

CIRCULAR ECONOMY

Encouraging circular practices in a recovering construction sector

Comments by the plaster & plasterboard product industry on the 2nd EU Circular Economy Action Plan

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As Europe is slowly restarting economic activities severely slowed down by the Covid-19 pandemics, the principles and concrete initiatives presented in the Circular Economy Action Plan¹ in March 2020 are a useful compass to guide industrial recovery into more sustainable practices. This is particularly true in material processing industries such as construction product manufacturing.

Eurogypsum, the association representing the interests of the European industry extracting and processing gypsum into plaster, plasterboard and many other applications, mainly in the construction sector, welcomes the holistic approach taken in the new Action Plan, integrating energy and resource efficiency aspects beyond recycling, and the close link with the European Green Deal's² objectives, particularly the Renovation Wave and the expected Strategy for a Sustainable Built Environment as regards our sector.

We believe that the Action Plan duly recognises a number of shortcomings hampering the move towards more circular practices in our sector, which we had repeatedly identified in earlier communications, such as our latest Gypsum Recyclers Forum³ in November 2019. Based on our experience with gypsum recycling models, we would like to reflect here on how the initiatives announced in the Action Plan could be most helpful to boost circularity in our industry and promote sustainable construction practices at large.

Circular practices in the gypsum industry

The gypsum industry has long been involved in the promotion of circular production processes. Gypsum being an eternally recyclable material, circularity is enshrined in our industry's DNA. The gypsum industry has been a pioneer in promoting circular business models. Since the 1980s, the promotion of industrial symbiosis through the **use of FGD gypsum**, a by-product of the **flue gas desulphurisation** of coal-fired power plants, enabled the industry to reduce the need for primary raw materials considerably. Moreover, the use of this by-product as raw material for the gypsum industry enabled to avoid a yearly 18-20 million tonnes of FGD gypsum being landfilled as waste. This important resource represents today up to 50% or more of the raw materials used in certain European countries for the production of gypsum-based products, as in the case of Germany. FGD gypsum will, however, become less available due to the progressive phase-out of coal-fired power plants in Europe. Therefore, an acceleration of circular practices in the construction sector is a priority for our industry, which will enable to decrease both our resource and carbon footprint.

¹ European Commission: "A new Circular Economy Action Plan. For a cleaner and more competitive Europe" (COM(2020)98, 11 March 2020.

² European Commission: "The European Green Deal" (COM(2019)640), 11 December 2019.

³ <http://www.eurogypsum.org/4th-european-gypsum-recyclers-forum/>

Gypsum is **fully recyclable and a “closed loop” material**. Our industry has engaged for many years to facilitate and boost the actual recycling of gypsum-based products such as plasterboards. A Life+ project “G to G – Gypsum to Gypsum⁴”, completed in 2015, demonstrated the feasibility of producing plasterboards with up to 30% recycled gypsum content, based on current available technologies and high-quality recycled gypsum. By the way some plasterboard processing plants in the Nordic countries are already achieving this result, notably thanks to a favourable legislative environment. Since then, Eurogypsum and its members have continued cooperating with the whole value chain, to address all obstacles and increase recycling rates. Furthermore, the use of recycled paper layers in plasterboard is approaching 100%.

Main obstacles to circularity / How EU action can help

As a pioneer in circularity, the EU has already an important regulatory framework to promote recycling and set a 70% **target for the recovery of construction and demolition waste** by 2020. However, the target does not differentiate between materials and gives too much leeway to suboptimal recovery practices, such as ‘downcycling’ or use of waste for backfilling practices when it could be recycled. As regards gypsum, experience on the ground shows that important volumes of recyclable waste are still sent to landfill or ‘downcycled’ into products which will not be recycled further, thus breaching the closed loop recycling model of our industry. Therefore, we welcome the Commission’s intention to **revise the material recovery target for construction and demolition waste and include material-specific fractions in legislation**.

Certain products, such as plasterboard, can already guarantee top levels of performance and safety with a substantial share of **recycled content** in the material. To increase overall levels of recycled content across the product spectrum, we believe that concrete requirements could be made for certain products, starting with public procurement, e.g. through the existing criteria “Wall Panels – Green Public Procurement Product Sheet⁵” developed by the Commission’s DG Environment, which include gypsum plasterboard wall panels.

Authorities can indeed be a driving force by introducing mandatory recycled content obligations or zero waste requirements on public construction sites.

Manufacturers of construction products have a central role to play in promoting circular practices. This is why, as in the case of gypsum, they have long implemented **models to ensure the most effective and economical supply of gypsum waste**, its recycling and integration in the production process, working together with other actors across the gypsum recycling chain. While we understand the rationale behind the extended producer responsibility (EPR) approach, we are cautious about its suitability to the construction sector. We have concerns about possible negative impacts on the investment made into existing recycling models. Furthermore, we are worried about the possible consequences such approach could have on forcing any kind of recovery due to financial motivations, therefore not necessarily favouring the most circular second usage. In the case of gypsum waste, streams which would be suitable for the production of new plasterboards could end up being ‘downcycled’ into the production of cement or for agricultural purposes – therefore breaching the closed loop approach.

