

Foreword

This document (EN 12899-3:2007/prA1:2010) has been prepared by Technical Committee CEN/TC 226 "Road equipment" the secretariat of which is held by AFNOR.

This document is currently submitted to the Unique Acceptance Procedure.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

The main reason for this amendment is to incorporate in the series of existing standards EN 12899:2007 (Parts 1 to 5), a new standard EN 12899-6, which deals with the visual performance of retroreflective sign face materials.

1 Modification to Foreword

In paragraph 2, in:

- line 2: delete “May 2008” and replace with “month year(?)”
- line 3: delete “August 2012” and replace with “month year(?)”

Insert the following text between paragraphs 2 and 3:

“The main reason for this amendment is to incorporate in the series of existing standards EN 12899:2007 (Parts 1 to 5), a new standard EN 12899-6, which deals with the visual performance of retroreflective sign face materials.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.”

Replace the introductory sentence to the list of parts, as given in paragraph 6, with the following text:

“This document is European Standard in the series of standards EN 12899 on “Fixed, vertical road traffic signs”, with the followings parts:”

In paragraph 6, add also “Part 6: Retroreflective sign face materials” to the end of the list.

2 Modification to Introduction

Replace paragraph 1 with:

“This European Standard is designed for use by manufacturers, who are placing their fixed vertical, road traffic signs to the market, as well as for road authorities and private developers who wish to use these signs.”

Delete paragraph 2 completely.

3 Modification to Clause 1

Replace paragraph 1 with:

“This European Standard specifies the requirements for delineator posts and for reflectors as separate products or for those combined together in assembled delineators to be used in traffic circulation areas.

Replace paragraph 2 with the following paragraph and new note:

“This European Standard specifies also the provisions on the corresponding test methods, evaluation of conformity and marking.

NOTE Provisions for the evaluation of conformity with regards to initial type testing (ITT) are further specified in EN 12899-5; provisions with regards to factory production control (FPC) are further specified in EN 12899-4.”

Delete paragraphs 3 to 6 completely.

Modify the initial part of the paragraph 7 as follows:

“This European Standard does not specify use of colours, dimensions and ...”

4 Modification to Clause 2

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Delete “2007” in normative references “EN 12899-1:2007”, “EN 12899-4:2007” and “EN 12899-5:2007” and make consequential changes also throughout EN 12899-3:2007.

In reference to EN ISO 9001, replace “2000”, given between brackets, with “2008”.

In addition, add the following new reference to the reference 8:

“ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods*”,

5 Modification to Clause 4

Add “corresponding” between “and” and “tolerances”.

6 Modification to 6.3.1

In the title of this sub-clause delete “Daytime” and replace it with “Daylight”.

7 Modification to 6.3.2.1

In the title of this sub-clause delete “Daytime” and replace it with “Daylight”.

Delete paragraph 1 and replace it with the following new paragraph and two new Tables 2 and 3, completed with a new note:

“When tested in accordance with the relevant procedure specified in CIE 15, using CIE standard daylight illuminant D65 and the standard CIE 45/0 viewing conditions, the chromaticity and the luminance factor β of type R1 retroreflectors shall conform to Table 2 or Table 3, as appropriate.

Table 2 — Chromaticity boxes and luminance factors for class CR1

Colour	Point 1		Point 2		Point 3		Point 4		Luminance factor β
	x	y	x	y	x	y	x	y	
White	0,355	0,355	0,305	0,305	0,285	0,325	0,335	0,375	$\beta \geq 0,27$
Yellow	0,545	0,455	0,487	0,423	0,427	0,483	0,465	0,535	$\beta \geq 0,16$
Orange	0,631	0,369	0,552	0,359	0,506	0,404	0,570	0,430	$\beta \geq 0,12$
Red	0,735	0,265	0,674	0,236	0,569	0,341	0,655	0,345	$\beta \geq 0,030$
Blue	0,078	0,171	0,150	0,220	0,210	0,160	0,137	0,038	$\beta \geq 0,015$
Green	0,007	0,703	0,248	0,409	0,177	0,362	0,026	0,399	$\beta \geq 0,030$
Dark green	0,313	0,682	0,313	0,453	0,248	0,409	0,007	0,703	$0,070 \geq \beta \geq 0,010$
Brown	0,455	0,397	0,479	0,373	0,558	0,394	0,523	0,429	$0,090 \geq \beta \geq 0,030$
Grey	0,355	0,355	0,305	0,305	0,285	0,325	0,335	0,375	$0,18 \geq \beta \geq 0,11$

