

**Comments of the European Insulation Platform (EIP)
on the
Study on Amended Working Plan under the Eco-design Directive – draft
reports on tasks 1, 2, 3 (18/07/2011) and task 4 (24/08/2011)
Methodology for Ecodesign of Energy-related Products - MEErP 2011,
parts 1 and 2 (08/2011)
Evaluation of the Ecodesign Directive – first progress report (20/04/2011).**

The EIP has taken note of the above mentioned draft reports.

General comments:

- The EIP appreciates that the scope of the work packages is substantial, which limits the time available to investigate the peculiarities of each product group.
- The EIP considers that the current approach to the implementation of the revised Ecodesign Directive is incoherent: on the one hand, the new work programme is being developed without having finalised the assessment of the current legislation, and on the other hand the new MEErP methodology -instead of being in place before hand- is being developed, at the same time as the work programme.
- The EIP reiterates its position that the Ecodesign methodology is not adapted to intermediary construction products such as insulation products. If comparisons are done for products as different as PU / EPS / XPS, mineral wool, wood fibre or sheep wool, a common functional unit is required. Units like kg or m² are not applicable, as each product has a different weight / density and thermal performance. The insulation industry and, in fact, the whole construction industry has therefore agreed to assess product performance at the building level. The product-related approach adopted in the draft Ecodesign work programme will not allow the identification of the best design option for a specific building design taking into account the whole life cycle impact for these solutions.
- The building as a holistic entity uses energy and this comes from a system that includes insulation, but is also impacted by ventilation, heating system efficiency, lighting efficiency, controls etc. Because of this, the building as a whole should be considered, especially for new build. The potential savings in this area are addressed by the EPBD and national regulation. The Ecodesign directive is not complementary in this area, only confuses the market, adds administrative burden to the producers, and hinders rather than stimulates investments in better insulated buildings.
- From this prospective, the development of Ecodesign implementation measures for buildings could make sense. This would also be in line with the development of an Ecolabel for (office) buildings.
- The EIP supports efforts to increase the sustainability of buildings based on the selection of the best performing products for a given building design. Consequently, the EIP associations publish the environmental impacts of manufacturing and disposing of insulation products using the TC350 standards (EPDs for use at the building level only). The associations also make publically available third party test results regarding emissions of dangerous substances.

Conclusions based on incoherent methodology:

- The methodology applied in reports regarding Tasks 3 and 4 (work programme) is fundamentally flawed in the case of thermal insulation products. **The improvement potential calculated in the Task 4 report refers to better insulated, i.e. more efficient buildings. This is however not related to the saving potential realised by introducing potential Ecodesign requirements for insulation products.** Decisions regarding the insulation level of buildings are based on national / regional regulations and decisions by investors, contractors and architects.
- Logically, the proposed “areas of particular environmental relevance” should be linked to the improvement potential, in this case, contribute to saving energy in buildings through better insulation. This link is however completely missing and progress could not be measured.
- There is no indication as to how much the proposed “areas” would improve the life cycle performance of insulation products. The amount should be negligible compared to the energy savings and thus not justify additional certification costs. This is in contradiction to article 15.4a.
- The conclusions do not comply with the provisions of article 15.2c of directive 2009/125/EC:

The product shall present **significant potential for improvement** in terms of its environmental impact without entailing excessive costs, taking into account in particular:

(i) the **absence of other relevant Community legislation** or failure of market forces to address the issue properly; and

(ii) a **wide disparity in the environmental performance** of products available on the market with equivalent functionality.

- The Task 4 report (work programme) uses a graph from a submission of the European Insulation Platform that shows differences in impacts levels. Whilst this correct, it should have been explained that **substitution of one material or product by another one is often not possible** due to specific technical product properties and end-use requirements. Furthermore, within one material group, different variations of that product exist to respond to specific end-user needs. Furthermore, the report omits to clarify that these disparities are also partially due to different national energy mixes used for the calculation of national EPDs (for example: coal versus nuclear).

The following procedure must be applied to determine disparities in environmental performance

It can only be established at the building level whether there is a “wide disparity in the environmental performance”. First of all, it must be determined whether a product is “fit for use” in a given end-use application. In a second step, it has to be determined how much of each usable insulation product is needed to meet design requirements (U-value) and what are the knock-on effects of material choices on the overall building performance (weight of the insulation layer and effects on the building structure, thickness of the insulation layer and effects on roof size, fixing devices, studs, window boards etc.). Only when this is done, can one compare the overall environmental impact of the insulation (including related material use caused by insulation product choices). This has to be done for each building design solution, as best and worst performers will vary according to end-use applications.

All available studies show that disparities in the environmental performance of insulation products are relatively small when measured at the building level. In many end-use applications, they will be within the statistical error margins of 10-15%.

- **No evidence was provided that relevant environmental issues are not already addressed by Community legislation or market mechanisms.** It is therefore unclear what the “complementary” function of the Ecodesign directive could be, given the fact that it should focus on “significant” impacts over the product life cycle. As will be demonstrated further down, environmental concerns are already covered in a comprehensive manner by other instruments.

Proposed “areas of particular environmental relevance” not relevant in practice

- The **R value** does not offer any improvement potential as it is a function of thermal conductivity and thickness. One can achieve any R value with any material (even concrete). The insulation manufacturer supplies his products based on client orders. The client may be an architect, a contractor or a wholesaler. Ecodesign cannot impose certain R-values on the manufacturer. Furthermore, in many applications (i.e. refurbishment), existing structures impose thickness restrictions on the material. This leaves the choice to either accept a lower R value or opt for products offering a lower thermal conductivity. Again, this decision is out of the control of manufacturers.

