

ECODESIGN FOR SUSTAINABLE PRODUCTS REGULATION

Position paper on product priority consultation

Reference: *Response to the Public Consultation on new product priorities for Ecodesign for Sustainable Products Regulation (ESPR)*

The European ceramic industry, represented by Cerame-Unie, recognises the European Commission's efforts to deliver on the commitments to make the EU regulatory framework fit for a sustainable future and to ensure that products placed on the EU market become sustainable. While supporting the principles underpinning the ESPR, we would like to present a ceramic industry's perspective on the JRC draft preliminary study on new product priorities published in January 2023, which identifies ceramic products in the end-use priority products.

I- General comments

The JRC study rightly distinguishes between construction products on the one hand and between end products and intermediate products on the other.

Unfortunately, it fails to distinguish between the different ceramic sectors, as is done very clearly, for example, in the BREF Ceramics to which the study refers.

Construction products, according to the wording of the study, are not to be the subject of consideration. Vitriified clay pipes, expanded clay and sanitaryware should therefore not be covered by the study as construction products. Furthermore, the distinction between unfinished and intermediate products is not clearly drawn, so that ceramic products are uniformly reported as a "finished product", i.e. like a "product group" in the sense of the ESPR.

In addition, the aspects of the production of various ceramic sectors and their products, including those that are not considered in the context of the ESPR study, are mixed up under the category "ceramic products" and correspondingly erroneous conclusions are drawn. For example, consumption data from abroad is used. This gives a wrong picture of the European industry. Furthermore, the particularly long service life of ceramic products is completely disregarded in the assessment of environmental and climate impacts; the impact of "ceramics" and its very diverse products is low and does not justify the sectors to be shortlisted.

As a consequence, we highlight the following points:

- **No group approach for ceramic products!**

The ceramic industry covers a large variety of products, from intermediary products to



end-use products, with a wide range of applications: from construction to consumer goods, industrial processes and cutting-edge technologies. Due to their diversity and various applications, **ceramic products are not a product group** according to the definition¹ of ‘product group’ in the ESPR proposal by the European Commission.

- According to the JRC draft technical study, end-use products are ‘products that are sold directly to the consumer and are ready for their intended use’ and intermediate products are ‘placed on the market as final products but require further manufacturing and/or assembly processes before being ready for use as end-use products’ (p.6). **A distinction should be made between ceramic end-use products and ceramic intermediate products.**
- Ecodesign performance requirements need to be properly adapted to the specific product category, after an in-depth impact assessment and involvement of the industry.
- **Consistency of ESPR proposal with other important pieces of EU legislations** (e.g. CBAM, BREF, Construction Products Regulation (CPR), EU Taxonomy, EU-ETS, competition law) should be strictly ensured to avoid double legislation and administrative burden for companies.
- **Products whose main applications are in construction should only be covered by the CPR, and not the ESPR.** Setting up conflicting regimes under these regulations would create significant legal uncertainty and additional burdens to manufacturers without any demonstrable added value.

II- No double legislation for construction products

A clear assignment of construction products to the CPR is vital in order to avoid double legislation and additional administrative burden for manufacturers. The JRC study itself mentions that “construction products [...] were not addressed in this report, due to the interaction with the recent publication of the revised Construction Products Regulation [...]” (p. 5), making clear that an explicit delimitation between the ESPR and CPR is important. The environmental performance of construction products will be covered under the revised CPR and is already covered under the life-cycle assessment specifically developed for construction products, the Environmental Product Declarations (EPD), whose principles are set out in international and European standards (EN 15804).

However, we have noticed that **ceramic products with a use related to construction and covered in the scope of the CPR have been identified as potential product priorities in the JRC draft technical study, i.e. sanitaryware, expanded clay aggregates, vitrified clay pipes.**

→ **Cerame-Unie requests that sanitaryware, expanded clay aggregates and vitrified clay pipes are excluded from the list of ESPR potential product priorities in the JRC**

¹ ESPR proposal – COM (2022) 142 final - art. 2 (5) ‘product group’ means a set of products that serve similar purposes and are similar in terms of use, or have similar functional properties, and are similar in terms of consumer perception



technical study; we request that Ecodesign requirements for these products are laid down under the CPR only.