The **landfilling** of valuable recyclable waste should also be limited. Too often, recyclable waste does not re-enter the production processes due to the comparatively lower prices of sending it to landfills. The lack of a harmonised approach across the Single Market also leads to the shipment of such waste to EU Member States where the costs of landfilling are lowest. A similar phenomenon towards non-EU countries is for the time being unknown in our sector but we support the Commission’s intention to address illegal shipments of waste outside the EU and we call upon national and EU legislators to coordinate further and limit similar activities within the Single Market, when they are detrimental to circular economy principles. The legal status of secondary raw materials also remains a factor slowing down the recycling of gypsum. This is why we would support **EU-wide end-of-waste criteria** for high-quality recycled gypsum waste which fulfils the

⁴ <https://gypsumtogypsum.org/gtog/gtog-project/>

⁵ https://ec.europa.eu/environment/gpp/pdf/wall_panels_GPP_product_sheet.pdf

requirements defined by the industry. Standardisation also has an important role to play in facilitating the functioning of an EU market for secondary raw materials.

A major obstacle in the quick uptake of circular practices in the construction sector is the uncertainties about the quality of the waste coming from demolition of older buildings. Construction product manufacturers have to guarantee the levels of performance and safety for their products, as required by existing standards, regardless whether they are generated out of primary or secondary raw materials. This practically hampers the use of secondary materials when it cannot be certified that their exact composition is meeting today's legal standards and the specific quality requirements. This is particularly true as regards potentially **dangerous substances** in demolition waste used for recycling. In order to avoid any risks for product and building users, but still allow for circular practices, a clear, consistent and supportive framework between chemical and waste legislation is needed, as well as an engagement and action of all players in this important raw material stream, including the demolition sector. These considerations should be reflected in the Commission's initiative on a toxic-free environment.

Avoiding dangerous substances while promoting recycling: the example of asbestos

A typical example for such dangerous substances in construction and demolition (C&D) waste is asbestos. When recycling gypsum-based C&D waste, cross-contamination of recycled gypsum with asbestos resulting from other waste materials cannot be avoided in principle. Some Member States require 0% asbestos fibre content in recycled gypsum, others implemented different limits for the presence of asbestos. Nevertheless, 0% content of any dangerous substance in recycled material is impossible to guarantee, as even in primary raw materials there are (very low) concentrations of heavy metals for example. In order to encourage recycling of C&D, as in the case of gypsum, while ensuring the highest feasible levels of safety, a **harmonised quality system** would be necessary, with a standardised analytical method combined with a **detection limit** for substances like asbestos. This only can provide legal certainty to all economic operators, certifying that recycled materials are asbestos-free by undercutting this detection limit.

We also believe that several initiatives mentioned in the Circular Economy Action Plan can support the deployment of sustainable trends in the construction sector. One of the main conclusions from the "Gypsum to Gypsum" project was the importance of accelerating and mainstreaming **deconstruction** practices, instead of demolition. The works conducted by the Commission, in close cooperation with the industry, on design for deconstruction, are a useful step in this regard. Related to this, the **separate collection of waste** at deconstruction/demolition stages is a major enabler for circular practices. **Sustainable market trends** should be encouraged: lightweight and less resource intensive constructive solutions, increased modularity of buildings, prefabrication of building elements, or even innovative approaches like reuse models, in the case of short life cycle (5-10 years) products such as partitions or ceilings.

New practices in urban development, such as the vertical extension of buildings, e.g. above existing commercial or parking areas, are also helpful to contain urban sprawling and **minimise soil sealing**. Lightweight solutions such as gypsum-based systems are particularly adequate to perform such works.

Digitalisation must also play a part in facilitating sustainable and circular practices, providing easy ways of storing and communicating product information throughout the product's and building's lifecycle. The concept of building passports or digital logbooks for buildings is particularly relevant in this context.

Industry and policy-makers have invested time and money in developing mechanisms to promote **life-cycle thinking in construction**; the most appropriate tool being Environmental Performance Declarations (EPDs) drafted on the basis of standard EN 15804+A2. We believe these instruments can be very helpful and should be used to inform the market, without distorting it. It is important that they are considered in key upcoming initiatives such as the Strategy for a Sustainable Built Environment or the revision of the Construction Products Regulation. However, fairly assessing a product's environmental performance when its real impact will depend on proper integration into systems and construction works is not an easy task. Therefore, a cautious approach should be taken when linking sustainability performance and legal requirements for the marketing of construction products.

Circular practices can be highly beneficial to Europe's construction sector and economy at large, and should in our view be duly considered in the **EU Recovery Plan**. The Circular Economy Action Plan provides a good basis for this approach, although some of the contained initiatives may need to be reassessed in light of the Covid-19 crisis' impact on the sector. Generally, past and existing achievements from the industry should be properly considered before introducing new measures, and the potential impact of the latter carefully assessed.

Eurogypsum thanks the Commission and other EU institutions in advance for taking into account our remarks when rolling out the Circular Economy Action Plan. We look forward to using our expertise and impact on Europe's built environment with a view to contributing to positive changes towards a more circular society.

Eurogypsum is a European federation of national associations of producers of gypsum products (i.e. plaster and plasterboard). It is one of the few fully integrated industries (from cradle to cradle) within the construction products field. The companies which mine gypsum also process it and manufacture the value-added products and systems used extensively in construction and other industries.

With a turnover of EUR 7 billion, the European gypsum and anhydrite industry operates some 160 factories and 154 quarries and generates employment directly to 28,000 persons and indirectly for 300,000 persons. The Gypsum industry provides jobs to 1,100,000 plasterers and plasterboard installers. It trains around 25,000 persons per year across Europe.

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