Table 3 — Chromaticity boxes and luminance factors for class CR2

Colour	Point 1		Point 2		Point 3		Point 4		Luminance factor β
	x	y	x	y	x	y	x	y	
White	0,305	0,315	0,335	0,345	0,325	0,355	0,295	0,325	$\beta \geq 0,27$
Yellow	0,494	0,506	0,470	0,480	0,513	0,437	0,545	0,455	$\beta \geq 0,16$
Red	0,735	0,265	0,700	0,250	0,607	0,343	0,655	0,345	$\beta \geq 0,030$
Blue	0,100	0,109	0,146	0,156	0,183	0,115	0,137	0,038	$\beta \geq 0,010$
Green	0,007	0,703	0,216	0,448	0,147	0,400	0,018	0,454	$\beta \geq 0,030$

Grey	0,305	0,315	0,335	0,345	0,325	0,355	0,295	0,325	$0,18 \geq \beta \geq 0,11$
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NOTE Class CR1 defines fairly large chromaticity boxes that allow some change of the colours with time and is intended for application over the functional life of retroreflective sheeting or at least within a specified guarantee period. Class CR2 defines smaller chromaticity boxes and is intended for colour matching and similar purposes, for new materials only.”

8 Modification to 6.3.2.2

In paragraph 1 replace the reference to “Table 2” with the one to “Table 4”.

Delete paragraph 2.

Replace the Note to Table 2 (new Table 4) with the following note:

“NOTE It is recommended that Orange is not used in the same field of view as Red.”

Renumber all following tables accordingly.

9 Modification to 6.3.2.3

Delete sub-clause title and replace with “Retroreflection”.

Delete paragraph 2 (including three bullet points) and replace with the following text:

“The minimum initial coefficient of retroreflection R_A of type R1 retroreflectors shall conform to Table 3 (new Table 5) multiplied by the appropriate colour factor given in Table 6 (new Table 8).”

Delete Table 3 (new Table 5) and replace with the following:

Entrance angle β_2 ($\beta_1 = 0^\circ$)	Observation angle α	Coefficient of retroreflection R_A (cd·lx ⁻¹ ·m ⁻²) Type R1		
		Class 1	Class 2	Class 3
+5°	0,33°	50	180	300
+30°	2,0°	2,5	2,5	2,5

Delete note after Table 3 (new Table 5).

In paragraph 3 replace references to “Table 4” and “Table 6” with the ones to “Table 6” and “Table 8”, respectively.

In paragraph 4 replace references to “Table 5” and “Table 6” with the ones to “Table 7” and “Table 8”, respectively.

10 Modification to 6.4.1.1

In paragraph and in title of the subsequent table replace also the reference to “Table 7” with the one to “Table 9”.

11 Modification to 6.4.1.6

In paragraph 1 delete “daytime visibility” and replace it with “daylight visual performance”.

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In paragraph 2 delete “Daytime visibility” and replace it with “Chromaticity coordinates and luminance factor”.

12 Modification to 6.4.2.1

In paragraph and in title of the subsequent table replace also the reference to “Table 8” with the one to “Table 10”.

13 Modification to 6.4.2.4

Delete paragraph 1.

In paragraph 2, sentence 1, delete “class 3”.

14 Modification to 7.3.1

In sub-clause title delete “Daytime visibility” and replace it with “Daylight chromaticity coordinates and luminance factor”.

15 Modification to 7.3.2.1

Delete sub-clause title and replace it with “Daylight chromaticity coordinates and luminance factor”.

Furthermore, delete also “, class RA1 and class RA2”.

16 Modification to 7.3.2.3

Delete sub-clause title and replace it with “Retroreflection”.

17 Modification to 7.4.1.6

In the last sentence delete “daytime visibility” and replace it with “daylight chromaticity coordinates and luminance factor”.

18 Modification to 7.4.2.2

In paragraph 2 replace the reference to “Table 8” with the one to “Table 10”.

19 Modification to 7.4.2.3

In paragraph 2, delete the first bullet point completely and in the second one “class 3”.

20 Modification to 7.4.2.5

Delete paragraph 2, as introduction to the 3 indents followed, and replace it with the following new paragraph:

“Type R1, R2 and R3 retroreflectors shall be exposed for 2 years and tests shall be made on the carefully cleaned test products. The following tests shall then be made.”

21 Modification to Clause 9

Delete all 3 sub-clauses and replace them with the following ones:

“9.1 General

The conformity of a product (i.e. delineator post and reflector as separate product or that combined with both of them) with the requirements of this standard and with the declared

performances for the stated characteristics (e.g. values, classes) shall be demonstrated by:

- initial type testing,
- factory production control by the manufacturer, including product assessment.

