



## Special Report

*October 2020*

*This report, updated for October 2020, outlines what to expect in the disposable glove marketplace over the next year to 18 months. It examines the disparity between supply and demand, the manufacturing challenges that the industry faces, and the outlook for the rest of 2020 and beyond.*



As we approach a year since the first cases of COVID-19 appeared in the central Chinese city of Wuhan, the world is still reeling from the pandemic's effects.

Global cases are in the tens of millions, with deaths over a million. In the U.S., the virus is proliferating. Global economies continue to sputter. Still, we may not have yet seen the worst of COVID's impact on society and the disposable glove marketplace in particular.

Although there was some success in lowering the infection rate in the spring of 2020, COVID-19 came roaring back during the summer as state and local governments across the U.S. rushed to reopen their economies. Throughout this period, demand for disposable gloves remains at several times the pre-pandemic levels and shows no signs of declining.

The number of cases is expected to snowball with the arrival of autumn and winter. The uncertainty surrounding a vaccine, and continuous struggles with testing across the U.S., realistically delay any form of relief until at least mid- to late 2021. This ensures the need for all types of personal protective equipment, including disposable gloves, will continue to remain high.

## SUPPLY AND DEMAND ARE OUT OF BALANCE

The simple fact is that the world needs hundreds of billions more gloves. Experts projected a jump of global production to more than 330 billion gloves this year, but the demand appears to be 2-3 times higher than that. Demand at that level will carry over into 2021.

Depending on the estimate, glove consumption worldwide before the pandemic found the U.S.—by far the global leader in

glove use—using between 150 and 280 gloves per capita. In Europe, that number was between 100 and 150 per capita. Contrast that with China, between 6 and 9 per capita, and India, between 2 and 3. As little as 20% of the world's population accounts for 70% of glove usage.

Then consider that worldwide demand is skyrocketing. In a country like China, with a population of nearly 1.4 billion, or India, with 1.35 billion, even a small increase in use per capita will result in many more gloves needed. Worldwide production capacity at the end of 2019 was less than 300 billion gloves and was slated for a standard 10% increase in 2020.

Industry estimates show that the maximum capacity added by the end of 2021 will be around 20 to 25 percent, resulting in an additional 30 to 50 billion gloves. The added capacity may seem like a significant number; however, all extra capacity is spoken for through advance orders.

In addition to the pandemic, a greater general awareness of health, hygiene, and safety drives demand. Gloves and face masks, commonly seen throughout COVID coverage, will only grow more ubiquitous as time progresses. From first responders to average Joes, we are seeing citizens everywhere wearing gloves. Industry observers expect glove use to remain high even after a legitimate vaccine is developed.

Along with unprecedented demand, a chronic supply shortage has hampered makers of disposable gloves. That is due to limitations inherent to glove manufacturing: shortages of raw materials, labor, and capacity.

Consider the production of nitrile rubber, the key component in the world's most popular disposable glove material. This essential raw material is produced by only a handful of major companies worldwide, which until 2020 had never been required to increase output so massively and on such a short timetable. It will take considerable time and investment for the production of synthetic rubber to ramp up.

In addition to raw materials, there are challenges involving logistics and labor that make rapid increases in glove production difficult if not impossible.

One of the biggest problems with the glove industry is that the barrier to entry is so great. Unlike other forms of personal protective equipment, glove manufacturing is complex and the raw materials are difficult to access in some parts of the world.

There is minimal domestic manufacturing of disposable gloves in the United States. And unlike we've seen with face masks, there is no such thing as do-it-yourself glove-making. The deluge of consumer-grade masks—from fashion companies to individuals starting their own side-hustles on Etsy—won't happen with gloves. And because of land-use and financial factors, glove factories are not likely to be built outside of Southeast Asia.

Ninety percent of disposable gloves are produced in Thailand and Malaysia. Neither of those countries has the ability to scale production quickly to meet the demand that exceeds their planned capacity by several times.

The shortage of qualified labor is another major impediment to increased glove production. Malaysian glove manufacturers

rely heavily on foreign workers, but the government has placed limits on the use of non-native employees. There is also a substantial training curve involved in an industry that requires specific chemical expertise.

Movement control orders that forced suppliers to shut down temporarily plagued the industry in spring of 2020. Early on in the pandemic, export restrictions by some producing countries caused major delays in shipping; now, with the industry in peak shipping season, further delays are inevitable.

## RAW MATERIAL SHORTAGES IMPACT AVAILABILITY OF NITRILE GLOVES

The unexpected increase in demand for disposable gloves due to the pandemic caught NBR manufacturers by surprise. No one expected needing 2 or 3 times the capacity required to produce the additional billions of gloves. With only a handful of major suppliers, of which Kumho and Synthomer produce about 1M tons—roughly 60% of global supply—the industry has limited ability to scale fast. This even led to some glove manufacturers pondering integrating vertically and investing in NBR production.

