



Brussels, 9 January 2004  
G5/PB D(2003)

## **ADDENDUM TO :**

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

<b>M 100 - Precast concrete products (normal/lightweight/autoclaved aerated concrete products)</b>
--------------------------------------------------------------------------------------------------------

#### **Explanatory note**

1) CEN has requested that pre-cast concrete garages (monolithic units or sets of single sections with room dimensions) be covered by mandate M100.

These products have been manufactured for a long time (for over 50 years in Germany) and are placed on the market and delivered to sites as complete boxes or as sets of components, which are then assembled on the site. National regulations exist covering these products in Germany; whilst it is possible to bring garages to the market without an approval in Austria, Belgium and France.

Pre-cast concrete garages were quoted as an example of a “construction product” in the statements for entry into the minutes of the meeting” where the CPD was agreed (comment n°3 related to paragraphe2 of the article 1 of the CPD).

One could consider that this product is already covered by mandate M100 (intended uses 1/33 Floor beds, roads and other trafficked areas; 4/33 External walls and partitions and 5/33 Floors, galleries, ceilings), but an amendment is necessary to add it explicitly into the annexes and to define the relevant performance characteristics.

CEN/TC 229 has already prepared two voluntary standards covering this product: pr EN 13978-1 (reinforced garages monolithic or consisting of elements) and pr EN 13978-2 (steel fibre concrete garages). These could be formulated into harmonised standards following the mandate and could be launched for formal vote before the end of this year.

Taking into account the work already completed by CEN, this draft amendment aims to include explicitly this product into mandate M100.

2) CEN has also requested to add the product “floor slats” (e.g. used for cattle, pedestrian or other public areas). This family of products is subject of regulation in Germany. These products are placed on the market in some Member States.

**This addendum modifies the original mandate in the following manner:**

***1. Precast concrete garages***

- The product “pre-cast concrete garages” (monolithic units or sets of single sections with room dimensions) shall be added to the mandate **M100**, such that it shall read as shown in Annex A below
- The intended use concerned is 1/33 (Floor beds, Roads and other trafficked areas), 4/33 External walls and partitions and 5/33 Floors, galleries, ceilings
- The corresponding Commission Decision (1999/94/EC) does not need to be changed to cover this product

***2. Floor slats***

- The product “floor slats” is added in the part of the mandate 5/33 (products used for floors, galleries, ceiling) annex 2 and 3 (the product “floor slats is already listed in the Annex 1 – Large units (structural) – Precast concrete, therefore Annex 1 does not need to be amended)
- The corresponding Commission Decision (1999/94/EC) does not need to be changed to cover this product

ANNEX A : precast concrete garage

ADDITION to ANNEX 1 of Mandate M100 1/33, mandate 4/33 and 5/33

*In the intended use 1/33*, for the form “G: Large units (structural), materials “concrete”, change in the column “products for consideration” the item “Pre-cast concrete units” to “Pre-cast concrete units including pre-cast concrete garages (monolithic units) or

*In the intended uses 4/33 and 5/33*, for the form G “Large Units” material f “precast concrete” add in the column “products for consideration” the item “pre-cast concrete garages (sets of single sections with room dimensions)”.

ADDITION TO ANNEX 2 OF MANDATE M100 1/33 “Floors beds, roads and other trafficked areas”, 4/33 “External walls, internal walls and partitions” and 5/33 “Floors, galleries, ceiling”

The following table and comments are added to Annex 2 of these mandates:

<b>Precast concrete garages</b>
---------------------------------

Reinforced garages (monolithic units or sets of single sections with room dimensions), steel fibre concrete garages, etc.

.TO BE USED IN (respectively)

- 1/33 Floor beds, Roads and other trafficked areas
- 4/33 External walls, internal walls and partitions
- 5/33 Floors, galleries, ceiling

Characteristics to be covered by the harmonised standards will be:

Note : not all of the characteristics shown in the following tables will be relevant for every product in a particular family or sub-family. CEN/CENELEC should select the subset of characteristics applicable to a particular product from the full set provided.

E R	PERFORMANCE CHARACTERISTICS *	DURABILITY
1	<b>Mechanical resistance and stability:</b> . Mechanical strength expressed in terms of: bending, tension, compression, shear, torsion or punching shear strength, as relevant; . resistance to impact of vehicle at very low speed (accidental action) <b>Strength of materials or constituents</b> . Compressive strength ( <i>of concrete</i> ), . Ultimate tensile strength and tensile yield strength ( <i>of steel and steel fibres</i> ) . Detailing ( <i>in end conditions</i> ) . oven-dry density ( for lightweight concrete) - flexural strength and equivalent flexural strength (for steel fibre concrete)	Y  e.g. -compressive strength against freeze-thaw, - ultimate tensile strength and tensile yield strength against corrosion, - water, chemicals, ..., when relevant
2	<b>Reaction to fire</b> for external walls and roof coverings <b>Resistance to fire (R, E and I)</b> for external walls and roof coverings	
3		

4	
5	<b>Airborne sound insulation</b> (for external walls and roof covering) <b>Impact sound insulation</b> (for external walls and floor if relevant)
6	

If the performance characteristics are already given in CE marking of components or constituents, then these properties do not need to be re-tested

**ADDITION TO ANNEX 3 OF MANDATES M100 1/33, 4/33 and 5/33**

<b>Precast concrete garages (1/2)</b>
---------------------------------------

**1. Levels and classes for product performances**

1.1 For the time being, the differences specified in Article 3 (2) of the CPD do not seem to give to the need of a classification system for products.

