

Chemicals Strategy for Sustainability

Strategic Chemicals

In the past few months chemicals have been referred to as indispensable, essential, critical or crucial because they supply multiple key value chains. As the Cefic contribution on [strategic value chains](#) has shown, chemicals are key components of materials used in wind turbines, solar panels, electric batteries and building insulation in addition to playing a vital role in everyday needs of society, from medicines to clothes. Chemicals play an important role in enabling the achievement of the Green Deal, the Industrial Strategy and the proposed Economic Recovery Plan. Rather than referring to/focusing on “strategic chemicals”, Cefic is therefore of the opinion that it is more valid to focus on “strategic value chains” or “strategic ecosystems”.

Furthermore, the Covid-19 pandemic has also shown the key role our industry plays in producing essential supplies during this unprecedented public health crisis. Chemical processes and products are present in every imaginable industrial ecosystem in Europe today, which makes this a crucial sector in the post-Covid-19 economic recovery. During the crisis, most EU Member States declared the chemical industry as strategic.

The central importance of the chemical sector as a whole is, therefore, generally well recognised. A strong EU chemical industry will ensure the EU's resilience to future crises/shocks that cannot be predicted today.

Some materials, such as rare earths and cobalt, are easily defined as critical raw materials for Europe. It is much harder to define individual chemicals as strategic.

The following reasons make it difficult and undesirable, in Cefic's view, to provide an encompassing and unequivocal definition of a strategic chemical:

- The constituent parts of chemical value chains and hence also their end products are inextricably linked with one another in a complex industrial symbiosis. This is illustrated in the chart covering the petrochemical value chain (see above-mentioned document). Certain chemicals might be considered “non-strategic” when taken individually but may well constitute essential side-streams or inputs or building blocks to “strategic” chemicals or value chains.
- The definition of what is strategic and/or essential may change over time. For example, before the Covid-19 crisis, substances used for Personal Protective Equipment (PPE) might not have been designated as strategic. A future crisis may be of a nature that makes it impossible to predict today what applications, and hence which substances, will have strategic relevance at that time. What would happen if at the time of such a future crisis, the required substances had not been classified as strategic? The decision on what applications are deemed strategic would likely have to be underpinned by a robust scenario planning and crisis preparedness exercise.

- A substance/use that could be considered strategic today might not be considered strategic tomorrow. In regulatory terms, however, the reverse is even more challenging: a substance that is non-strategic today, and regulated accordingly, could become strategic through an innovation. The regulation of non-strategic substances should therefore always provide for the possibility of that designation to be changed, and for all substances to be available so as not to inhibit innovation.
- The denomination of certain chemicals as strategic would imply that non-listed chemicals are not considered as strategic. Input materials to produce strategic chemicals should then also be considered strategic.
- Market demand is a good indicator of which substances play important roles in the European economy. The input of downstream users, particularly those in the strategic ecosystems, is probably the best indicator of demand for specific chemical substances. A challenge would be to ensure downstream users understand all the substances that feed into their supply chains. (It goes without saying that all substances should be used in compliance with all applicable regulations.)
- To appreciate the strategic relevance of specific substances at any given point in time a sequential set of questions could be applied. This could be done via a flow diagram which would pose the following proposed questions (initial ideas):
 1. Is the chemical used in applications and materials that are critical to achieve EU strategic priorities e.g. the European Green Deal, Security and Defence, European Industrial Strategy, Batteries, and Digital Agenda?
 2. Is the chemical used in applications critical to protecting lives of EU citizens, such as pharmaceuticals, medical devices or personal protective equipment?
 3. Is the chemical used in other applications that have significant societal relevance?
 4. Does the chemical bring unique benefits in the applications where it is used?
 5. Is there a lack of alternatives that can guarantee the same benefits or quality (think of conformity assessment in downstream sectors such as aeronautics)?
 6. If alternatives exist, would they carry a significant negative impact on performance, environmental impact, and/or competitiveness? Is there a risk of regrettable substitution, including to materials that have a worse overall environmental footprint?
 7. Is the supply of chemicals in the European Union sufficient or is Europe dependent on imports? Is the quality of the supplied chemicals high enough?
 8. Would the production of a designated “strategic chemical” require other chemicals that are not considered strategic?
 9. How would the availability of the “non-strategic” chemical be ensured for use in research and innovation processes?
 10. How would a notional list of “strategic chemicals” be updated?

For all the above reasons Cefic believes it is near impossible and even undesirable to attempt developing a definition of strategic chemicals. It is up to the EU authorities to set strategic priorities and for industry to identify the chemicals that are indispensable to achieve these strategic priorities.

