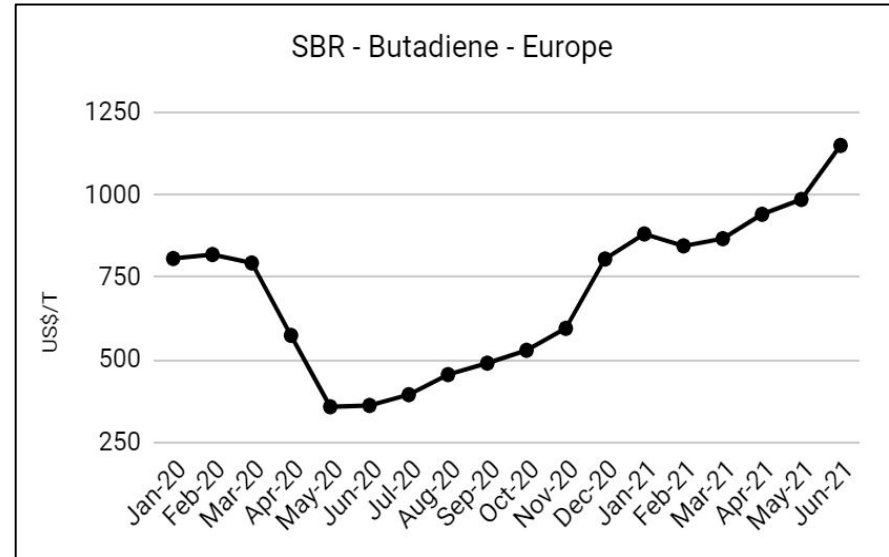


## Styrene-Butadiene Rubber (SBR)

Butadiene is the main component of SBR.

Prices continued to increase throughout Q3 due to difficulty in sourcing raw materials, packaging shortages, transportation delays and planned yearly maintenance at main suppliers.

The current forecast for butadiene shows that prices should remain high in Q3 and slightly decrease in Q4. Styrene (the second main component of SBR) contract prices increased by +€1000/ton in May vs the beginning of the year. Styrene prices are expected to slowly decrease over the next few months to the level of €1200/ton and should remain at this point until the end of the year.





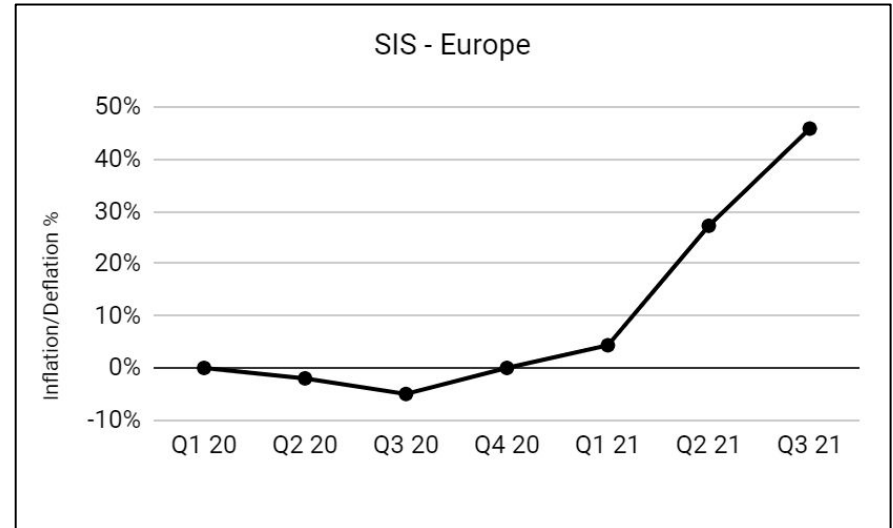
## Styrene-Isoprene-Styrene Rubber (SIS)

Styrene and isoprene are the main components of SIS rubber.

Since the beginning of the year, styrene and isoprene prices have been increasing due to raw materials shortages, freezing temperatures in February and many manufacturers being under force majeure.

SIS producers are unable to fulfil 100% of the global demand due to isoprene shortages and an inability to find material. Vertically integrated producers are unable to serve the market volumes, whereas the rest are struggling to find isoprene on the spot market.

This situation is forecasted to continue until the end of the year, with August/September being at high risk.



