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GREEN PUBLIC PROCUREMENT
Comments on the Window Product Sheet & Background Report
19th of August 2009

1. INTRODUCTION

The Building Group of the European Aluminium Association (EAA) speaks on behalf of the leading companies developing and producing aluminium building systems[1] and flat aluminium building products[2].

The European Aluminium Association is an Associated Member of CEPMC, the Council of European Producers of Materials for Construction.

We fully support green public procurement initiatives promoting the development and construction of more sustainable buildings.

However, we cannot support the development of technical specifications for the construction products. This overlaps existing European Legislations such as the Energy Performance of Buildings Directive and activities of the CEN TC 350 "Sustainability of construction works". Furthermore, it is conflicting with some national building codes.

We participated to the first round of consultation in 2008 and we thank the Commission for having taken several of our comments into account. However, the latest version of the Window Products Sheet and Background Report still fails to address the issue properly.

2. KEY COMMENTS

2.1. A UNIQUE U-VALUE RECOMMENDATION ALL ACROSS EU IS NOT ACCEPTABLE

Local and regional climatic conditions must be taken into account to define minimum performance requirements for thermal transmittance (U-value), solar heat gain (g-value) and other parameters, simply because it is their combination that determines the energy performance of the product.

The product sheet and background report recommend taking local and regional climatic conditions into account to award points related to the g-value and air leakage factor but they set a unique maximum U-value all across Europe (2.0 in core criteria and 1.5 in comprehensive criteria). The maximum U-value should also be set based on local and regional climatic conditions, like it is done already in many Members States.

[1] Alcoa Building & Construction Systems, Alumil, Metra Sistemi, Hydro Building Systems, Reynaers Aluminium, Sapa Building System, Schüco
[2] Alcan Composites, Alcoa Building & Construction Systems, Hydro Rolled Products, Novelis

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Furthermore, asking the same U-value all across Europe will distort the competition, because southern Europe manufacturers are not used to producing windows suited for northern climates and vice-versa. In other words, many SME's will be endangered.

2.2. EXISTING EU BUILDING LEGISLATIONS AND STANDARDS ARE MORE RELEVANT THAN ECOLABEL(S) TO VERIFY COMPLIANCE

Hundreds of European harmonised standards (hEN's) have been developed to support the implementation of the Energy Performance of Buildings Directive (EPBD) and the Construction Products Directive (CPD) while only Nordic eco-labels exist for construction materials with questionable success.

In the product sheet and background report, it is true that no eco-labels cover all climatic regions for Europe. However, it is misleading to say that none of the existing standards covers all climatic regions of Europe. All hENs are by definition applicable all across Europe but they do not include performance targets because these are the responsibility of the Members States.

Therefore, the best way to verify U-value, g-value and other energy efficiency relevant parameters is to refer to the declaration of performance attached to the CE-Mark according to the Construction Products Directive.

2.3. GPP CRITERIA FOR THE WHOLE BUILDING SHOULD PREVAIL

2.3.1. ENERGY

As pointed out in the background report, the use stage is the most relevant one for energy efficiency.

The EPBD is based on a holistic approach which needs to be safeguarded; and attempts to set requirements at building components level might not lead to the best possible choice for the energy efficiency and cost optimisation of the building as whole. This problem is called sub-optimisation.

Therefore for new and existing buildings undergoing major renovation it is crucial to set performance targets at the level of the complete building or at the level of the building unit undergoing the renovation (e.g. an apartment).

For renovation of existing buildings falling out of the definition of "major renovation", there might be a case for setting minimum performance requirements at components level, however this would be better addressed in the framework of other national legislations that fit to local and regional climatic conditions.

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2.3.2. ENVIRONMENT

As pointed out in the background report, LCA is the most innovative approach to understand the environmental impacts of a product during its life cycle.

Environmental Product Declarations (EPDs) are the best way to communicate LCA results of building products and can be used as building bricks to assess the overall environmental performance of buildings. Selecting and weighting a few environmental impact categories for a single building product to create an eco-label, makes no sense from an environmental point of view. All producers of construction materials regrouped under the CEPMC umbrella are opposed to eco-labels for building products.

Further info: CEPMC position on Eco-labeling

CEN TC 350 is presently developing a set of standards to assess the sustainability of construction works, including standards for EPDs. ISO standards for EPDs do already exist (ISO 14025 & ISO 21930). Based on ISO standards, the European Aluminium Association started working five years ago and offers a web-based application to window manufacturers allowing them to generate their own EPDs. The EPDs generated by this software also give environmental results according to the French Standard NF-P 01-010, that should soon become compulsory for Public Procurement in France.

COMPREHENSIVE GPP criteria could therefore be replaced by the requirement of an EPD for any building product to be used in a public building, as it will soon be the case in France.

2.4. LIFESPAN CONSIDERATIONS ARE MISLEADING

The statement that aluminium frames would have a shorter life than frames made of some other materials is wrong. Aluminium is naturally protected by a thin layer of aluminum oxide (alumina) that “passivates” its surface and protects it from atmospheric corrosion. The first aluminium applications in buildings are now more than one century old and still in perfect condition. Aluminium does not age when exposed to UV rays.