National regulations never stipulate R-values for insulation products but many of them fix minimum U-values for building components. Others set minimum overall performance requirements for buildings ($\text{kWh/m}^2/\text{a}$). In that case, it would be even more difficult to measure progress.

The inappropriateness of using the R-value as indicator for the environmental performance of thermal insulation products can be illustrated by the following example: In certain applications, two cross layers of insulation $R=3$ are installed instead of one single layer of $R=6$ with a view to reducing the risk of thermal bridges. Hence, in those cases, the overall thermal performance is improved although the R-value of the individual insulation products is lower.

The U-value of a component is determined by the insulation material, but also by the thermal resistance of other construction products such as bricks. The latter also claim a certain thermal resistance (R-value). Hence, one must look at the performance of the whole component.

- **Emissions of hazardous substances** are covered by ER / BWR 3 of the CPD / CPR. The test standards are in place at international level (ISO 16000-9). As regards the European standards mandated by the European Commission and developed by CEN/TC351, the robustness testing phase is underway. In parallel, the Commission develops technical emissions classes for construction products in contact with indoor air.
Many product groups / manufacturers already publish emission data. In countries with indoor air emission schemes (France compulsory; Germany, Denmark, Finland voluntary), practically all insulation materials achieve the best class. Ecodesign could add little to this ongoing process. It goes without saying that all insulation products must respect REACH requirements. Where justified by risk assessments, substances are subject to specific restrictions.
In countries where specific requirements exist for construction, practically all insulation products achieve the best class.
- **End-of-life treatment** is indeed an issue all insulation products are faced with. However, this is already covered by European legislation through the Waste Framework Directive. This stipulates that 70% of construction waste needs to be recycled or recovered by 2020. The clients of the insulation industry are therefore increasing pressure with the view to obtaining products meeting the requirements of this directive. It can be assumed that most insulation products put on the market today can be recycled provided they are not contaminated in the use phase. The ratio should be even higher in 50 years, i.e. at the end of the life of insulation products installed today.
However, recycling or recycled content are not goals in themselves, in particular for products with a long service life. Environmental policies must aim at reducing the overall environmental impact of buildings over their life cycle. This requires an analysis of the impacts of different end-of-life scenarios such as recycling, recovery, waste-to-energy and landfill. If small waste

quantities have to be shipped over hundreds of kilometres to a recycling plant, this option may turn out more environmentally harmful than the waste-to-energy scenario.

Very importantly, the impacts of different end-of-life solutions are included in Environmental Product Declarations (EPD). This allows the specifier to make a sound and informed choice comparing the different options available at the building level.

Lack of coherence with other European instruments

The study does not refer to the GPP criteria developed for insulation products. Neither does it take account of the obligations of manufacturers regarding dangerous substances derived from the CPD / CPR including those defined in the product mandates.

Furthermore, it should have been investigated to what extent REACH and the CLP regulation cover all relevant aspects relating to hazardous substances.

Instead, reference is made to a private green label scheme for a specific insulation application. To the best of our knowledge, this label is not used in practice. We regret that eco-labels are extensively quoted in this report. The insulation industry fully supports efforts towards sustainability, but we object to references made to (private) eco-label criteria, as they are often decided by trade-offs between various stakeholder groups, rather than based on a sound scientific underpinning, i.e. life cycle assessments and risk analyses carried out according to standardised methodologies. National or regional eco-labels, to which the report makes extensive reference, are influenced by local market conditions which are not necessarily relevant for the entire EU.

Other comments regarding the Task 4 report relating to the Work Programme:

- **Regulation on substances that deplete the ozone layer EC 2037/2000:** The use of ozone depleting substances has been banned for foam insulation products between the end of 2001 and the end of 2003. In many countries, the foam industries proactively phased out ODS use well ahead of that date (mid nineties). Hence, no insulation product put on the market today is allowed to use ODS.
- **CPR - Construction Products Regulation (305/2011/EC) replacing the Construction Products Directive 89/106/EEC, 93/68/EC, Reg 1882/2003:** Reference should be made to essential requirement / basic works requirement 3 on health and environment. The reference should also explain how this requirement is implemented at product level through product mandates.
- **Ecolabel - European Union Ecolabel Regulation 66/2010:** To the best of our knowledge, insulation is not included in the work programmes for 2011, 2012 and 2013. This should be checked again. The title of the table is “Non-exhaustive list of product groups ranked by environmental priority order for ecolabelling with priority assessment”. That table is not a work programme.
- **Table 62 Consideration of other relevant community policies:** Insulation products are covered by ETS and will be covered by the F gas regulation. The CLP Regulation and the waste framework directive should be added to the list.
- **As to chapter 1.4.1.1,** CEN/TC350 has approved two highly relevant standards for the assessment of the environmental performance of buildings: prEN 15978 Assessment of environmental performance of buildings - Calculation method and prEN 15942 Environmental product declarations - Communication format business-to-business. A common European assessment tool is therefore now available.
- **Chapter 1.4.1.1 - Regarding Subtask 4.1 - Other environmental impacts:** As outlined above, insulation products are extensively covered by REACH, CLP, CPD / CPR (with ER/BWR3 and related CEN/TC351 standards) and the Waste Framework Directive. The EIP disagrees to the

“positive” judgement, as no evidence could be presented that current legislative requirements do not already cover all relevant aspects. The judgement should be “negative”.

- **Chapter 1.4.1.1 - Regarding Subtask 4.2 - Suitability for other complementary measures:** The judgement should be “neutral”, as it could not be demonstrated that other complementary measures could significantly improve the life cycle performance of buildings.

Brussels, 8th September 2011