OVERVIEW

Henkel continues to experience raw materials shortages and supply chain disruptions.

As a global company, we will utilize the full strength of our well-established global manufacturing footprint and a network of many trusted partners and raw material suppliers to help secure materials and maintain supply to our customers. Our solid financial foundation, extensive supply network, and our experienced team of product development specialists allow us to explore options and offer viable alternatives where needed, subject to qualification and approvals.

Examples of industry commentary follow:

2 CONFIDENTIAL - INDUSTRIALS NORTH AMERICA: APRIL 2022 SUPPLY DISRUPTIONS NEWSLETTER





ADHESIVES RAW MATERIALS TRENDS

Industry commentary from Adhesives Magazine:

"Most products in the adhesives and sealants industry, and the CASE industry as a whole, rely on formulations with five, 10, 15, and sometimes more compounds, and often the majority are specialty ingredients. So it's easy to see how a disruption accessing one ingredient can bring down the whole formulation, which is a huge risk most companies can't afford to take." *Chris Fitzgerald, Vice President of Global Coatings, Adhesives, Sealants, and Elastomers, Rubber and Plastic Additive Specialty Solutions, Univar Solutions*

"The 80/20 rule, where 80% of your output is caused by 20% of your inputs, is insufficient when managing materials for critical products. Even if you have 99% of your materials secured, that last 1% can keep you from shipping. And it isn't just the chemicals. Packaging and logistics have been just as challenging (in some cases, more so)." *Jim Swope, Chief Commercial Officer, The ChemQuest Group*

"It seems that 2022 will follow more or less the same path of the last year. We are almost sure that the first semester of 2022 will still have issues in the supply chain and also that energy costs will heavily impact margins through price increases. It is quite hard to prognosticate the second part of the year." *Altim Laknori, Sales Manager for BU Rubber and Adhesives, LEHVOSS Italia S.r.l.*

"The key lesson from unprecedented supply challenges last year is that high-quality, timely communication is very important to successfully navigating a turbulent market." *Eric Post, Vice President of Principal Management, Barentz*

Source: https://www.adhesivesmag.com/articles/99225-2022-raw-materials-and-chemicals-roundtable



GEOPOLITICS: SUPPLY CHAIN DISRUPTIONS

From Bloomberg :

According to supply constraint indexes developed by Bloomberg Economics, pressures in the U.S. and Europe intensified in February after several months of improvement. Anecdotal evidence through March suggests the strains won't abate.

"We thought Russia was just a resources story that was going to push energy prices up — that it would make supply chains more expensive but it wouldn't disrupt them," Vincent Stamer, a trade economist with Germany's Kiel Institute for the World Economy told Bloomberg. "It appears a little more threatening than we initially anticipated."

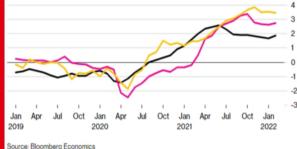
"Multiple industries are reliant on the same raw materials and a large percentage of them are coming out of Russia," Interos CEO Jennifer Bisceglie told Bloomberg. "You're seeing a massive cascading effect on an already limping system of the global supply chain."

Goldman Sachs economists say the new geopolitical risks are forcing companies to reinforce their operations against global disruptions through reshoring, diversification and overstocking inventories—all of which will add delays, sourcing problems and costs for businesses from the U.S. to Europe.

Source: https://www.bloomberg.com/news/articles/2022-03-29/supply-chain-latest-war-in-ukraine-and-china-lockdowns-add-turmoil

Pressure Cooker

Bloomberg Economics' supply indicators show pressure is rising again / U.S. / Euro Area / U.K.



Positive readings point to constraints, negative ones mean supply is abundant.

Source: https://www.bloomberg.com/news/articles/2022-03-29/supply-chain-latest-war-in-ukraine-and-chinalockdowns-add-turmoil



OMICRON: MORE SHUTDOWNS IN CHINA

From reports in CNBC, FreightWaves and the Wall Street Journal:

China has locked down parts of the country in recent weeks as COVID-19 cases hit a pandemic high, leading to the potential for additional supply disruptions.

"If we look at provinces where there's partial or full lockdowns we estimate it covers around 40% ... of China's GDP," Rob Subbaraman, chief economist and head of global markets Research for Asia ex-Japan at Nomura, told CNBC. "China is very vulnerable right now."

Supply disruptions related to the shutdowns are intensifying. "We're about to see a logistics snarl that'll dwarf anything in 2020 or 2021," Richard Martin, managing director at IMA Asia, told CNBC's "Street Signs Asia" on April 13.

"The ongoing COVID-19 lockdown issues in China continue to create additional supply chain disruption for U.S. retailers," Jon Gold, vice president of supply chain and customs policy for the National Retail Association, told FreightWaves.

"Ongoing challenges include factories struggling to get materials needed for production, difficulty moving products to the ports in part because of the driver shortage, as well as increased consumer demand. While the impact of the Shanghai lockdown is limited right now, it will grow the longer the restrictions are in place."

"The severe imbalance between robust demand and handicapped supply will persist throughout [the second quarter], keeping producer-price inflation sticky and elevated until price pressures start to decelerate in the latter part of 2022," Mahir Rasheed, U.S. economist at Oxford Economics told the Wall Street Journal. "With a new wave of lockdowns in China and the war in Ukraine raging on, however, risks to the inflation outlook remain firmly to the upside."

Sources:

https://www.cnbc.com/2022/04/13/china-lockdowns-could-trigger-a-major-supply-chain-disruption-expert.html https://www.freightwaves.com/news/shanghai-zero-covid-lockdown-impact-summer-supply-chain https://www.wsj.com/articles/supplier-prices-jumped-in-march-keeping-upward-pressure-on-u-s-inflation-11649854297

