

BD Feedback to Support the Department of Commerce's Request for Public Comments on Risks in the Semiconductor Supply Chain [Docket Number 210915-0189]

BD Overview

BD (Becton, Dickinson and Company) is a global medical technology company that is *advancing the world of health™*. We are deploying unique capabilities to address critical health needs – including diagnostic tools that rapidly identify infection, essential medical devices to support routine patient care and overarching surveillance tools that track real-time pandemic developments. BD is also a world leader in providing injectable devices, which are essential for successful vaccination campaigns. BD's medical technologies support virtually every aspect of healthcare and the coronavirus response. We welcome discussion with government partners and other stakeholders on supply chain resiliency, particularly as it relates to raw material shortages such as semiconductor chips that can affect patient access to critical medical technology at a time when these products are needed most.

Summarizing Comments

We appreciate the Administration's and the Department of Commerce's attention to supply chain challenges relative to semiconductor products. As we continue to work through a number of supply chain and raw materials shortages issues, BD is particularly concerned about the current semiconductor supply chain landscape: inflationary supplier pricing, potential for counterfeit products, growing lead times and last minute "decommits" threaten our ability to deliver critical medical technology to our customers, including the U.S. government. Some of the technologies impacted by continued semiconductor supply chain challenges include products such as infusion pumps, including BD's infusion pumps, which serve over 70% of health systems across the U. S. We also collaborate closely with the Department of Defense and the Veterans Affairs Administration to ensure their healthcare facilities have medication dispensing capabilities, which rely on semiconductor components. We are employing creative purchasing efforts to ensure continuity of our operations, but those are only temporary solutions. We are eager to engage in actionable efforts that address proper allocation and appropriate prioritization of semiconductor products for medical technology.

Response to Survey Questions

- a. ***Identify your type of business and the types of products you sell.*** BD is one of the largest global medical technology companies in the world and is *advancing the world of health™* by improving medical discovery, diagnostics and the delivery of care. Headquartered in Franklin Lakes, NJ, BD has a presence in virtually every country and partners with organizations around the world to address some of the most challenging global health issues. By working in close collaboration with customers, BD can help enhance outcomes, lower costs, increase efficiencies, improve safety and expand access to health care. For more information on BD, please visit [bd.com](https://www.bd.com).
- b. ***What are the (general) applications for the semiconductor products and integrated circuits that you purchase?*** Semiconductor products are integral components to a variety of medical products used across health systems, intensive care units, laboratories and research centers in addition to other healthcare settings, including the home. BD medical technologies that depend on semiconductor components range from diagnostic testing capabilities, infusion pumps, medication dispensing cabinets, endovascular AV fistula creation devices, and cutting-edge flow cytometry technology, all of which are critical to healthcare.
- c. ***For the semiconductor products that your organization purchases, identify those that present the greatest challenge for your organization to acquire.*** Please see the attached excel file.
- d. ***For each of your organization's top semiconductor products, estimate each product's lead times and your organization's inventory for 2019 and (b) currently (in days).*** Please see the attached excel file.

- e. **What are the primary disruptions or bottlenecks that have affected your ability to provide products to customers in the last year? e. Is your organization limiting production due to lack of available semiconductors?** Continued shortage of semiconductors and lack of support for proper allocation and prioritization to BD and other medical technology manufacturers will impact our ability to deliver live-saving products. Through creative purchasing solutions in the open market, BD has been able to minimize the impact to date to ~10%. However, these purchases present their own risk with ever increasing inflated costs, (we can document scenarios where the markup is 36-100X what we paid for the same products the year before). Additionally, we have increasing concern that counterfeit parts are making their way into supply chain, and we have employed extensive testing and validation measures to ensure patient safety.
- f. **What percentage of your current production has your organization had to defer, delay, reject, or suspend in the past year?** See above answer.
- g. **Is your organization considering or carrying out new investments to mitigate semiconductor sourcing difficulties?** We are spending tens of millions of dollars to purchase materials on the open market just to maintain continuity of operations. We are also making significant investment to validate potential alternatives. However, we are a highly regulated industry and even if alternatives are available, the time it takes for new validation and regulatory approvals does not pose any short-term solutions.
- h. **What semiconductor product types are most in short supply and by what estimated percentage relative to your demand? What is your view of the root cause?** We have identified integrated circuits as the most concerning category. Our perspective is that global and domestic capacity is the root cause but is worsened by workforce challenges and over-ordering/lack of proper allocation procedures in place.
- i. **Has your organization changed its material and/or equipment purchasing levels or practices in the past three years?** Yes, the demand for our products has increased to support routine healthcare and the coronavirus response. We have had to place orders out 18-24 months to ensure we have a pipeline of parts and components to service our health system customers. In some cases, our suppliers are asking BD to purchase these products upfront, as our suppliers do not want to carry inventory we find in the open market.
- j. **What single change (and to which portion of the supply chain) would most significantly increase your ability to purchase semiconductors in the next six months?** Proper allocation with priority attention to industries supporting pandemic preparedness must be addressed with suppliers at all levels to prohibit companies from buying products and reselling them on the open market. This is exacerbating the shortage through panic buying and creating an environment ripe for counterfeit activity. For the healthcare industry, inflationary costs will have an adverse impact on patient access to medical products.
- k. **What percentage of your orders are fulfilled by distributors versus through direct purchase orders to semiconductor product manufacturers?** 40% of our orders are filled through authorized distributors and 60% are filled directly with the semiconductor manufacturers. Due to shortages across the board, we are purchasing a small percentage of our semiconductors through open market where orders are de-committed.
- l. **For the semiconductor products your organization purchases, how long (in months) are the typical purchase commitments? How, if at all, do your organization's purchase commitments differ for products in short supply?** Prior to 2021, expected lead times were generally 24-36 weeks. For products in the shortest supply, we are seeing lead times of 12-18 months with questionable commitments made by suppliers.
- m. **Has your organization faced "decommits" (defined as a notification from a supplier that expected or committed supply will not be delivered in the agreed-upon time and quantity) in recent months? If this is a significant issue, please explain (e.g., nature of product, supplier, impact).** Yes, "decommits" are increasing across the board and the timing of notifications leave us little time to adapt or find creative purchasing solutions. BD has daily escalation meetings with suppliers to reinforce the potential impact to healthcare if commitments and delivery dates fall through.