



EUROPEAN COMMISSION

DIRECTORATE-GENERAL III  
INDUSTRY

**CONSTRUCT 96/193 rev 1**

MANDATE TO EOTA  
CONCERNING THE EXECUTION OF HARMONISATION WORK  
FOR AN ETA GUIDELINE ON

**PLASTIC ANCHORS FOR USE IN CONCRETE AND MASONRY**

RELATED TO THE FOLLOWING END USES

- 1/33: FLOOR BEDS, INCLUDING SUSPENDED GROUND FLOORS
- 2/33: FOUNDATION AND RETAINING WALLS
- 4/33: EXTERNAL WALLS (INCLUDING CLADDING), INTERNAL WALLS AND PARTITIONS
- 5/33: FLOORS, GALLERIES, CEILINGS
- 6/33: PREFABRICATED SYSTEMS FOR FLOORS AND GALLERIES, STAIRS, RAMPS, RAISED ACCESS FLOORS, BALLUSTRADES AND HAND RAILS, INCLUDING EXTERNAL WORKS
- 7/33: ROOFS
- 8/33: FRAME (INCLUDING CHIMNEYS AND SHAFTS)
- 11/33: EXTERNAL FINISHES OF WALLS
- 12/33: INTERNAL FINISHES OF WALLS AND PARTITIONS
- 30/33: CIRCULATION FIXTURES

**FOREWORD**

*This mandate is issued by the Commission to EOTA within the context of the Council Directive 89/106/EEC of December 21, 1988 concerning construction products, hereafter referred to as "the Directive" and the Commission Decision 94/23/EC of 17 January 1994 on common procedural rules for European technical approval.*

*One of the aims of the Directive being the removal of technical barriers to trade in the construction field, in so far as they cannot be removed by means of mutual recognition among Member States, it seems appropriate that mandates cover, at least during a first phase of the mandating programme, construction products likely to be subject to technical barriers to trade.*

*This mandate covers the field of products or families of products that are considered innovative and for which there is neither a harmonised standard, nor a recognised national standard, nor a mandate for a harmonised standard and for which the Commission, after consulting the Standing Committee on Construction, considers that a harmonised standards cannot, or not yet, be elaborated; or when harmonised standards or recognised national standards exist, the products differ significantly from them.*

*This mandate intends to lay down provisions for the development and the quality of the ETA guidelines in order, on the one hand, to make "approximation" of national laws, regulations and administrative provisions (hereafter referred to as "regulations")*

*possible and, on the other hand, to allow products conforming to them to be presumed to be fit for their intended use, as defined in the Directive.*

*In this respect, this mandate takes account of the basic principles prevailing in the regulations of Member States, particularly those described in chapters 3 and 4.2 of the Interpretative Documents, to which ETA guideline writers must refer. As stated by the Directive, the responsibility Member States have for construction works on their territory remains unchanged.*

*In order to fulfill the provisions of article 7.1 of the CPD the present mandate has been structured in the following way:*

*Chapter I Grounds. General conditions within the framework of the CPD.*

*Chapter II Execution of the mandate. Conditions regarding the programming, development and execution of the work on the guidelines.*

*Chapter III ETA Guidelines. Conditions regarding the content and the presentation of the ETA guidelines.*

## **CHAPTER I. GROUNDS**

1. This mandate falls within the framework of the general policy of the Commission with respect to technical harmonisation and standardisation, as well as within the scope of the Directive. It replaces any previous mandate on the same products formerly issued on a provisional base by the Commission.
2. This mandate is based on article 11 of the Directive and has taken into consideration the Interpretative Documents<sup>(2)</sup> that serve as reference for the establishment of guidelines for ETAs. It serves to ensure the quality of ETA Guidelines for products, always with reference to the state of the art, with particular reference to the fitness of the products listed in annex 1 intended to be used in **FLOOR BEDS, INCLUDING SUSPENDED GROUND FLOORS, FOUNDATION AND RETAINING WALLS, EXTERNAL WALLS (INCLUDING CLADDING), INTERNAL WALLS AND PARTITIONS, FLOORS, GALLERIES, CEILINGS, PREFABRICATED SYSTEMS FOR FLOORS AND GALLERIES, STAIRS, RAMPS, RAISED ACCES FLOORS, BALLUSTRADES AND HAND RAILS, INCLUDING EXTERNAL WORKS, ROOFS, FRAME (INCLUDING CHIMNEYS AND SHAFTS), EXTERNAL FINISHES OF WALLS, INTERNAL FINISHES OF WALLS AND PARTITIONS, CIRCULATION FIXTURES** enabling the works to satisfy the essential requirements set out in annex 1 of the Directive, provided that barriers to trade in these products exist and that the products fall within the scope of article 2.1 of the Directive;
3. Levels or classes of requirements for the works are under the responsibility of Member States and are not covered by the present mandate. As a consequence, they are not expected to be defined in the ETA guideline.

