

Roadmap of Deutsche Bauchemie on the green and digital transformation of the construction sector

1. Background and context

Deutsche Bauchemie and its member companies are facing up to the challenges of our time: They are actively shaping the transformation to a **resource-efficient, environmentally friendly economy** and Germany's and Europe's pathway to **climate neutrality**. **Consumer and worker protection** is ensured at all times and continuously optimised by the sector. The members see **digitalisation** as key opportunity and are actively driving it forward.

European and German **politicians** have also recognised the need for action: The general goals of the **European Green Deal** point in the right direction. A well-balanced development of chemical and product legislation can offer new opportunities. Europe's digital decade is taking the right path.

The new EU industrial strategy assigns a key role to the **construction sector** in the transition to a **resilient, greener and digital economy**¹ and recognises the importance of the **chemical industry**.

2. Contribution and responsibility of the construction chemicals industry

Deutsche Bauchemie and its member companies are committed to the goals of the **European Green Deal** and take **responsibility that goes beyond the legal requirements**: Building on their previous commitment, Deutsche Bauchemie and its members support the transition to a resilient, greener and digital construction sector initiated by the European Commission with its roadmap¹.

Therefore, the association and its member companies are defining targeted measures that they will implement until 2030.

3. Measures by Deutsche Bauchemie

Deutsche Bauchemie is proactively shaping the green and digital transformation of the construction and chemical sector. Through innovative products, targeted technical solutions and responsible and sustainable action, the construction chemicals industry is actively contributing to the success of the transformation process. The following catalogue of measures forms the guideline for the association's actions and future orientation.

¹ CSWD: Scenarios for a transition pathway for a resilient, greener and more digital construction ecosystem

Measures by Deutsche Bauchemie to support the transition to a resilient, greener and digital construction sector

1. Promoting technical solutions for defossilisation/decarbonisation

- 1.1. Deutsche Bauchemie actively helps members to develop and expand their competences in climate management (capacity building) through specific measures such as workshops, guidelines and best practice sharing. This is intended to enable and motivate companies in the construction chemicals sector to set their own climate targets, which they then systematically implement.
- 1.2. Deutsche Bauchemie specifically develops model environmental product declarations (EPD) for concrete admixtures for CO₂ -reduced concretes. These are verified by an independent body. This offers member companies the possibility to assign their concrete admixtures, which have been specifically developed for this use, to the model EPD, based on clear criteria, and to provide their customers with the corresponding life cycle assessment data. The model EPDs for concrete admixtures for CO₂ -reduced concretes also provide a guideline for new product developments. This supports the ongoing developments towards decarbonisation of concrete technology.
- 1.3. Deutsche Bauchemie highlights technical solutions for CO₂ -reduced construction methods in the form of "success stories", aiming towards motivating product manufacturers to develop the necessary products and encouraging users to apply these products and technologies.

2. Promoting healthy and sustainable buildings

- 2.1. Deutsche Bauchemie carries out life cycle assessments for the product categories of construction chemicals. On this basis, the association develops, maintains, and updates model environmental product declarations (model EPDs) for all relevant product categories in the sector. The model EPDs are independently verified before publication. The sample EPDs of Deutsche Bauchemie can be referred to by the member companies and assigned to the relevant products on the basis of clear criteria. In this way, manufacturers of construction chemical products can provide interested customers, architects, and contractors with life cycle assessment data on the products used. With the help of this information, the sustainability of buildings can be calculated according to standardised methods.
- 2.2. Deutsche Bauchemie supports the application and further development of schemes for the health-related assessment of emissions from construction products into indoor air. In this sense, the association participates in the ongoing development of the AgBB VOC assessment scheme, the derivation of so-called NIK values (NIK: niedrigs interessierende Konzentration) and their European harmonisation in the form of European LCI values (LCI: lowest concentration of interest) through active participation in the relevant committees of the Committee for Health-related Assessment of Building Products (AgBB) and the European Commission. This enables companies in the construction chemicals industry to test relevant products regarding their health compatibility and, if necessary, to optimise their emission behaviour before they are used indoors.

3. Increasing energy and resource efficiency and the circular economy

- 3.1. Deutsche Bauchemie promotes technical solutions for resource-efficient construction methods by means of "success stories". This is intended to stimulate the development of needed products and their use.
- 3.2. Deutsche Bauchemie is pursuing the goal of establishing a recycling system for plastic packaging in cooperation with recycling companies.

4. Supporting the digitalisation of the construction sector's supply chains

Deutsche Bauchemie pursues the long-term goal that all product-related information relevant to supply chain communication is available in digital, machine-readable form.

- 4.1. Deutsche Bauchemie is taking the first step with the development of BIM product data templates (PDTs) for product categories in construction chemistry. This will create conditions for the digitalisation of supply chain communication and the methodical application of Building Information Modelling (BIM).

Companies in the construction chemicals industry can use these standards to create standardised digital data sets for their specific products. This makes it easier for customers and architects to develop BIM models.

- 4.2. Deutsche Bauchemie continues to support the application of the "*Smart CE Marking*" concept and its implementation for harmonised construction chemical products. This creates the prerequisite for standardised digital communication of the properties and performance characteristics of harmonised construction products. This in turn enables the application of intelligent data processing, such as an automatic "compliance check" by the user. During the ongoing revision of the EU Construction Products Regulation, the association is engaged to ensure that the provision of a "digital" declaration of performance becomes the legal standard.

5. Promotion of education and training as well as research and teaching

- 5.1. By regularly awarding prizes for dissertations, master's and bachelor's theses in the field of construction chemistry, Deutsche Bauchemie promotes young scientists.
- 5.2. Deutsche Bauchemie supports education and training by actively participating in training advisory boards and by developing, providing, and updating professionally sound teaching materials.

Deutsche Bauchemie e.V.

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As an industry association, Deutsche Bauchemie represents the entire construction chemicals industry in Germany. In 2021, the more than 130 member companies with around 32.000 employees generated sales of 8.9 billion euros. This corresponds to half of the European market volume and about a quarter of the world market. Under the umbrella of the German Chemical Industry Association (VCI), Deutsche Bauchemie has been representing the interests of its member companies for over 70 years, to the public, political actors, authorities, other industry sectors, science and the press.