Note: Source is coming from AD internal estimate

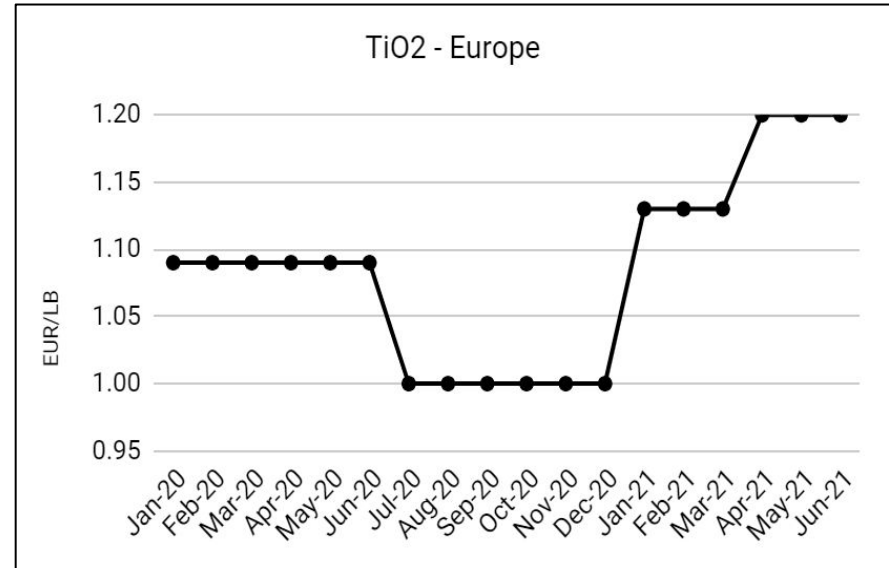


## Titanium Dioxide - TiO<sub>2</sub>

European titanium dioxide (TiO<sub>2</sub>) supply continues to be restricted by a lack of Asian imports due to logistics reasons coupled with strong domestic demand, along with other feedstock and output disruptions.

Also Rio Tinto, one of the largest producers of a key feedstock in TiO<sub>2</sub>, declared force majeure from RBM on June 30, which is expected to negatively affect Q3 supplies.

After 20% inflation, further increases are expected in Q3 as well as supply constraints due to the factors mentioned above.





# Non-product Costs

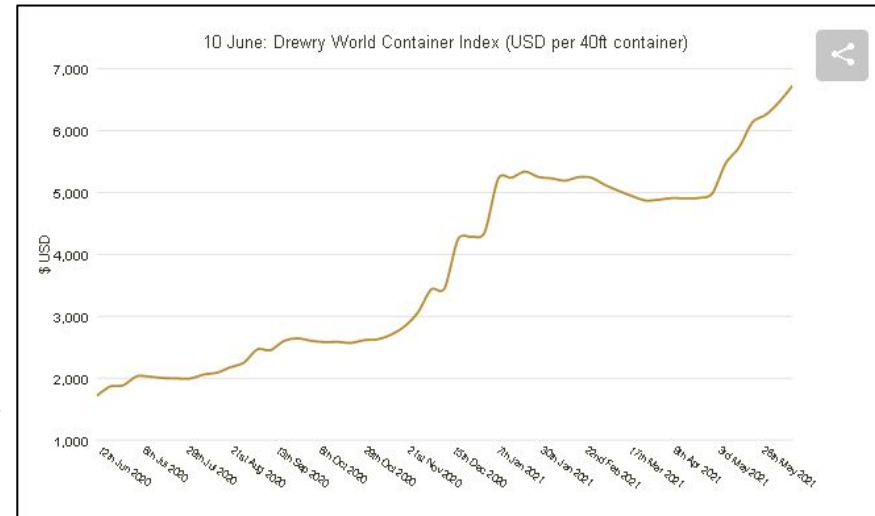


# Global Ocean Freight Market

- Continued global imbalances push prices up further and importers and exporters are struggling to secure capacity.
- An estimated 5.5% of all ocean capacity is currently waiting outside a port.
- Port of Yantian (25% of US-bound, Chinese-origin ocean volumes) operated at only 30% capacity for two weeks following a coronavirus outbreak.
- Compounded by air freight delays, trucking delays and driver shortages in some areas, and related cost increases due to longer lead times.

## 2021 H2 Expectations (ING.com Report)

- No short-term relief. Few alternatives to ocean freight.
- Port congestion and closures keep creating delays.
- An unbalanced recovery throughout 2021. A flood of new container capacity will ease price pressures, but not before 2023.