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<sup>(2)</sup> O.J N°c 62, 28.02.1994

4. Levels or classes of requirements for the products may be determined either in the Interpretative Documents or according to the procedure provided for in article 20 (2) of the Directive. In either case, where levels or classes of requirements for products are determined, guidance is given in Annex 3 to this mandate. This is not the case for classes of convenience, which are classes of product performances developed as a means of convenience for specifiers, manufacturers and purchasers. Such classes of convenience are not covered by the present mandate and should not be defined within the ETA guideline.

5. The ETA guideline resulting from this mandate must allow products to comply with it 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 a characteristic. Declaration of performance for such characteristic must not be imposed on the manufacturer if he does not wish to declare it.

6. Indications regarding the documents which should be taken into account to inform technical specification writers and manufacturers on national and harmonised legislation on substances classified as dangerous are given in Annex 4.

## **CHAPTER II. EXECUTION OF THE MANDATE**

1. EOTA will present the Commission with a detailed work programme, at the latest, by the end of **JANUARY 1997**

2. This programme will include all aspects considered necessary to ensure the quality of the ETA guideline and the subsequent ETAs in order to permit the assessment of the fitness for use (in accordance with Article 4 (2) of the Directive) of the products covered by the mandate. In particular it will contain the following:

- a) the title of the ETA guideline;
- b) the content of the guideline, including reference to those items mentioned in III.2;
- c) the list of supporting documents (national standards, ISO standards, prENs, ENs, research results, etc.) which might be used in the ETAs and indications of those documents that have to be developed by EOTA;
- d) the timetable for the development of the guideline and its submission to the EC; and
- e) the identification of the Working Group responsible;

3. Clear differentiation should be made between the item to become the ETA guideline for the product or product family and the items to be used as supporting documents.

4. Where practicable, EOTA will make reference existing harmonised methods of assessment. When a supporting test method for a characteristic does not exist or is not in the work programme of the EOTA WG, a clear statement should be presented indicating whether EOTA is able to produce one or not.

5. Any proposals for the addition of products, intended uses and materials and forms not included in the mandate but considered relevant by the EOTA WG should be presented separately from the work programme for further analysis by the Commission services. Guidelines prepared for products outside of this mandate will not achieve the status of ETA guidelines. In addition to the provisions of article 4.1 of the CPD, it must be taken into account that all the products included in the mandate have a system of attestation of conformity in accordance with the relevant Decision of the Commission; those products not included have not.
6. Any proposal for the addition of characteristics and durability aspects not included in the mandate but considered relevant by the EOTA WG should be proposed in a special chapter of the work programme for further analysis by the Commission services.
7. Where a classification system of the product performances is envisaged in Annex 3 of the present mandate, EOTA is requested to make an appropriate proposal for its implementation.
8. EOTA WGs must give a technical answer for the determination of the characteristics of the mandate taking into account the conditions stated below; test methods suggested must be directly related to the characteristic required and must not make reference to determination methods for characteristics not required by the mandate. Durability requirements should be dealt with in the framework provided by the current state of the art.
9. Reference to test/calculation methods must be in accordance with the harmonisation aimed at. In general, only one method should be referred to for the determination of each characteristic, for a given product or family of products.

If, however, for a product or family of products because of justifiable reasons, more than one method is to be referred to for the determination of the same characteristic, the situation must be justified. In this case all referenced test methods should be linked by the conjunction "or" and an indication of application should be given.

In any other case, two or more test/calculation methods for the determination of one characteristic can be accepted only if a correlation between them exists or can be developed. The relevant harmonised product standard must then select one of them as the method of reference.