→ **Overlapping requirements between the ESPR and the CPR might lead to conflicting rules for the same product. Transparency, clarity, and simplicity should drive the bringing to market of construction products.**

1) Expanded clay

We object to the inclusion of expanded clay in the ESPR priority list for the following reasons:

→ **Expanded clay is already covered by the CPR Regulation**

Expanded clay is a well-proven, high quality, efficient and durable lightweight aggregate widely used in the construction sector. The vast majority of expanded clay applications are in construction: internal and external walls, ground floor, intermediate floors, and premixed mortars. However, some of these applications are also end-uses (embankment fillings in road constructions²). The overall market for construction applications of expanded clay is roughly 80%. Therefore, the non-construction end uses of expanded clay would represent less than 20% of the overall European market. We contest that this limited use alone would meet the prioritisation requirements set in page 21 of the JRC Report (“ (...) combination of its (the product’s) market relevance, its environmental impacts and the existing related regulations deserve a deeper analysis).

→ **Embankment fillings are incorrectly identified as non-construction application**

The selection of expanded clay as a priority product for the ESPR for its non-construction products is based on the assumption, among other elements, that its use as embankment filling for road construction, would be a non-construction application. However, it is clear from a reading of the CPR Regulation that this application which accounts for a considerable share of the expanded clay market, is covered by the CPR Regulation³.

→ **The limited applications of expanded clay beyond construction are mainly Business-to-Business.**

In addition to the wrongly identified embankments filling application, the other non-construction applications listed in the JRC report are: loose material in garden and landscape design, substrates for green roofs, filters and drainage fillings. With the exception of loose materials in gardens, the other applications are not end products according to the JRC definition. Substrates for green roofing are sold to professional users, and not individual consumers. Moreover, in most countries, even loose materials sold for gardens are sold to professional users, and not to the final consumer.

²² Incorrectly identified as non-construction application in the JRC report.

³ Article 2.1. CPR: ‘construction product’ means any product or kit which is produced and placed on the market for incorporation in a permanent manner in construction works or parts thereof and the performance of which has an effect on the performance of the construction works with respect to the basic requirements for construction works



→ **Technical standards for expanded clay products currently being revised include circularity aspects**

Standards covering expanded clay have been developed and are currently being revised as high priority in the CPR Acquis process. In particular, standards 14063 (“Thermal insulation products for buildings - in-situ formed expanded clay lightweight aggregate products”) and 15732 (“Standardisation in the field of thermal insulating materials and products for application in buildings, including insulation for installed equipment and for industrial insulation, covering: terminology and definitions, list of required properties with regard to different applications, methods for the determination of these properties, sampling procedures, conformity criteria, specifications for insulating materials and products, marking and labelling of insulating materials and products”) are listed as priority number 6 in the CPR acquis process, set to start being revised in 2023. Putting expanded clays under the ESPR would therefore only risk delaying and creating overlaps with the process of standardisation which has already been set in motion.

2) Vitrified clay pipes

We object to the inclusion of vitrified clay pipes in the ESPR priority list for the following reasons:

An essential part of municipal infrastructure, vitrified clay pipes transport wastewater safely and effectively away from buildings and roads and on to treatment plants. Vitrified clay pipes are not typical products for end consumers and are not offered as such for them. Clay pipes are construction products that only acquire their function when they are installed as drain or sewer. They are usually installed by construction companies for public clients.

Standards for vitrified clay pipes are specified by EN 295. These product standards were developed under a mandate of the former Construction Products Directive and fall under the existing and incoming CPR. They comply with the essential requirements in the context of CE marking for placing these products on the European market.

The grouping of vitrified clay components within a large and undifferentiated ceramic group does not do the application of components justice. In the “Factsheet for Ceramic Products” (p. 102), there is no differentiated assessment of the environmental effects of vitrified clay pipes.

In the study, requirements are set for vitrified clay pipes without knowledge of the specific situation for production and use in public sewer systems.

The pipes range from 0.1 to 1.0 m in diameter, with weights of up to 2,000 kg/pipe and overall lengths of 1.0 to 2.50 m. The pipes are designed according to the various static and structural boundary conditions.

All modifications with regards to raw materials and their proportions in the product have a direct influence on the use as a buried sewage pipe.

Changes in dimensions mean that the interchangeability of components from different manufacturers is lost, to the disadvantage of the user.



The components have been European standardised since 1991.

The typical user is the public owner of the sewer network. The pipes and fittings are an essential part of the network and cannot be used alone without installation.

Performance requirements need to be properly adapted to the specific product category, after an in-depth impact assessment and involvement of the industry.

