



- CFJ Article January 2013 Environmental Certification and EPD's

There is a danger in embarking on a technical article such as this that we may disappear under a deluge of names of regulations and standard numbers. I will try as much as possible to avoid this in the interests of keeping the reader awake until at least the last paragraph.

In the first of these articles I suggested that leaving environmental claims to the marketing people had resulted in confusion and to considerable cynicism about green claims. For various compelling reasons governments and corporations are insisting on improved environmental performance from buildings and the products used in their construction and fit out. BREEAM and The Code for Sustainable Homes, LEED and the SKA ratings schemes require accurate environmental data and this need for credible technical information to support commercial bids is increasing. What then is the way ahead?

Is regulation the answer? Flooring products come within the European Construction Products Regulation 2011 and these require manufacturers across the EU to show "sustainable use of natural resources." Should there then, for example, be limits placed on operational and embodied levels of carbon in products or on any potentially toxic content? While regulation has advantages in terms of forcing people to act and thus making product selection easier by removing unacceptable options, the rules have to be workable. The devil lies in the detail and this particular devil is a really tricky fellow. Given that environmental science is evolving rapidly and that building regulations are looked at only once every three years, any new basic environmental regulations and guidelines are unlikely to be available in less than 10 years. They may even have been superseded by new market demands as soon as they appear.

In addition although European Regulations and testing requirements are designed to set harmonised standards across the EU, this doesn't appear to stop an individual member country going its own way with a particular issue it isn't happy about. This has happened for example with potential harmful emissions from flooring products. Germany has set the bar much higher than the European standard for VOC's which also meets the BREEAM requirements. Germany insists on individual testing of products to their own standard regardless of any testing to EU standards and possession of the CE marking that the manufacturer has in place. This is now the subject of a court action with the EU Parliament having decided that such action is a barrier to trade. I suspect that the Germans will lose the case but that the VOC standard will be set at the higher German level across Europe.

A much more promising approach than regulation is the development across Europe of Environmental Product Declarations – EPD's. These are formal documents that are produced to a

standardised methodology under EN15804. These will provide consistent data on the environmental impacts of construction products or systems throughout their life from raw material to manufacture, installation and use, demolition, waste and recycling phases – based on powerful Life Cycle Assessment (LCA) software tools. EPD's are primarily designed to allow specifiers to compare products and systems and to quantify their potential to damage the environment through impacts such as climate change, which have been agreed internationally under so called Product Category Rules (PCR). Like regulation this process will take several years to implement. However a major advantage is that EPD's offer a means to set target environmental impacts for whole buildings, based on the cumulative sum of EPD data. Unfortunately the EPD's that are currently available are difficult to comprehend – some run to over 100 pages – and are not therefore a particularly useful basis for comparisons even by experts. Put simply they do not provide a practical basis to compare “apples with apples.”

Flooring companies in the UK have some advantages. Many products have been assessed under the BRE Environmental Profile Methodology and are therefore already in possession of a currently valid, and mercifully brief, ISO 14025 (Type 111) EPD. The BRE EPD is recognised as the mother of EPD's across Europe and possession of this is likely to become more useful commercially without the need for much further expense. BRE report on more environmental impacts than required under ISO 14025, although under EN15804 these will increase and the BRE scheme will evolve in line with this. However, in my view the most important advantage of the BRE Environmental Profile is that it evaluates the total impacts reported in the EPD and gives them a numerical value and rating summary. This is expressed numerically in the form of Ecopoints and a “green guide” rating on a scale of A-E. Therefore a product which has a BRE EPD may be readily compared to other products assessed under the same system. This is the main objective ISO 14025 labels of this type and is, in my view a major advantage for BRE over other European providers of EPD's. The Ecopoints approach also lends itself to the calculation of the environmental impacts of whole buildings. Innovative new software from BRE and IES (“Impact”) includes EPD data on many construction products and building systems and is soon to be launched. The software is designed as a plug in for the revolutionary BIM software which will doubtless change the future of architectural design and specification globally.

While EPD's are a step forward, there is still an important place for Eco-Label schemes. These provide independent confirmation of green credentials. They look at LCA and EPD data and match it to their own stringent criteria for products which they classify as sustainable and safe. Although these are voluntary labelling schemes, which differ widely from each other, there are a number of well established eco labels across Europe that are widely respected and which influence major buying decisions. Among them is the EU Ecolabel with the daisy logo, the Scandinavian ecolabel with the Nordic Swan, and national labels such as the German Blue Angel and the Austrian Umweltzeichen.

In summary this is all very complex and unlikely to become simpler for quite some time, but come it will and it will affect us all in the industry. It may be helpful to draw a comparison with food labelling. This was first regulated for across Europe in 1979 and these rules have been subject to almost annual revision. From the early days when manufacturers were keen to extol the sometimes dubious health claims of their food (a Mars a day helps you work, rest and play!) we now have standard nutritional data on every item of packaged food that most customer are familiar with.

That data is like the EPD for food. It gives information but doesn't interpret it for you so further assistance is necessary if you are to compare it and decide if it is healthy. The latest proposal is for a traffic light scheme which removes the need for scientific understanding and conveys a simple message -just like the eco-labelling schemes for construction products. With food it will be simple. If it has a red light avoid it!! I suspect that in 10 years flooring will have something similar.

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