Testing and/or calculation methods shall have, whenever possible, a horizontal character covering the widest possible range of products
10. Within the work programme, EOTA will also specify those cases where the performance-based approach will not be followed in the ETA guideline and will give the relevant justification.
11. After examination of the work programme and consultations with EOTA, the Commission services will endorse the timetable and the list of guidelines which meet the terms of this mandate and which will be recognised as ETA guidelines, as well as the list of supporting standards where relevant.

12. The terms of reference of this mandate may be subject to possible modification or addition, if necessary. Acceptance of the work programme by the Commission services does not imply acceptance of all the items listed as supporting documents. EOTA WGs will need to demonstrate the direct link between items for harmonisation and the products, intended uses and characteristics given in the mandate. Nor does acceptance exclude the possibility for further items to be added by EOTA in order to fully respond to the terms of the mandate
13. Representatives of the authorities responsible for national regulations have the right and will be able to participate in the activities of EOTA through their national approval bodies and to present their points of view at all stages of the drafting process of the guidelines.
14. The Commission may participate in the drafting process as observer and has the right to receive all relevant documents.
15. EOTA will immediately inform the Commission of any problem relating to the carrying out of the mandate from within the WGs and will present an annual progress report on work within the framework of the mandate.
16. The progress report will include a description of work carried out and information on any difficulties being met, whether political or technical, with particular reference to those that might lead the authorities of a Member State to raise objections or to resort to article 5.1 of the Directive.
17. The progress report will be accompanied by the latest drafts of the guideline under the mandate and by updated reports on any subcontracted work.
18. Acceptance of this mandate by EOTA can take place only after the work programme has been endorsed by the Commission.
20. EOTA will develop the draft ETA guideline on the basis of the work programme.
21. EOTA will present the final drafts of the ETA guidelines to the Commission for confirmation of compliance with this mandate at the latest in accordance with the timetable agreed between EOTA and the Commission and referred to in point II.2.d).
22. In order to permit compliance with the provisions of article 11. 3 of the C.P.D., EOTA will provide the Commission with the ETA guideline in accordance with the timetable agreed between EOTA and the Commission and referred to in point II.2.d) after a positive vote in EOTA.

**(Draft 4) ANNEX 1**

**FIELD OF APPLICATION**

**PLASTIC ANCHORS FOR USE IN CONCRETE AND MASONRY**

**(mechanical fasteners)**

PRODUCTS TO BE USED IN MASONRY ELEMENTS INCLUDED IN :

- 1/33: FLOOR BEDS, INCLUDING SUSPENDED GROUND FLOORS
- 2/33: FOUNDATION AND RETAINING WALLS
- 4/33: EXTERNAL WALLS (INCLUDING CLADDING), INTERNAL WALLS AND PARTITIONS
- 5/33: FLOORS, GALLERIES, CEILINGS
- 6/33: PREFABRICATED SYSTEMS FOR FLOORS AND GALLERIES, STAIRS, RAMPS, RAISED ACCES FLOORS, BALLUSTRADES AND HAND RAILS, INCLUDING EXTERNAL WORKS
- 7/33: ROOFS
- 8/33: FRAME (INCLUDING CHIMNEYS AND SHAFTS)
- 11/33: EXTERNAL FINISHES OF WALLS
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- 30/33: CIRCULATION FIXTURES

FORM	MATERIALS	PRODUCTS FOR CONSIDERATION
Prefabricated components	Steel	<b>Plastic anchors screwed in, plastic anchors hammered in, with :</b> <b>-expansion element</b>
	Polymeric materials	<b>-sleeve</b>

(Draft 4) ANNEX 2

TECHNICAL TERMS OF REFERENCE

**PLASTIC ANCHORS FOR USE IN CONCRETE AND MASONRY**

PRODUCTS TO BE USED IN MASONRY ELEMENTS INCLUDED IN :

- 1/33: FLOOR BEDS, INCLUDING SUSPENDED GROUND FLOORS
- 2/33: FOUNDATION AND RETAINING WALLS
- 4/33: EXTERNAL WALLS (INCLUDING CLADDING), INTERNAL WALLS AND PARTITIONS
- 5/33: FLOORS, GALLERIES, CEILINGS
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- 7/33: ROOFS
- 8/33: FRAME (INCLUDING CHIMNEYS AND SHAFTS)
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**FAMILY OF PRODUCTS**

**PLASTIC ANCHORS FOR USE IN CONCRETE AND MASONRY**

Plastic anchors consisting of an expansion element and a polymeric expansion sleeve which passes through the fixture.