3) Sanitaryware

For similar reasons, **we object to the inclusion of sanitaryware in the ESPR.**

Sanitaryware are covered by the existing CPR, as they are recognised as a construction product and Ecodesign provisions should be laid down under the revised CPR. Removing sanitary appliances from the scope of the CPR and adding them under the ESPR scope is contradictory with the Commission's objective to improve the functioning of the single market for construction products with the revision of the CPR. This situation will create legal instability that will be detrimental for the industry. Manufacturers anticipate an increase of costs due to the necessity of additional measurements in accredited laboratories and the re-introduction of mutual recognition principles. In addition to that, the situation of sanitaryware harmonized product standards and technical specifications would be very unclear and uncertain.

III- Refractories

Refractories are a vital element for all high-temperature industrial processes. They are technologically advanced heat resistant, products that can withstand thermal and mechanical abuse and chemical corrosion at extremely high temperatures. They play a critical role in the daily operations of almost every primary sector of finished goods manufacturing.

→ **Refractories are B2B and intermediate products (around 65% of refractories are sold to the steel industry) and requires further transformation; classifying refractories as end-use products is incorrect.**

Dense refractory products are used for process stabilisation in all thermal processes between 600 °C and 2000 °C, and insulation refractory products for energy saving purposes. Refractory products are tailor-made and essential for plant safety and safety at work. For each customer sector (plant level) and each production step in these sectors, different refractory products are necessary. Therefore, refractory products are diverse and multiple: they are supplied to customers as shaped and unshaped products. The different refractory product groups (dense, insulation, shaped, unshaped) do not fulfil the criteria for a product group according to the definition in Article 2 of the ESPR proposal from the European Commission.

In this context, we would also like to draw your attention to the inclusion of yet another category of refractory products in the JRC report. High temperature insulation wools (HTIW) are included in the "Glass" product group and we understand that the HTIW industry, represented by their trade association ECFIA, will submit comments specific to this group of refractory products.



- **A one-single approach for refractories therefore does not fulfil the criteria for a product group according to Art. 2 (5). On the contrary, a product-by-product approach shall be adopted.**

With regards to the ecodesign requirements, it should be mentioned, that refractory product durability and the expected generation of waste is determined by the production processes and the production conditions at the customer's site.

For the complementary analysis on strategic autonomy in the JRC draft technical study, which takes into account critical raw materials embedded in the product group, it should be mentioned that little critical materials are used in refractory products.

IV- Tableware

- **We object to the inclusion of tableware in the ESPR as an entirety of products.**

Tableware and ornamental ware have a different purpose: the former is to be used with food, while the latter is used for decoration or as an art object. Ornamental ware should be excluded from ESPR because they are art objects, mostly tailor-made or part of a small production series. The same is true for traditional artisanal tableware products, manufactured as art, for example a decorative wall plate.

- **Consequently, when defining the product group, the Commission should exempt ornamental ware (art objects and custom-made or limited series products) from the application of whole or parts of the Ecodesign requirements.**

There should also be a further distinction regarding the usage of the product: in particular between household and Horeca tableware: the former is used in private homes and can be even handed down from generation to generation, while the latter is used in the Horeca sector (hotels, hospitals, restaurants, ...) and can have a shorter life-cycle (because of the higher usage rate).

- **We propose to distinguish between: household tableware and "Horeca" tableware as two groups of products because of different uses and life-cycle.**

Further comments on ecodesign requirements:

- Durability (technical lifetime), resistance, and light-weight design

In the case of design for use in the professional (Horeca) sector, products are made for maximum resistance to intensive use. This means that to increase the durability and the resistance of the products they also require a thick design. Having a light-weight design would diminish the technical lifetime and the resistance to stress of the product.

It should also be taken into consideration that the life cycle of tableware depends greatly on the context of use (here again the difference between Horeca and household). If not stressed by inappropriate impacts and aggressive chemicals, the technical life of the product can be of more than 100 years. Product durability should be emphasised as one of the key requirements as it is



essential to minimise the associated environmental impacts and is one of the key factor of circular economy.

- Minimum recycled content and water consumption during production

The reuse of waste materials (from the first cooking) and water in the production cycle should also be included and valorised among these requirements. The waste material from second firing (as well as molds) is reused outside of its production cycle, in other sectors. These are all factors to be taken into consideration as they are already in accordance with the principles of circular economy.

- Information requirement on how to repair the product to increase durability to avoid air pollution due to new products acquisition

This is not applicable to tableware (a product that already has a long life). Product durability should be emphasised.

