

The adhesive and sealant industry continues to innovate to become more sustainable. By Dimitrios Soutzoukis, FEICA.



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TOWARDS A CIRCULAR ECONOMY

The European Commission adopted an ambitious Circular Economy Package in 2015 to boost global competitiveness, create jobs and generate sustainable growth.

The Package will contribute to “closing the loop” of product lifecycles through greater recycling and re-use, and bring benefits for the environment, society and the economy. The plans will extract the maximum value and use from all raw materials, products and waste, fostering energy savings, materials efficiency and reducing Green House Gas emissions. In January 2018, it adopted a set of measures that included:

- > A Europe-wide “EU Strategy for Plastics in the Circular Economy” and annex to transform the way plastics and plastics products are designed, produced, used and recycled.
- > A communication on options to address the interface between chemical, product and waste legislation that assesses how the rules on waste, products and chemicals relate to each other.
- > A monitoring framework on progress towards a circular economy at EU and national level. The framework comprises a set of ten key indicators which cover the various phases such as production, consumption, waste management and secondary raw materials, economic aspects such as investments and jobs, and innovation.
- > A report on “Critical Raw Materials and the Circular Economy” that highlights the potential to make the use of 27 critical materials in our economy more circular.

THE NEED FOR COHERENT POLICIES

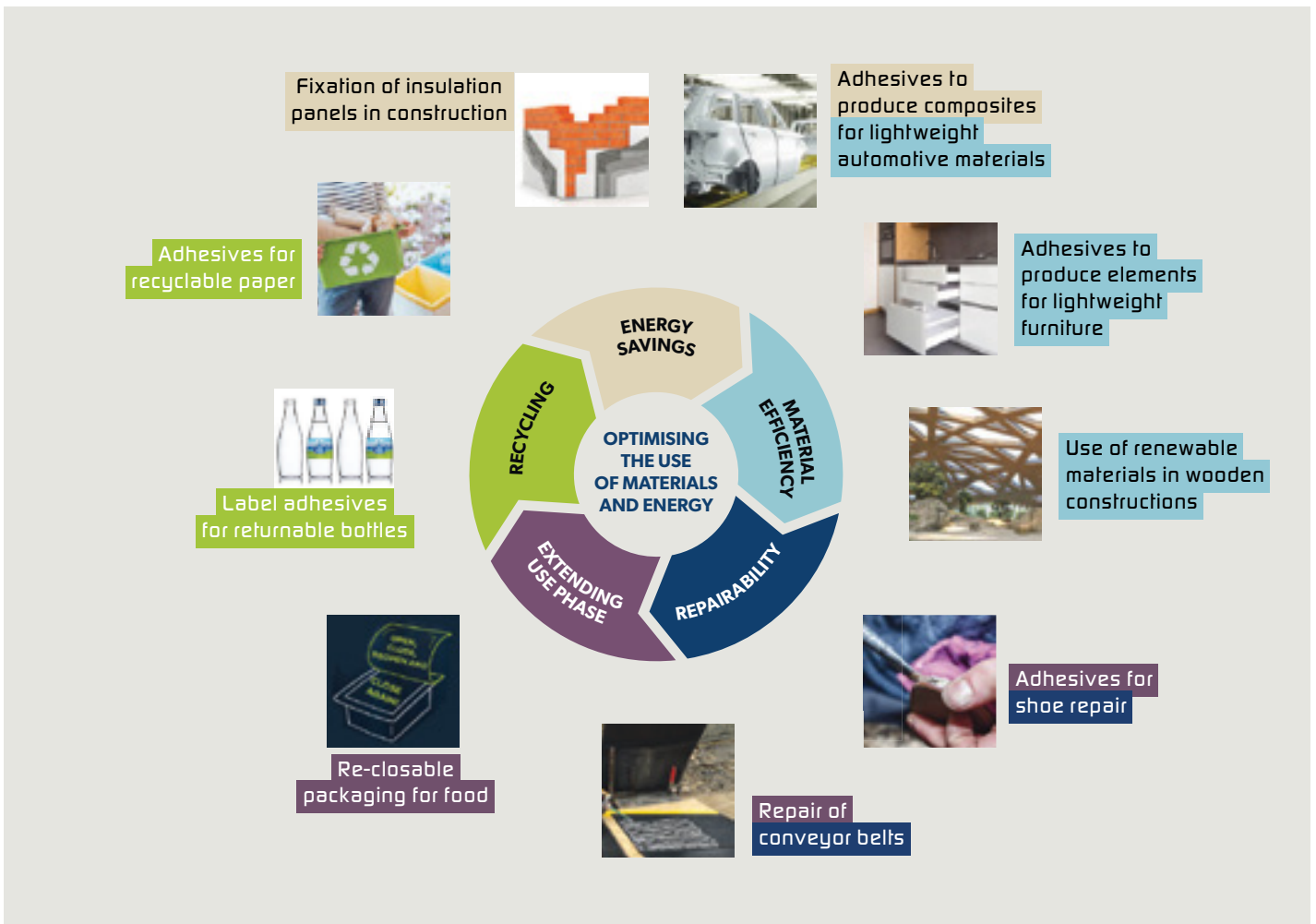
These EU measures highlight the importance of developing a coherent set of policies to help ensure products are manufactured, consumed