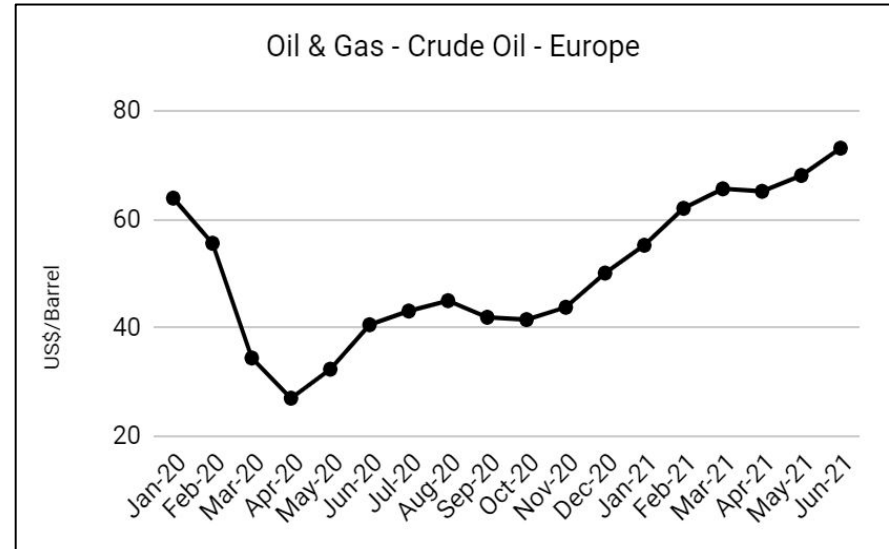


## Fuel Costs - Crude Oil (Actual)

The steep increase of crude oil pricing since Q4 2020 (+62% in June) has been reflected in higher fuel surcharges.

Oil has been boosted by renewed confidence in the economic revival and an associated jump in demand. Oil prices have risen, supported by economic recovery and the prospect of fuel demand growth as vaccination campaigns in developed countries accelerate.

However, the possibility of Iran resuming crude exports in the event of the U.S. lifting sanctions as a result of the revival of the 2015 nuclear deal has weighed on the overall market over the last few weeks. Negotiations have progressed, so a scenario with Q3 stabilisation at these higher levels is possible.





# Packaging

## Timber and Wooden Pallets

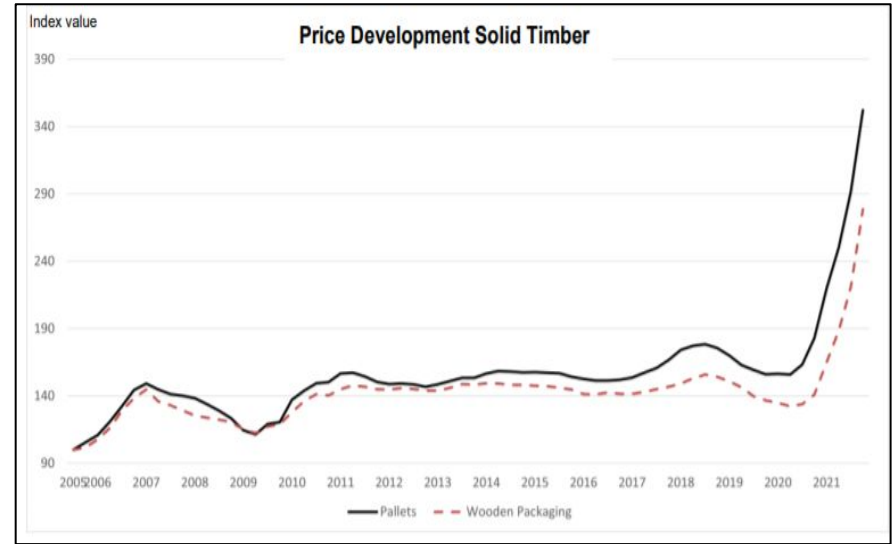
The HPE pallet timber index for June vs Q1 2021 increased +60%. Year over year, the unprecedented increases are exceeding 125% and partly caused by supply tightness.

Three years of droughts, massive bark beetle infestations, storms and increased forest fires have caused massive long-term damage to forests in Germany.

Increased competition from US and Chinese buyers is significantly driving up the European lumber prices. In the US, the price of wood has risen by more than 200% YOY.

Rising construction, renovations and furniture purchases have also made an impact. These industries will pay a premium for wood and are competing with packaging suppliers for raw materials.

Other packaging materials costs have significantly increased. Coreboard rose +80% since Q4 2020, while packaging films have soared along with resin prices.



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