In the absence of scientific evidence, the GPP criteria should not quote any lifespan figure but, should a ranking be made, aluminium would certainly be the one with the longest lifespan.

3. DETAILED COMMENTS

GPP SHEET – 1. Definition and scope

See our comments about standards in section 2.2, second §.

GPP SHEET – 2. Key Environmental Aspects

The first sentence should better be modified as follows:

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*"The key environmental impacts of windows are linked to thermal efficiency in terms of ~~temperature lost~~ **energy exchanges** between the temperature-controlled interior of a building ~~to~~ **and** the outside world, estimated to be an order of magnitude (ten times) greater than the energy required to manufacture a window."*

GPP SHEET – 3. GPP Criteria for Windows

"U-Value of no higher than 2.0 W/m^{2}K" & *"U-Value of no higher than 1.5 W/m^{2}K"*:

- See our comment in section 2.1

"The frames shall be efficient with sufficient thermal bridges built…":

- We guess you meant just the opposite i.e. "without thermal bridges" or "with sufficient thermal breaks".

"Verification":

- The CE-mark is the most common place where to find the declared performance for U-value, g-value and air tightness.

"10-year warranty":

- Is it compatible with relevant legislations in force in the 27 Member States?

"3.3 Explanatory notes:
local climate – which way a window may face, shading on an area, etc."

- This is not so clear: To be complete, it should include orientation, shading or no shading, building internal loads, building thermal inertia, ventilation…

GPP SHEET- 4. & BACKGROUND REPORT- 5. Cost Considerations

"window frame and glazing life expectancy and replacement periods"

- As the various sources contradicts each other, it would be better not to detail life expectancy of the various frame material types. It is not credible and may distort the competition based on non-scientific basis.
- Typical replacement period should also be deleted because they depend on many parameters that are usually not related to the product itself e.g. technical progress or financial incentives to replace old windows.

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BACKGROUND REPORT – 2. Abbreviations and Definitions

"G-value (Europe) or Solar Heat Gain Coefficient (SHGC, USA): a measure of how much heat from the external environment is transferred through a window into the interior of a building. Expressed as a value between 0 and 1; the lower the value the lower the solar gain."

- g-value in Europe only applies to glass. To calculate the solar heat gain coefficient of the whole window, the frame fraction must be taken into account.

BACKGROUND REPORT – 4. Key Environmental Impacts

"Aluminium is produced from its abundantly available ore, bauxite. Production requires a great deal of energy (between 170[18] - 225MJ/kg) and generates significant amounts of pollution in the form of CO_2, SO_2, polyaromatic hydrocarbons (PAHs), fluorine and dust."

- For footnote 18, the "Environmental Profile Report from the European Aluminium Association" should be put as reference
- "*generates significant amounts of pollution in the form of*" sounds like a judgment without quantified basis. We would suggest to write *"generates gaseous emissions like"*
- No energy consumption figures for steel?

BACKGROUND REPORT – 6.1 Construction Products Directive

"In relation to windows and doors the key European product standard is EN 14351-1 which specifies the performance characteristics for these products. Criteria for air permeability (EN 12207:1999) and the correlating test method (EN 1026:2000), water tightness (EN 12208:1999 and test method EN 1027:2000), resistance to wind load (EN 12210:1999) and the thermal performance of windows and doors (EN ISO 12567-1:2000) exist"

- EN ISO 10077 (Thermal performance of windows, doors and shutters -- Calculation of thermal transmittance) should better be listed here than in "*7.2 Other Standards"*
- The hierarchy between product standards and the ones used to determine the product performances should be clarified.

BACKGROUND REPORT – 7.1 Ecolabels

- Sorry but several initiatives listed in this section are energy labels (Type 2 - ISO14021) and far from being Ecolabels (Type 1 - ISO14024)

"UK
In the UK the British Fenestration Ratings Council (BFRC) established the Window Energy Rating system (WERs) to assess the thermal efficiency of windows of a standard size (1.48m by 1.23m) allowing comparison of products against one another under identical conditions. The WERs were developed with EU funding, and with the input of many Member States. The BFRC scheme is the British implementation of WERs."

- The EU-funded project name was "Establishment of European Window Energy Rating System (EWERS) - SAVE Contract – 4.1031/Z00-030/2000
- It should be noted that BFRC only covers the heating season.

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BACKGROUND REPORT – 7.2 Other Standards

- This part is quite confused because it mixes different issues, goes beyond standards and contains mistakes.
- Standards addressing **sustainable construction** are not limited to ISO 15392. ISO 14025, ISO 21930, prEN15643, prEN15804 and other ones presently under development by CEN/TC350 should be added.
- Quality marks developed by some national trade associations should not be mixed with European harmonized standards.
- EN 14351-1 and EN 12608 are not glazing standards.
- The hierarchy between product standards and the ones used to determine the product performances should be clarified.

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