For example, Synthomer, a chemical concern based in the U.K., owns two NBR manufacturing facilities in Malaysia. Along with Kumho and LG Chem, it is a major supplier of synthetic rubber to glove manufacturers in Malaysia and Thailand, and to a lesser extent China. Currently operating at full capacity, Synthomer expects no further capacity additions until at least mid-2021. LG Chem also expects to add capacity, but not

before late 2021. It typically takes about 18 months to build a plant and bring it online.

There have been discussions on potentially bringing manufacturing closer to end users. Synthomer has converted some of its styrene butadiene rubber (SBR) facilities in Europe to NBR production, a process that takes about 12 months. (SBR is used primarily in the production of automotive and truck tires, gaskets, and building sealants.) There is limited production of NBR in China because there is little production of nitrile gloves, although Synthomer recently acquired OMNOVA, which has non-NBR latex factories there that could be retrofitted.

Synthomer initially expected 90,000 tons of new capacity at one of its plants added in 2019 to be filled over two years; however, the spike in demand for NBR has the company selling everything it can produce. With the industry not having additional capacity until sometime in 2021, Synthomer is aiming to operate the plants as close to 100% as possible—and it is still not enough.

Governments could have contributed greatly to the solution if they nationalized NBR production, similar to what the U.S. did during World War II, and built their own plants. However, many have chosen to buy up the existing glove supply, which only drives up prices and makes the shortages worse.

## NO RELIEF IN SIGHT

The current situation is so unprecedented that experts with 30 to 40 years of experience in the glove industry have struggled to find ways to rectify the disparity between supply and demand.

Even under normal conditions, manufacturing capacity industrywide can increase by only 10% to 15% per year. The easiest way to do that is to add production lines. A modern disposable glove line can produce up to 300 million gloves annually, which may sound like a lot. But adding even 1,000 lines would increase the overall yearly capacity by only 20% to 25% and cost multiple billions in infrastructure investment.

The shortest lead time to add capacity is six to 12 months. Even though the industry has experience with such previous epidemics as SARS, MERS, H1N1, and Ebola, all came and waned in relatively short order. That is not the case with COVID-19.

Even if a manufacturer was to infinitely increase its capabilities today, it could be well into 2021 before glove sellers would have additional inventory to sell once we factor in the construction time, shortages of raw materials, challenges in labor, length of the supply chain, and other delays.

Manufacturers are already looking to increase output by producing thinner gloves. There will be a great many more 3-mil products on the market, and heavier-duty gloves will be harder to come by (as well as quite expensive). Changing the focus to thinner gloves would streamline operations but have only a limited impact on overall volume.

Before COVID-19, global glove demand was already growing at about 10% annually. Other factors to consider moving forward include:

- In developing countries, gloves are becoming an essential item in the

healthcare sector as a protective barrier for medical staff.

- Gloves are relatively inexpensive. Because they are disposable items, the demand is recurring.
- Increasing hygiene standards and healthcare awareness in non-medical sectors of developed countries, as well as medical sectors of developing countries.
- A population that is living longer, with the elderly being more susceptible to disease.
- Progressively stringent health regulations such as reforms in the U.S. and China.
- The emergence of future health threats, on a level with or exceeding the dangers posed by COVID-19.
- Throughout the pandemic, disposable gloves have received unprecedented coverage worldwide, leading to greatly increased awareness of hand protection. Images of people wearing gloves is on every news channel, website, and newspaper. This amounts to an ad campaign targeting non-medical users.

Hybrid gloves, which blend vinyl and nitrile to create a more affordable and available synthetic, provide some hope for reducing supply shortages. Some manufacturers, particularly in China, are experimenting with such gloves, although expecting these products to make an immediate impact on the glove supply is unrealistic.

Constrained supply and high demand will take a long time to reconcile. Disposable glove markets have historically been relatively stable. Where in the past glove makers may have planned orders and production 3 to 4 months in advance, they are now planning 18 months to nearly two years out and have changed their terms, such as demanding full payment upfront.

### WHAT TO EXPECT NEXT

The reality is that the balance between supply and demand is in no way imminent. It will be months if not years before the market achieves any semblance of equilibrium. No one can produce an accurate timetable for marketplace recovery; however, we and the majority of industry observers expect prices to remain high as long as demand does.

As a disposable glove company, AMMEX will keep buying and selling gloves, and doing everything we can to accommodate our partners' needs. We will continue our efforts to move the supply chain by securing as much production capacity and inventory as possible, and we are always searching for new glove opportunities.

The best advice we can give our partners is to buy available inventory from any reputable source they can find. Disposable glove prices will not be any lower in 2020, and likely not in the first half of 2021. Consider alternatives to nitrile such as vinyl gloves, which offer tremendous value and are more available for the time being.

It will take creativity, ingenuity, and determination for all of us to survive the havoc that COVID-19 has wreaked upon the disposable glove industry.