

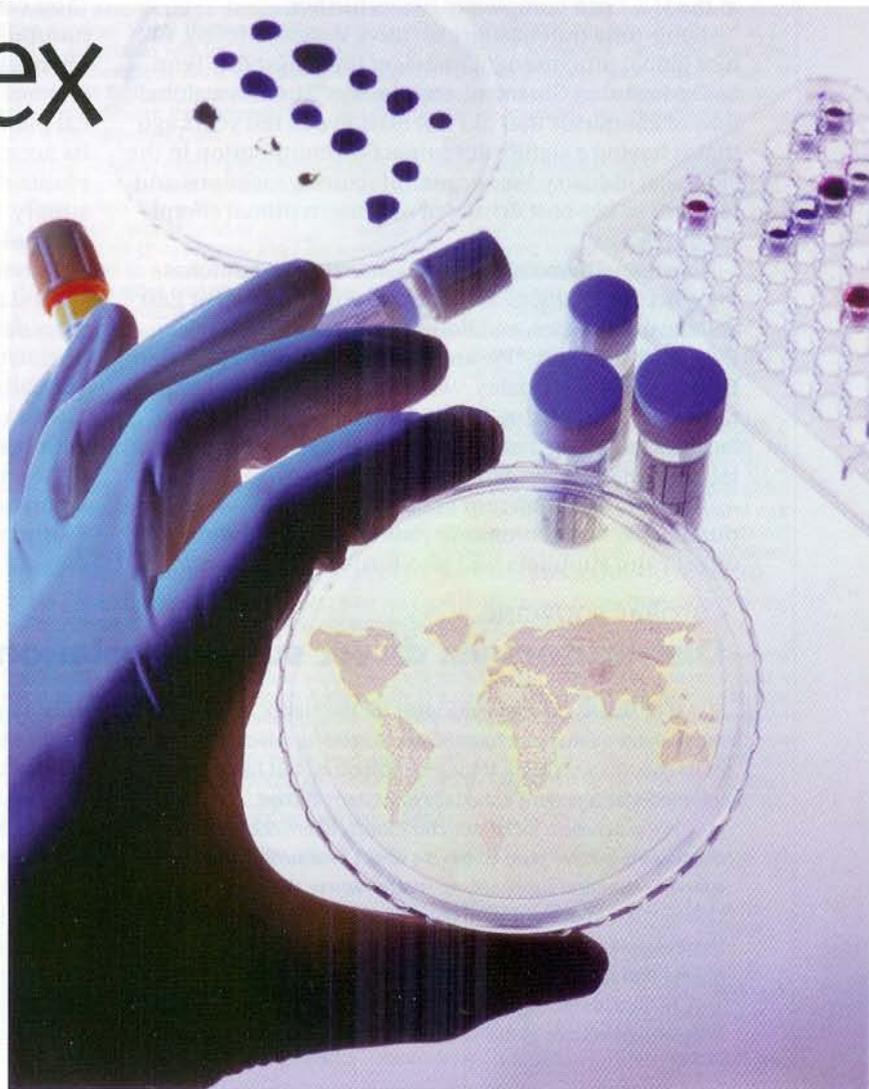
Buyers are grappling with a host of new concerns, including logistics costs and tariffs, in an effort to find effective chemical suppliers in global markets. By Richard Weissman

Chemicals markets getting more complex

An increasing flow of commodity and specialty chemicals from China, India, the Middle East and Eastern Europe have chemical buyers participating in a more complex global supply chain. The upshot: New concerns for chemical buyers such as volatile energy costs in various global markets, logistical bottlenecks, changes in distribution channels, quality and safety concerns and intricate global economics/currency issues are all adding to the challenges of effective chemical sourcing.

Bob Zieger, category manager at Sunnyvale, Calif.-based procurement services provider Ariba, puts it this way: "Effective sourcing of specific chemicals requires a basic understanding of their cost drivers and supply and demand links." And those factors are not the same worldwide.

"Global trade is robust for many commodity chemicals and regional market conditions are often variable and volatile," adds Zieger. As with most international purchases, he says, it is important to understand the total landed-cost elements in sourcing chemicals, including duties and tariffs, since logistics costs can be a significant cost factor in lower value chemicals.



Specialty considerations

Zieger points to challenges in purchasing specialty chemicals, specifically, in overseas markets. "Supply bases are typically narrower and the number of qualified sources is usually reduced as the level of chemical compound customization increases. Security of supply and cost containment can be challenging without viable alternatives."

Zieger adds that when dealing with specialty chemicals, the emphasis is usually on technical aspects and quality-control capabilities, which require greater supplier oversight and due diligence. "This has become a hot button of late particularly as it relates to downstream product safety and low-cost country sources," says Ziegler. "Similarly, understanding and complying with regional regulatory requirements such as REACH in Europe and FDA/OSHA in the U.S." can complicate issues further.

Long-time purchasing executive Vaughn McCoy, senior global procurement manager for Kingsport, Tenn.-based Eastman Chemical, says today, "There is a global flow of chemicals that did not exist five to ten years ago that is having a significant impact on competition in the chemical industry. We see manufacturing locations and logistics as key cost drivers of our international chemical purchases."