**2. Systems of attestation of conformity**

2.1 For the product(s) and intended use(s) listed below, CEN/CENELEC are requested to specify the following system(s) of attestation of conformity in the relevant harmonised standard(s):

Product(s)	Intended use(s)	Level(s) or class(es)	Attestation of conformity system(s)
<b>Pre-cast concrete garages</b> - Reinforced garages -steel fibre concrete garages	Any		2+
System 2+: See CPD Annex III.2.(ii), first possibility, including certification of the factory production control by an approved body on the basis of its continuous surveillance, assessment and approval.			

**3. Condition to be applied by CEN on the specifications of the attestation of conformity system:**

3.1. The specification for the system should be such that it can be implemented even where performance does not need to be determined for a certain characteristic, because at least one Member State has no legal requirement at all for such characteristic [*see Article 2.1 of the CPD and, where applicable, clause 1.2.3 of the Interpretative Documents*]. In those cases the verification of such a characteristic must not be imposed on the manufacturer if he does not wish to declare the performance of the product in that respect.

3.2. For the certification of the factory production control the parameters related to the following characteristics shall be of the interest of the approved body: all the characteristics listed in the table included in Annex 2.

The initial inspection of the factory production control shall cover also all the characteristics listed in the table included in Annex 2.

## Precast concrete garages (2/2)

### 1. Levels and classes for product performances

- 1.1 According to article 3.2 of the CPD and Clause 1.2.1 of the IDs, a classification of product performance has been identified as the means of expressing the range of requirement levels of the works in respect of **reaction to fire**.

Regarding reaction to fire, CEN/CENELEC are requested to follow the Commission Decision 2000/147/EC [O.J. L 50 of February 2000] and make reference to the standard(s) to be prepared under Commission mandate to CEN/CENELEC "Horizontal complement to the mandates in respect of reaction to fire" in dealing with reaction to fire in the specific harmonised product standards to be developed under this mandate.

- 1.2 Reaction to fire is a risk for which the need for a classification system has been identified for the time being.

Further needs may be identified on the basis of differences specified in Article 3 (2) of the CPD, which are justified in conformity with Community law (IDs Clause 1.2.1).

Where for such needs it is recognised that a classification of product performance is the means of expressing the range of requirement levels of the works, the Commission will give the appropriate guidance or will request CEN/CENELEC to make the appropriate proposal through a modification to this mandate.

### 2. Systems of attestation of conformity

- 2.1 For the product(s) and intended use(s) listed below, CEN/CENELEC are requested to specify the following system(s) of attestation of conformity in the relevant harmonised standard(s):

Product(s)	Intended use(s)	Level(s) or class(es) <i>(reaction to fire)</i>	Attestation of conformity system(s)
<b>Pre-cast concrete garages</b> - Reinforced garages - steel fibre concrete garages.	for uses subject to regulations on reaction to fire	A1*, A2*, B*, C*	<b>1</b>
		----- A1**, A2**, B**, C**, D, E	----- <b>3</b>
		----- (A1 to E)***, F	----- <b>4</b>
System 1: See Directive 89/106/EEC Annex III.2.(i), without audit-testing of samples System 3: See Directive 89/106/EEC Annex III.2.(ii), Second possibility System 4: See Directive 89/106/EEC Annex III.2.(ii), Third possibility * Products/ materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material) ** Products/ materials not covered by footnote (*). *** Products/ materials that do not require to be tested for reaction to fire (eg. Products/materials of classes A1 according to Commission Decision 96/603/EC, as amended).			

### 3. Conditions to be applied by CEN/CENELEC on the specifications of the attestation of conformity system

- 3.1 The specification for the system should be such that it can be implemented even where performance does not need to be determined for a certain characteristic, because at least one Member State has no legal requirement at all for such characteristic [*see Article 2.1 of the CPD and, where applicable, clause 1.2.3 of the Interpretative Documents*]. In those cases

the verification of such a characteristic must not be imposed on the manufacturer if he does not wish to declare the performance of the product in that respect.

3.2 For products under systems 1 and 3, regarding the initial type testing of the product [see Annex III.1.a) of the CPD], the task for the approved laboratory will be limited to the assessment of the following characteristics:

- **Euroclass characteristics for reaction to fire**, as indicated in the Commission Decision 2000/147/EC

3.3 For products under system 1, for the initial inspection of the factory and of the factory production control [see Annex III.1.f) of the CPD], and for the continuous surveillance, assessment and approval of the factory production control [see Annex III.1.g) of the Construction Products Directive], parameters related to the following characteristics shall be of the interest of the approved body:

- **Euroclass characteristics for reaction to fire**, as indicated in the Commission Decision 2000/147/EC

**ANNEX B : floor slats**

**ADDITION TO ANNEX 2 OF MANDATE M100 5/33**

The sub-family of beams/block floor units and elements is defined as the following:

<b>PRECAST NORMAL / LIGHTWEIGHT / AUTOCLAVED AERATED CONCRETE PRODUCTS: Beams /block floor units and elements / floor slats</b>
-------------------------------------------------------------------------------------------------------------------------------------

The list of characteristics not changed.

**ADDITION TO ANNEX 3 OF MANDATE M100 5/33**

In the annex 3 of mandate M100 (1/33), the table dealing with “beam/block floor units and elements” is modified according to the following table:

Product(s)	Intended use(s)	Level(s) or class(es)	Attestation of conformity system(s)
<b>Beam / block floor units and elements / floor slats</b>	Structural		2+
System 2+: See CPD Annex III.2.(ii), first possibility, including certification of the factory production control by an approved body on the basis of its continuous surveillance, assessment and approval.			

In the clause 3.2 of the mandate, the list of characteristics covered by the initial inspection of the factory production control is amended as follow:

- 22a Resistance to fire (*if relevant*)

-----