1.2.2. ENVIRONMENTAL DECLARATIONS OF CONSTRUCTION PRODUCTS IN ROMANIA

OERCO2

ONLINE EDUCATIONAL RESOURCE FOR INNOVATIVE STUDY OF CONSTRUCTION MATERIALS LIFE CYCLE

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1. Introduction

There are three types of ecolabels that promote the lower environmental qualities of products based on its life cycle: ecolabel type I, environmental self-declarations (type II) and environmental product declarations (III). The first ecolabels are voluntary schemes that affirm the least environmental impact of a product, the next, the manufacturer performs it with or without certification of a competent authority, and the latest are verified and they establish the environmental behaviour of the product. Creating an Environmental Product Declaration (EDP) requires from companies to commit to fully disclose what is usually confidential information about how products are made. In addition, companies must perform a comprehensive life cycle assessment according to ISO 14040 standards. From this information, an Environmental Product Declaration is developed based on ISO 14025 standards. Both the EPD and the LCA must be third party verified.

Environmental declarations include information on product, company information and the environmental impact of raw material extraction, selection, acquisition, production process energy use and efficiency, content of materials and chemical substances, emissions to air, soil and water and waste management.

The methodology to establish the EPD assumes the UNE-EN ISO 14025 (Labelling Type III: Environmental Product Declarations). The environmental product declarations are related to, amongst other documents, the following:

Europe

- European initiative of Single Market for Green Products.
- *Resolution 2014/2208 (INI)* about the efficient use of resources: move towards the circular economy: "The European Parliament, (…) urges the Commission to propose, by the end of 2015, a main indicator and a set of sub-indicators about efficient use of resources, also in ecosystem services; it noted that the use of these harmonized indicators must be legally binding form 2018 and these must measure the consumption of resources, including the imports and exports a EU level, Member States and the industry, and consider all the life cycle of products and services, and has to be based on the ecological footprint methodology and measure of, at least, the land, water, materials and carbon use".
- Environmental procurement. Handbook on Green Public Procurement.
- Regulation 305/2011 of Construction Products. For the evaluation of the sustainable use of the resources and environmental impact of construction work must use the environmental product declaration, when available.

Romania

EPDs are related to national legislation via the following standards: SR EN ISO 14020:2002; SR |So/TR 14025:2005; SR EN IS0 14040:2002; SR EN ISO 14041:2002; SR EN IS0 14042:2002; SR EN ISO 14043:2003; SR EN ISO 14044:2007.

Romania Green Building Council has established procedures for EPDs to be easily integrated into the environmental certification tools such as GREEN HOMES and promotes the EPDs for point recognition in the LEED or BREEAM international certification. In the case of Living Building Challenge certification system, the Materials petal is designed to encourage a successful materials economy that is non-toxic, transparent and socially equitable. The two Imperatives directly addressed by Declare are Imperative 11 – Red List and Imperative 14 –Appropriate Sourcing.

In Romania there is no accredited body to emit EPDs and all the declarations are being issued by international entities. The National Institute for Research and Development in Buildings, Urbanism and Sustainable Regional Development "URBAN INCERC", established in 2009, is the only recognized institution to perform testing on materials and emit performance certifications.

2. The situation of EPDs at national level

Saint Goban is one of the first glass producer to have performed a complete Life Cycle Assessment (LCA) of their products in accordance with international standards (ISO 14025, 14040 & 14044). They have two types of EPDs for, as follows:

- EPD For Basic Products (Saint-Gobain Glass). The products in this category include Securit Diamant, Antelio, Miralite Revolution, Stadip and Masterglass - Decorglass.
- EPD For Processed Products (Glassolutions) such as: Climaplus Protect - Silence, Climaplus 4S - Sun, Climaplus Solar Control, Climatop.

Also, Saint-Gobain Construction Products Romania produces and sells Rigips® with EPD according to EN 15804 şi ISO 14025 RB 12,5 mm.

Holcim another relevant construction materials producer that owns eight cement kilns across the country and markets the EPD materials such as aggregates, grey cements and ready mixed concrete.

Interface is a world leader in recycled content carpet with an established market in Romania for products such as modular carpet tiles, product type 6 Nylon with GlasBac, GlasBacRE and Next

Step, Needlefelt with Graphlar.

In the case of Knauf Insulation EPD's are available for the following products: Blowing Wool; Glass Mineral Wool with ECOSE Technology; Mineral Plus; Rock Mineral Wool; Urbanscape; Wood Wool Heraklith and XPS.

Rockwool Stone Wool Thermal Insulation for buildings obtained an EPD according to EN 15804 and ISO 14025 and 3rd party verified ROCKWOOL Group EPD rules and LCA model.

Gutex is produced in Germany and sold and ecological insulation on the Romanian market by Natural Paint SRL. The natureplus seal of quality and the EPD provides proof for the biological safeness and sustainability of the insulation products manufactured by GUTEX. Further evidence is the "very good" score received from ÖKO-TEST, a consumer magazine for ecological products.

Other companies that offer EPD s for their insulation products are as follows:
- Ytong Energy Plus certified Cradle to Cradle, Xella;
- Styronite certified by the Institut Bauen und Umwelt;
- RHEINZINK offers EPDs acording to ISO 14025 Tip III şi EN 15804 for the following product lines: PATINA LINE, PROTECT LINE şi INTERIEUR LINE and Cradle to Cradle for Patina line;
- Hempcrete - carbon negative concrete, Hempflax (produced and sold in Romania);

3. Conclusions

The Romanian market offers a small range of choices regarding EPD products. However, the importance of EPDs is increasingly higher and encouraged by the evolution of green building certification market and companies are compelled by both demand and competition to promote greener and better products, even if the legislation is not very supportive in this respect.

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