

A NEW MOMENTUM FOR STANDARDISATION

CEMBUREAU looks forward to a functioning standardisation process facilitating the deployment of low-carbon cements

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CEMBUREAU calls for:

- 1. The development of new harmonised standards supporting low-carbon cements.**
- 2. The adoption of a dual approach keeping the current system whilst introducing in parallel a complementary, more performance-based system. Such a dual approach should further facilitate the standardisation of new low-carbon products, whilst ensuring the safety and reliability of cements put on the European market.**

Cement standard at the forefront of European harmonisation

For the benefit of citizens, the development of new harmonised standards is necessary.

CEMBUREAU is in line with the European Commission in that the cement standardisation activities must support the green transition. The European cement standard EN 197-1 has provided the backbone for construction as the first harmonised standard developed in the EU 40 years ago. As outlined by the European Commission, there is “*a need for the development of harmonised standards supporting low-carbon cements given the significant emissions-saving potential.*”¹

The current framework is known and used all over the world, often adopted as such, sometimes as the basis for standards in other countries outside the EU. To preserve its sovereignty on strategic construction products such as cement, Europe must rely on a robust and well-functioning standardisation system. Rapid and efficient standards approval processes are needed to bring low-carbon cements to the market.

Decarbonisation and standardisation

Decarbonisation is underway but improvements in the functioning of standardisation system are needed for an accelerated transition.

One of the levers identified in [CEMBUREAU Roadmap](#) to reduce the cement carbon footprint is to replace part of the clinker by cement constituents other than clinker. Low-clinker cements are possible in the existing cement standards and are already available on the market, but they face hurdles and scalability issues (due to the limited availability of clinker substitutes) as well as technical limitations as not all cement types are adapted to ensure durability for all exposure classes.

Builders, contractors, public administration, and citizens need certitude that cements used in concrete, and concrete in construction meet the requirements for buildings and infrastructure works in all EU different climatic and seismic environments. EN 197 standards have proven over time a balance between requirements on constituents, cement compositions and performance requirements (mechanical, physical, chemical and durability).

CEMBUREAU has been long calling for a well-functioning standardisation process. Unfortunately, the Mandate M/114 concerning the standardisation work for cement is no longer up to date and the Commission has not been able to revise it in the last 8 years. As a result, the EU cement industry supported the work of CEN/TC 51 ‘Cement and building limes’ to shift through a non-harmonised

¹ COM(2022) 31 An EU Strategy on Standardisation - Setting global standards in support of a resilient, green and digital EU single market

route to speed up the way to have the new standards EN 197-5 (Portland-composite cement CEM II/C-M and Composite cement CEM VI) and EN 197-6 (Cement with recycled building materials) available for the placement of new low-carbon cements in the market.

The Construction Product Regulation (CPR) Acquis process for cement has started and will result in the elaboration of a new Standardisation Request to replace the M/114, which is urgently needed to:

- “Reshape” the existing cement standards to the legal obligations of the CPR and the essential characteristics of the cements.
- Keep the parts of the standards which have demonstrated their efficiency and introduce more flexibility for new products, always relying on uncompromising technical requirements.
- Allow the harmonisation of the standards EN 197-5 and EN 197-6.
- Develop new standards to place other low-carbon cements in the EU market.

The single market needs

A dual approach is fundamental!

Cement and cement-based products standards have been developed to be used *in tandem* with their respective design and construction standards. Eurocode 2 (design), EN 13670 (execution), EN 206 (concrete) and EN 197 (cement) are intrinsically linked to ensure the structural safety, fire resistance and design life of a concrete building are achieved.

In view of the intrinsic relation amongst those standards, foreseen changes to existing cements should have limited impact on concrete standards to avoid disruption in the market. For new products, more challenging issues like durability and liability need to be tackled.

CEMBUREAU therefore underlines that:

- It is important not to jeopardize the current system and create cascading problems for traditional products (concrete, mortar), national regulations on construction products, and building regulation processes that cite cement standards.

By providing definition of cement type classes based on their composition with a long list of proven constituents, the standards enable downstream performance-based concrete design. It is unrealistic to delete from standards the cement constituents' specifications and cement composition as this information is requested by the customers and by other legal provisions.

- It would be essential to introduce a complementary, more flexible route in the standardisation request to define new products that can be standardised, in line with progress of adequate technical assessment.

Typically, cement constituents have different contributions to concrete performance depending on the individual nature of concrete works (temperature conditions, production method etc.), exposure conditions (indoor/ outdoor/ aggressiveness/ structural), their combination with other concrete constituents (aggregates, concrete additions, chemical admixtures), strength or sustainability requirements.

To maintain the high level of quality and safety in cements, the acceptance of new cement constituents into cement standards needs to be based on robust technical information. This complementary standardisation route should be based on the reinforcement of the constituents' qualification and on additional specific requirements (performance-based) of the cement depending on the intended use.

That is why CEMBUREAU believes that the transition towards full performance approach would require time to be implemented in the construction value chain and that a **dual approach** for standards would accelerate decarbonisation without disrupting the construction market. **Our view is that (1) the current system should be kept (2) while in parallel a complementary approach, more performance-based, is introduced to facilitate the standardisation of new products.**