V- Technical ceramics

We object to the inclusion of technical ceramics in the ESPR for the following reasons:

Advanced technical ceramics is a large group of materials which have unique mechanical, electrical, thermal and chemical properties that enable their use in a variety of applications.

Applications of technical ceramics can be found in diverse industrial sectors (e.g. the automotive industry, electronics, medical technology, energy and environment and in general equipment and mechanical engineering). In each industrial sector, the applications of technical ceramics are numerous.

Technical ceramics products are customised according to the needs of an industrial customer and each material has a specific mixture of properties. The material has to be selected according to the specific intended use.

Designed for a specific purpose according to customers requests, technical ceramics are part of an end-product and require further manufacturing or transformation (e.g. assembling). Thus technical ceramics are an intermediate product. Only parts of end products are made with technical ceramics which are designed for a specific purpose for a single customer as a B2B part. This leads to the question: Is technical ceramics placed on the market? One could come to the conclusion: it is not. It has also to be taken into account that technical ceramics are used to increase the lifetime of product.

VI- Comments to the JRC draft technical study

1) Annex 2 – screening of products (p.71)

- A production value of 26 bn EU for the ceramic industry is mentioned. We highlight that this figure takes into account all ceramic sectors, including ceramic construction products such as bricks and roof tiles as well as ceramic tiles, which are not in the



scope of the ESPR and the JRC study but represent respectively 20.86%⁴ and 31.8%⁵ of the share of the production value. All construction products together represent nearly 60 %. This figure should be corrected accordingly.

- Environmental considerations scored as high in four categories. In the environmental assessment only climate change and energy consumption scored as high. The resource depletion and air pollution should be deleted.
- The assessment is mainly based on figures of ceramic tiles which are not part of the scope of the JRC report. Therefore, the assessment is not representative.
- Policy coverage (table p. 72): Ceramic products are covered by several other legislations: EU-ETS, Food contact materials, CLP...

2) Paragraph '3.3.4 Strategic autonomy' (p.48):

The complementary analysis on strategic autonomy takes into account critical raw materials embedded in the product group. However, it should be mentioned that few critical materials are used in the ceramic industry. It is also referred to 'kaolin clay from Ukraine used for ceramic products': such raw material is only used for ceramic tiles which are not in the scope of ESPR.

3) Annex 9 - Modelling background information – table 18 (p. 259)

The JRC study provides details on the impact on "Ceramic products [end use]" in terms of consumption intensity and environmental impact. Once again, references are made to data concerning sectors which are not in the scope of the ESPR, i.e. bricks, tiles and construction products. Hence the possibility of improvement is much too high rated.

The environmental impact column refers to a dataset used for ceramic tiles. This is not relevant as ceramic tiles are out of the scope of the ESPR.

V- Comments on the ceramic products factsheet⁶

1) General comments

The study mostly refers to reports concerning ceramic products which are not in the scope of ESPR. In order to give a real picture of the sectors concerned and to ensure correct finding relevant and adapted data shall be used.

2) Water Effects

As mentioned on the Environmental impact "the amount used varies greatly between sectors and processes". Therefore, an analysis of impacts and potentials for improvement for ceramic products based only on water consumption for the production of ceramic tiles, which are not

⁴ see Ceramic Roadmap to 2050, p. 13

⁵ see Ceramic Roadmap to 2050, p. 13

⁶ JRC draft study - Annex 5 – Factsheet for Ceramic products (p. 102-109)



in the scope of the study, and water consumption for toilets during the use phase, is not appropriate.

Ceramic manufacturers re-circulate and reuse production water within the production process.

Further, process wastewater, which contains suspended solids from clay, is mentioned, also glazes and frits. For the production of refractory products, no frits and glazes are used. For a few refractory products only, clay is used as raw material. The dry method is in place.

The description of the waste water situation does not fit the production of vitrified clay pipes for the following reasons:

- there is no polluted waste water as written in the text
- the substances listed are not discharged into the sewer system
- the water consumption during production is minimal.

Improvement potential

- The impact as well as the improvement potential is low.
- The proposals for dry preparation do not fit the production technology for vitrified clay pipes
- The specifications for maximum water consumption do not match the different preparation of the clays
- The specifications for minimum amounts of recycled material do not fit the range of different components and also do not fit the basic requirements for the tightness of the pipes.

