

Shortages of these two materials over the past few months (see links below)---what do they have in common? They are both related to the current COVID-19 crisis, but in what way? Plexiglass has been used for years in the industrial and arts area for years, primarily as a "construction" material. But is also a relatively inexpensive transparent material that can be cut and formed in many different ways. In the case of virus transmission in public places, it is finding wide use as a transparent physical barrier and this "new" function has begun to cause shortages. If you are the marketing manager for a company that manufactures this type of plastic material, were you thinking about the "transparent barrier" FUNCTION of this material? Did you recognize this opportunity right after the virus began to spread or did you wait to get a phone call from someone with an inquiry about a new use?

We are all familiar with oxygen. We breathe it and need it to survive, but it's only 21% of the air we breathe. The rest is nitrogen. Oxygen is a resource needed to sustain a fire and in the industrial world, millions of dollars are spent on air liquefaction plants (and associated transport and storage) to separate nitrogen and oxygen so that liquid nitrogen can be used as an inert gas, in many different ways, to prevent fires and explosions which require the presence of oxygen. In some cases, the purity of the nitrogen does not need to be 99%+ and polymer membranes can separate air, under much less severe process conditions, to 90-95% purity. What happens to the oxygen that was in the air to start with? Most of it is simply vented to the atmosphere. But what happens when a new virus appears that requires ventilators using high oxygen content? In some cases, the oxygen now become more valuable than the nitrogen for which the process was originally designed, and not enough oxygen is produced. If you were in this type of business, did you see this coming right after the COVID news and make process and pricing adjustments immediately, or were you surprised by a phone call?

Think FUNCTION, not PRODUCT!

<https://www.cidrap.umn.edu/news-perspective/2020/06/covid-19-demands-intensify-efforts-ease-oxygen-shortages>

<https://www.wsj.com/articles/plexiglass-to-the-rescue-supplies-run-short-as-covid-barriers-go-up-11592918743>