For the purposes of testing, the product may be grouped into families of products, where it is considered that the results for one or more characteristics from any one product within the family of the products are representative for that same characteristics for all products within that same family.

NOTE One product may be in different families for its different characteristics.

9.2 Initial type testing

The product shall be subjected to initial type testing according to EN 12899-5 to show conformity with this European Standard.

9.3 Factory production control

The product shall be subjected to initial type testing according to EN 12899-4 to show conformity with this European Standard.”

22 Modification to Clause 10

Delete the whole clause.

23 Modification to Annex ZA

Replace whole Annex ZA with this one:

Annex ZA (informative)

Clauses of this European Standard addressing the provisions of the EU Construction Products Directive

ZA.1 Scope and relevant characteristics

This European Standard has been prepared under Mandate M/111 "Circulation fixtures", as amended, by the European Commission and the European Free Trade Association.

The clauses of this European Standard shown in this annex meet the requirements of the mandate given under the EU Construction Products Directive (89/106/EEC).

Compliance with these clauses confers a presumption of products covered by this annex for the intended uses indicated herein; reference shall be made to the information accompanying the CE marking.

WARNING: Other requirements and other EU Directives, not affecting the fitness for intended uses, can be applicable to products falling within the scope of this European Standard.

NOTE 1 In addition to any specific clauses relating to dangerous substances contained in this standard, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the EU Construction Products Directive, these requirements need also to be complied with, when and where they apply.

NOTE 2 An informative database of European and national provisions on dangerous substances is available at the Commission's CIRCA site "dangerous substances" (accessed through <http://ec.europa.eu/enterprise/construction/cpd-ds/index.cfm>).

This annex establishes the conditions for the CE marking of the products intended for the uses indicated in Tables ZA.1 to ZA.3 and shows the relevant clauses applicable.

Table ZA.1 – Scope and relevant clauses

Construction product: Delineator post			
Intended uses: For incorporation into an assembly of delineator intended to be installed permanently for vehicular and pedestrian traffic uses			
Essential characteristics	Requirement clauses in this standard	Levels and/or classes	Notes
RELEASE OF DANGEROUS SUBSTANCES		See Notes 1 and 2 in ZA.1	
MECHANICAL RESISTANCES: - to horizontal loads , and covered by:			
- Static resistance to wind load	6.4.1.1	-	Tested acc. to 7.4.1.1 and declared as selected class in Table 9
PERFORMANCE UNDER IMPACT, as:			
- Dynamic impact resistance (material requirement)	6.4.1.2	-	Tested acc. to 7.4.1.2 and declared as "Pass" or "Fail"
- Dynamic impact resistance (functional requirement)	6.4.1.3	-	Tested acc. to 7.4.1.3 and declared as "Pass" or "Fail"
- Dynamic impact resistance (Passive safety)	6.4.1.4	-	Tested acc. to EN 12767 and declared as "Pass" or "Fail"
VISIBILITY CHARACTERISTICS, as:			
a) CHROMATICITY COORDINATES and LUMINANCE , jointly covered by:			
- Daylight chromaticity and luminance factor	6.3.1	-	Tested acc. to 7.3.1 and declared as "Pass" or "Fail"
DURABILITY, as:			
- Resistance to corrosion	6.4.1.5	-	Tested acc. to ISO 9227 or EN ISO1461 and declared as "Pass" or "Fail" and corresponding class
- Resistance to UV radiation (accelerated natural weathering)	6.4.1.6, 6.3.1 and 6.4.1.2	-	Tested acc. to EN ISO 877:1996, method A (i.e. natural) for 2 years and declared as "Pass" or "Fail"

Table ZA.2 – Scope and relevant clauses

Construction product: Retroreflector			
Intended uses: For incorporation into an assembly of delineator intended to be installed permanently for vehicular and pedestrian traffic uses			
Essential characteristics	Requirement clauses in this standard	Levels and/or classes	Notes
RELEASE OF DANGEROUS SUBSTANCES		See Notes 1 and 2 in ZA.1	
PERFORMANCE UNDER IMPACT, as:			
- Dynamic impact resistance	6.4.2.1	-	Tested acc. to 7.4.2.2 and declared as selected class in Table 10
VISIBILITY CHARACTERISTICS, as:			
a) CHROMATICITY COORDINATES and LUMINANCE, jointly covered by:			
- Daylight chromaticity and luminance factor	6.3.2.1 ^{a)}	-	Tested acc. to 7.3.2.1 and declared as "Pass" or "Fail"
- Night-time chromaticity	6.3.2.2	-	Tested acc. to 7.3.2.2 and declared as "Pass" or "Fail"
b) RETRO-REFLECTIVITY, covered by:			
- Retroreflection	6.3.2.3	-	Tested acc. to 7.3.2.3 and declared as "Pass" or "Fail" and corresponding class acc. to Table 5, Table 6 or Table 7
DURABILITY, as:			
- Resistance to corrosion	6.4.1.5 ^{b)}	-	Tested acc. to ISO 9227 or EN ISO1461 and declared as "Pass" or "Fail" and corresponding class
- Water resistance	6.4.2.3	-	Tested acc. to 7.4.2.4 and declared as "Pass" or "Fail"
- Resistance to UV radiation (accelerated natural weathering)	6.4.2.4, 6.3.2.2, 6.3.2.3 and 6.4.2.1	-	Tested acc. to EN ISO 877:1996, method A (i.e. natural) for 2 years and declared as "Pass" or "Fail"
a) Applicable only for retroreflectors of type R1.			
b) Applicable only on metalized retroreflectors.			

