



Brussels, 3 May 2004  
G5/PB D(2003)

## **AMENDMENT TO :**

MANDATE TO CEN/CENELEC  
CONCERNING THE EXECUTION OF STANDARDISATION WORK  
FOR HARMONISED STANDARDS ON

**M 116 “Masonry and related products”**

### **The need to amend this mandate:**

Mandate M116 “Masonry and related products” defines, in its Annex 2, the characteristics to be covered by the harmonised standards for various sub-families.

For the sub-family “Masonry Units” the current table 1 in Annex 2 does not include “dimensions”, “dimensional tolerances” and “configuration”. Consequently these characteristics do not have to be declared in the information accompanying the CE marking.

Nevertheless, these elements are necessary to allow the designers to calculate the mechanical resistance and stability of assembled units, in particular in application to the Eurocodes (to enable the use of prEN 1996-1-1 table 3.1)

It has been required, in the Guidance paper L, that “all the material properties needed for the structural design of works which are linked to the essential requirements, relevant for the calculation have to be declared in the information accompanying the CE marking (clause 3.2.4).

These calculations are regulated in some Member States.

Therefore, we must add these characteristics to the mandate and, consequently, the corresponding harmonised standards on products (EN 771 part 1 to 5) have to be amended to introduce these characteristics in their annex ZA2.

### **This amendment modifies the original mandate in the following manner:**

In Annex 2 - table 1 concerning “Masonry Units”, the characteristics “dimensions”, “dimensional tolerances” and “configuration” will be added. Consequently the standards EN 771-1 to 5 will be amended. The amendment will be limited to add the necessary information in the documents accompanying the CE marking to enable the calculations, according to prEN 1996-1-1 table 3.1, to be performed.

This amendment does not need to change the decision concerning Attestation of Conformity Level.

**SCC WORKING DOCUMENT – NOT FOR REFERENCE – 1 March 2004**  
**ANNEX A**

**AMENDMENT to the mandate M116 “Masonry and related products”**

**Amendment to the Annex 2**

The table 1 concerning “masonry units” will be amended as the follow:

Characteristics of these MASONRY UNITS to be covered by the harmonised standard will be:

E R	PERFORMANCE CHARACTERISTICS	Durability
1	<p><b><u>Dimensions</u></b>  <b><u>Dimensional tolerances</u></b> (including flatness and parallelism of bed faces – for units intended to be used with thin layer mortar)  <b>Compressive strength</b> (for units intended to be used in elements subject to structural requirements)  <b>Dimensional stability</b> (for units intended to be used in elements subject to structural requirements)  <b><u>Configuration (*)</u></b> (for units intended to be used in elements subject to structural requirements or for units intended to be used in elements subject to fire requirements)                      . <b>Bond strength</b> (unit/mortar in end use conditions), <b><u>flexural bond strength</u></b>, <b>[water suction]</b> (for units intended to be used in elements subject to structural requirements)                      . <b>Active soluble salts content</b> (for relevant units only)(for units intended to be used in elements subject to structural requirements)</p>	<p><b>Y</b> (against freeze-thaw, frost, ...as relevant)</p>
2	<p><b>Reaction to fire</b> (for units intended to be used in elements subject to fire requirements)  <b>Resistance to fire R, E and I</b> (in end use conditions) / <b>[Density]</b> (for units intended to be used in elements subject to fire requirements)</p>	
3	<p><b>Emission of radioactivity</b> (only for units made with materials coming from known radioactive sources intended for use in elements subject to radioactivity requirements)  <b>Water absorption</b> (for units intended to be used in damp proof courses and in external elements)  <b>Water vapour permeability</b> (for units intended to be used in external elements)</p>	
4		
5	<p><b>Direct airborne sound insulation</b> (in end use conditions) / <b>[Density]</b> (for units intended to be used in elements subject to acoustic requirements)</p>	
6	<p><b>Thermal resistance</b> / <b>[Density]</b> (for units intended to be used in elements subject to thermal insulation requirements)</p>	

(\*) the configuration (including relevant geometrical properties, e.g. volume of holes, minimum thickness of shells and webs, etc) will enable the use of prEN 1996-1-1 table 3.1

Characteristic between [ ] is suggested as possible alternative characteristic to the relevant performance characteristic in cases where performance requirement refers to the masonry element rather than to the masonry units. Any alternative characteristic chosen must allow users to design and build masonry elements providing conformity with the relevant national performance requirement.

**SCC WORKING DOCUMENT – NOT FOR REFERENCE – 1 March 2004**

The comprehensive table of characteristics will be amended as follow:

**MASONRY AND RELATED PRODUCTS**

E R	Performance characteristics	1	2	3	4-6	7	8-10	11	12	Durability
1	- <u>Dimensions</u>	Y	-	-	-	-	-	-	-	Y (against relevant actions as indicated in other tables)
	- <u>Dimensional tolerances</u>	Y	-	-	-	-	-	-	-	
	- <u>Configuration</u>	Y	-	-	-	-	-	-	-	
	- Compressive strength	Y	Y	--	Y(1)	--	--	--	--	
	- Proportion of constituents	--	Y	--	--	--	--	--	--	
	- Dimensional stability of units	Y	--	--	--	--	--	--	--	
	- Bond strength (units/mortar) / [Water suction] (of units)	Y	--	--	--	--	--	--	--	
	- Bond strength (mortar/units) / [Water retentivity] (of fresh mortar)	--	Y	--	--	--	--	--	--	
	- Tensile strength	--	--	--	Y (1)	Y	--	--	Y	
	- Loadbearing capacity	--	--	--	--	--	Y	Y	--	
	- Deflection under load	--	--	--	--	--	Y	Y	--	
	- Shear strength or stiffness	--	--	--	Y (2)	--	--	--	--	
	- Bond strength (mortar/reinforcement)	--	--	--	--	--	--	--	Y	
	- Buckling or bending stiffness	--	--	--	Y (1)	--	--	--	--	
- Active soluble salts	Y	--	--	--	--	--	--	--		
- Contents of chlorides	--	Y	--	--	--	--	--	--		
2	Not changed									
3	Not changed									
4	Not changed									
5	Not changed									
6	Not changed									

Notes: (1) For wall and shear ties only (2) For shear and slip ties only (3) Expressed in terms of density or mass per unit area, as relevant.

Characteristics between [ ], in cases where performance is more properly addressed to a masonry element than to the masonry product, are considered as alternatives to the performance characteristics and can be used to comply with the harmonised standard where national regulations are expressed in these terms.

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