and handled at the end of their lifespan in an efficient, cost-effective manner that maximises their contribution to a circular economy. To help achieve this, the European Commission ran a public consultation from 29 November 2018 – 24 January 2019 titled “Towards an EU Product Policy Framework contributing to the Circular Economy”. Citizens, business and industries all take decisions related to products based on certain perceptions, under the influence of incentives and limitations set in (amongst others) EU policies. The Commission says: “It is vital to obtain views from a wide range of stakeholders on these perceptions and incentives, in particular those relating to EU product policies. This will help identify in how far the current EU product policy framework is supportive to a circular economy and what potential there is for increasing this contribution.” FEICA provided input to the consultation and on 6 and 7 March 2019 participated in the Circular Economy Stakeholder Conference, organised by the European Commission and the European Economic and Social Committee, to follow and engage in the relevant Circular Economy exchanges.

THE BENEFITS OF A LIFECYCLE APPROACH

To deliver the maximum sustainability benefit, it is necessary to adopt an approach that examines the entire lifespan of a product, from the raw materials and processes used to manufacture it, through the use phase, to the end-of-life processing (ease of disassembly, capability to re-use or recycle materials and components, etc.)

The adhesive and sealant industry has a long-standing commitment to sustainability and is an advocate of the lifecycle analysis approach. FEICA – the Association of the European Adhesives and Sealants Industry – has proactively engaged in discussions on the circular economy



with relevant stakeholders. For example, it contributed to the development of the European Commission’s ecodesign requirements for electronic displays. This resulted in a solution for certain ecodesign requirements that will enhance the extent to which products can be dismantled without restricting product innovation and design, enabling liquid adhesives to be used if they support the design and dismantling requirements.

FEICA has produced a position paper on “The circular economy: The role of adhesives and sealants”. FEICA believes there will be dismantling requirements for all types of bonding techniques. Adhesive producers will need to work with their customers to ensure that products can support recycle at end-of-life.

HOW ADHESIVES AND SEALANTS CAN HELP ACHIEVE A CIRCULAR ECONOMY

The circular economy concept creates a paradigm shift for many important sectors of European industry; successfully addressing the challenge of a circular economy is best secured if all of society is encouraged to contribute. The aims of reducing waste and ensuring full circularity of the economy go beyond what economic operators can achieve alone. It is indeed a societal challenge and FEICA members acknowledge this and are working to support such change. The adhesives and sealants industry has been pioneering on sustainability for many years. Examples from various sectors are highlighted in the diagram above, covering the main areas of circularity and sustainable developments, showing the value improvement that adhesives and sealants deliver to a broad range of applications along different value chains:

- > Energy saving: Adhesives and sealants enable solutions that save energy in the use phase of buildings and vehicles, for example for the fixation of insulation panels, the production of lightweight cars, etc.
- > Material efficiency: Adhesives enable the optimised use of materials, for example composite materials for lightweight vehicles and for furniture parts, supporting the use of the renewable materials such as wood in construction
- > Repairability: Adhesives enable the repair of many products, for example shoes, conveyor belts, etc., thereby extending their utility, use phase and service life
- > Extending use phase: Adhesives and sealants extend the life span of products and components for example, conserving foodstuffs through re-closable packaging
- > Recycling: Adhesives which do not impede/burden recycling, for example in paper recycling or the cleaning and reuse of returnable glass bottles, and which improve recycling efficiency through material efficiency because less material needs to be processed when the product is at its end-of-life



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