Eastman Chemical maintains international purchasing offices in Shanghai and Singapore to monitor Far East chemical purchases, and Rotterdam to better manage European suppliers. "We are a past winner of the Malcolm Baldrige National Quality Award and quality is very important to us," says McCoy. "We visit our chemical supplier's facilities, ensuring that there is proper safety, environmental, and employee welfare standards in place."

China is an important country for McCoy, who is purchasing both commodity and specialty chemicals direct from suppliers and also through brokers and

WHAT IT MEANS TO BUYERS:

- Savings are not a sure thing in global sourcing. Buyers must understand cost drivers of global markets.
- International procurement offices can help monitor overseas supply quality.
- Sourcing specialty chemicals is especially challenging overseas, due to their technical requirements.
- Chemical distributors can play a valuable role in both global and local sourcing.

traders. "China's low capital costs, as well as its lower costs of construction and labor, make it quite competitive." He sees the larger, regional commodity chemical suppliers competing on economies of scale, while the smaller specialty chemical manufacturers with smaller plants and higher prices, competing on improved logistics and stronger relationships.

Logistics are more of an issue when sourcing globally, says McCoy. "When dealing internationally the flow of goods is so important, but there are issues with shortages of specialty containers [for chemicals] and security of imports." He also sees quality and packaging problems from some global suppliers, but those issues are usually resolved through increased communication.

McCoy takes a global view of the chemicals market. "You can look at the cost of feedstocks, petroleum and natural gas specifically, to see where the international chemical market is migrating," says McCoy. And a lot of it is not in the U.S. He says that in addition to chemical plant development in China, Saudi Arabia, with its access to petroleum, is building gigantic chemical plants that will dramatically increase petrochemical supply. Middle Eastern markets are also developing technology-based joint ventures with western chemical companies.

And India, having gained expertise in current good manufacturing practices, also is building up its chemical infrastructure, especially concentrating on working with specialty chemicals for the pharmaceutical industry.

Mickey North Rizza and Bill Polk, research directors with Boston-based analyst firm AMR Research, note the importance, and cost pressures, of chemicals in domestic manufacturing. "It is a tough time in the chemical industry and two-thirds of U.S.-based manufacturers depend on chemicals for the products and processes,"

• GLOBAL SOURCING

Distributors vs. direct supplier relationships: One firm's strategy

Shaun O'Neil is a sourcing manager for the Natick, Mass.-based medical device manufacturer Boston Scientific, which does most of its chemicals sourcing through distributors, but has some international suppliers, especially in Eastern Europe.

"We purchase a lot of our commodity chemicals through distributors but we tend to have a direct relationship with our specialty chemical suppliers, no matter where they are," says O'Neil. "It is important to maintain a direct relationship with those suppliers, especially international ones, to ensure the quality and safety of the chemicals we purchase."

Chemical distributors have proven valuable to Boston Scientific in the era of volatile global chemicals pricing. "Our distributors do

stock a wide variety of the chemicals, help us with buffer stock, and also handle the small container sizes that we need," says O'Neil. "Cost is an issue and we see chemical costs increasing, following the rise in energy costs. We depend on our distributors to manage and leverage their relationships with manufacturers in order to protect our pricing and continuity of supply."

Distributors "often have the clout we don't have." O'Neil adds that while Boston Scientific prefers to have direct relationships with suppliers, it is often difficult to maintain those relationships with distributed products. "We are able to work with distributors for technical help on specialty chemicals and still maintain strong relationships with manufacturers," says O'Neil.

global sourcing

says Polk. "Chemicals can make up to 45% of a company's supply cost."

Costs in the chemical industry are directly related to the price of energy and more chemical-consuming manufacturers and chemical suppliers are adjusting supply chains as a result. North Rizza points out that one company with extremely high energy costs told her that, "By moving manufacturing to Europe they could save about 40% and manufacturing in the Middle East would save more than 80%, all due to the cost of natural gas and oil."

Boston Logistics, a Wellesley, Mass.-based supply chain consulting firm, sees some level of pricing relief coming to chemicals buyers in the late 2008/early 2009 time frame. "There is currently a capacity-driven bubble in bulk commodity and specialty chemicals that should begin to resolve itself in the next year or so," says David Jacoby, president of Boston Logistics. "There is a current shortage of capacity, as well as a shortage of pressured containers and continued increase of prices on trans-Pacific transportation rates, all causing upward pressure on chemical costs and prices."

Jacoby notes that there are about 1,500 chemical manufacturing projects current in process, with 80-90% of the new capacity coming online in Asia and Europe. "Those projects will go a long way in meeting global demand and in two to three years we may be in a situation of over capacity," says Jacoby. "We might also be facing a decrease in energy prices that will also lead to lower prices. All of these factors lead to a very volatile industry."

Jacoby also sees a complicated supply chain emerging in the chemicals industry and buyers need to do their homework more than ever. "In Asia everyone is trying to be an agent of sorts," says Jacoby. "The use of 3PLs and 4PLs in the international chemical supply chain can add complexity." □

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