The sleeve is expanded by installation of the expanding element which presses the sleeve against the wall of the drilled hole. (hammered in or screwed in)

They are used in members of minimum thickness of 100mm :

- normal weight concrete, lightweight concrete and aerated concrete.
- solid bricks and blocks of masonry
- hollow or perforated masonry units

These plastic anchors are intended to be used in situation where failure represents an immediate risk to human life. They are used for systems, such as façade systems, for fixing and/or supporting elements which contributes to the stability of the systems

<b>E.R.</b>	<b>PERFORMANCE CHARACTERISTICS</b>	<b>DURABILITY</b>
<b>1</b>		
<b>2</b>		
<b>3</b>		
<b>4</b>	<p><i>for the couple anchor-masonry or anchor-concrete, according to the type of masonry unit chosen or the classes of concrete chosen</i></p> <ul style="list-style-type: none"><li>-shear strength</li><li>-bending strength (<i>for anchors with outside length</i>)</li><li>-tensile strength/pull-out failure</li><li>-minimum edge distance to masonry or concrete member for ensuring strength characteristics of the single anchor</li><li>-minimum spacing of 2 anchors for ensuring strength characteristics of the single anchor</li><li>-load-displacement behaviour</li></ul> <p><i>for the anchor-</i></p> <ul style="list-style-type: none"><li>-shear strength</li><li>-tensile/yield strength</li></ul>	<b>Y</b>
<b>5</b>		
<b>6</b>		

## TABLE OF CHARACTERISTICS

### PLASTIC ANCHORS FOR USE IN CONCRETE AND MASONRY

Characteristics to be covered by the guideline		
E.R.	PERFORMANCE CHARACTERISTICS	DURABILITY
1		
2		
3		
4	<p><i>for the couple anchor-masonry or anchor-concrete, according to the type and strength of masonry unit choosen or the type and strength of concrete choosen</i></p> <ul style="list-style-type: none"> <li>-shear strength</li> <li>-bending strength (<i>for anchors with outside length</i>)</li> <li>-tensile strength/pull-out failure</li> <li>-minimum edge distance to masonry or concrete member for ensuring strength characteristics of the single anchor</li> <li>-minimum spacing of 2 anchors for ensuring strength characteristics of the single anchor</li> <li>-load-displacement behaviour</li> </ul> <p><i>for the anchor-</i></p> <ul style="list-style-type: none"> <li>-shear strength</li> <li>-tensile/yield strength</li> </ul>	Y
5		
6		



## ATTESTATION OF CONFORMITY

Product family : **Plastic anchors for use in concrete and masonry (1/1)**

### 1. Levels and classes for product performances

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

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 EOTA to make the appropriate proposal through a modification to this mandate.

### 2. Systems of attestation of conformity

For the product(s) and intended use(s) listed below, EOTA is requested to specify the following system(s) of attestation of conformity in the relevant guideline for European technical approval :

Product(s)	Intended use(s)	Level(s) or class(es)	Attestation of conformity system(s)
Plastic anchors for use in concrete and masonry	for use in systems, such as façade systems, for fixing or supporting elements. which contribute to the stability of the systems		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 initial inspection of factory and of factory production control as well as of continuous surveillance assesment and approval of factory production control

### 3 Conditions to be applied by EOTA on the specifications of the attestation of conformity system

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.

(Draft 4) **ANNEX 4**

European Technical Specifications must be adopted taking into account the necessary legislation on substances classified as dangerous.

This results from the Interpretative Documents, where it is noted in the introduction note to all six Interpretative Documents, that :

"Concerning dangerous substances which are in construction products, classes and/or levels of performance to which technical specifications will refer, shall allow the levels of protection needed by the works to be guaranteed, taking into account the purpose of the works."

In addition, outside the scope of the Directive, writers of technical specifications must take into account legislation which affects material to be used for construction products, and which are regulated for reasons not related to the incorporation into the works of the construction products.

In order to permit technical specifications writers to take into account the necessary legislation, a working document was elaborated by the Commission services (doc.CONSTRUCT 95/148 Rev.1 of January 4, 1996). Specification writers should use this document as a guide but must also take account of any other relevant legislation or dangerous substances which the working document does not yet include.

<sup>(2)</sup> O.J N°c 62, 28.02.1994