3) Air effects

Air pollution is already extensively regulated through IED and BREF process mentioned in the Study. Double regulation should be avoided. The manufacturing of ceramic products does not lead to significant emissions to the air, because the abatement techniques (both end of pipe installations and process integrated measures) are installed in order to reduce air emissions.

Improvement potential

- The requirements and measurements from health and safety at work are not mentioned.
- The requirement to use minimum quantities of recycled material shows that the production processes are unknown; the goal of reducing dust generation is not achieved.
- The information on the consumption of raw materials and energy is available in the BREF. Energy efficiency is also regulated by the Energy Efficiency Directive, the EU ETS and the BREF.



4) Waste Generation and management

For refractories, it is not possible to define a general minimum recycled content. The mentioned performance requirements can only be applied to a single product assessment. The possible content of recycled material, necessary to meet the technical requirements, depends on the product. For many products, therefore, no secondary raw materials can be used, while others tolerate a share. Refractory products are used under very harsh conditions and undergo a certain type of corrosion, which - in the worst case - will lead to a deterioration and perforation of, for example, a furnace wall or a ladle, causing an uncontrolled release of hot liquid metal.

Light-weight design contradicts the requirements for refractory products concerning plant safety and safety at work.

Improvement potential

- The potential for improvement is low. The use of the maximal possible recycled content and the internal reuse are already in place in the ceramic industry, as well as the use of secondary raw material from other ceramic manufacturers or other industries when technically possible.
- The requirement to use minimum quantities of recycled material shows that the production processes are unknown.
- The demand for weight restrictions does not fit with the static requirements of the vitrified clay pipes for the installation.

5) Climate Change

Climate Change is thoroughly addressed in the EU ETS. Double regulations should be avoided.

Moreover the JRC draft study mentions CO₂ emissions of 400 Mt/year CO₂. In fact the CO₂ emissions in Europa for all ceramic sectors are only 19 Mt/year and about 4 Mt/year for the ceramic sectors of concern.

In any case, the conclusion of the Study and the rating (“4”) of “ceramics” does not consider its extremely long service life time that leads to a positive CO₂ footprint compared to other competing materials.

Improvement potential

The impact is very low. The mentioned measures are mostly in place; therefore, the improvement potential is low.

6) Life Cycle Energy consumption

On-site energy consumption per ton of product is a confidential business information. Information on energy consumption per ton of product is not conform with EU competition law.



To achieve sintering, a broad range of firing temperatures and firing times are required. These parameters greatly vary from product to product and consequently the required energy to manufacture the product. Refractory products differ greatly in firing temperatures and firing durations. Some products are fired for several weeks, some for only a few hours. Therefore, a product-by-product approach is required.

For the performance requirements on the technical lifetime and stress-resistance of the refractory products, a product-by-product approach is necessary. For example, the lifetime of refractories in a glass furnace is 10-15 years (depending on the type of produced glass), in a cement rotary kiln approx. one year, and in a steel ladle between one and four weeks (depending on the use of the ladle). Changes in material composition or the production process always require very complex investigations to ensure plant safety and safety at work in the customer industries.

7) Material efficiency and lifetime extension

All ceramic products have proven a very long service life as history shows and a high rating in efficiency. Lifetime extension mostly depends on consumer behavior. The product itself may last decades and centuries.

Said that, the potential improvement is low and not medium. The mentioned measures are already in place in the ceramic industry.

As mentioned above, changes in the material composition or the production process of refractory products and technical ceramics require very complex investigations to ensure plant safety and safety at work in the customer industries and the willingness of the users to use a modified product.

As an example of the long lifetime of ceramic products, vitrified clay pipes have been in use for centuries and their service life is designed to be 150 or more years.

8) Proposal for ecodesign performance and information requirements

- The proposed requirements are not distinguishing between the different products of the ceramic industry.
- The requirements are proposed without any knowledge of the effects in production and the properties of the different ceramic products.
- Information requirement on “how to correctly dose additives to increase durability and avoid air pollution due to raw material extraction” (p.103). What is the purpose of the requirement? Who will benefit from this information once the product is on the market? Once the product is on the market, changing its properties is not realistic.
- Performance and information requirements: Sourcing of raw materials from certified sustainable practices: what certifications? What requirements? More information should be required for a better understanding.

Cerame-Unie Aisbl (CU) is the European Ceramic Industry Association. The European ceramic industry covers a wide range of products including bricks & roof tiles, clay pipes, wall & floor tiles, refractories, sanitaryware, table- & ornamentalware, technical ceramics, expanded clay and flowerpots.