Table ZA.3 – Scope and relevant clauses

Construction product: Assembled delineator (delineator posts fitted with retroreflectors)			
Intended uses: For permanent installation for vehicular and pedestrian traffic uses			
Essential characteristics	Requirement clauses in this standard	Levels and/or classes	Notes
RELEASE OF DANGEROUS SUBSTANCES			See Notes 1 and 2 in ZA.1
MECHANICAL RESISTANCES, to horizontal loads, for:			
- delineator post	6.4.1.1	-	See relevant line in Table ZA.1
PERFORMANCE UNDER IMPACT, for:			
- delineator post	6.4.1.2, 6.4.1.3 and 6.4.1.4	-	See relevant line in Table ZA.1
- retroreflector	6.4.2.1	-	See relevant line in Table ZA.2
VISIBILITY CHARACTERISTICS, as:			
a) CHROMATICITY COORDINATES and LUMINANCE, jointly covered for:			
- delineator post	6.3.1	-	See relevant line in Table ZA.1
- retroreflector	6.3.2.1 ^{a)} 6.3.2.2	-	See relevant line in Table ZA.2
b) RETRO-REFLECTIVITY, for:			
- retroreflector	6.3.2.3	-	See relevant line in Table ZA.2
DURABILITY, for:			
- delineator post	6.4.1.5, 6.4.1.6, 6.3.1 and 6.4.1.2	-	See relevant line in Tables ZA.1
- retroreflector	6.4.1.5 ^{b)} , 6.4.2.3, 6.4.2.4, 6.3.2.2, 6.3.2.3 and 6.4.2.1	-	See relevant line in Table ZA.2
a) Applicable only for retroreflectors of type R1.			
b) Applicable only on metalized retroreflectors.			
NOTE Further information on the relevant characteristics, including the proxy ones (where applied) are specified in the relevant line of the referred Tables ZA.1 and ZA.2, together with the CE marking examples.			

The requirement on a certain characteristic is not applicable in those Member States (MSs) where there are no regulatory requirements on that characteristic for the intended use of the product. In this case, manufacturers placing their products on the market of these MSs are not obliged to determine nor declare the performance of their products with regards to this characteristic and the option "No performance determined" (NPD) in the information accompanying the CE marking (see ZA.3) may be used. The NPD option may not be used, however, for durability and where the characteristic is subject to a threshold level.

ZA.2 Procedure for attestation of conformity of assembled delineator and/or of their components

ZA.2.1 System of attestation of conformity

The system of attestation of conformity of assembled delineator, as defined in Table ZA.3, and/or of their components, as defined in Table ZA.1 or ZA.2, in accordance with the Decision of the European Commission 96/579/EC of 1996-06-24 (see *OJEU L254 of 1996-10-08*), as amended by 1999/453/EC of 1999-06-18 (see *OJEU L178 of 1999-07-14*), as given in Annex III of the mandate for circulation fixtures is shown in Table ZA.4 for the indicated intended uses and relevant level or class.

Table ZA.4 — System of attestation of conformity

Product(s)	Intende d use(s)	Level(s) or class(es)	Attestation of conformity system(s)
Road traffic signs and traffic control devices installed permanently for vehicular and pedestrian traffic uses: - delineator posts and retroreflectors	For circulation areas	-	1
System 1: See Annex III, Section 2, point (i) of Directive 89/106/EEC, without audit-testing of samples.			

The attestation of conformity of assembled delineator, as defined in Table ZA.3, and/or of their components, as defined in Table ZA.1 or ZA.2, shall be according to the evaluation of conformity procedures indicated in Table ZA.5 resulting from application of the clauses of this or other European Standard indicated therein.

Table ZA.5 — Assignment of evaluation of conformity tasks for assembled delineators and/or of their components under system 1

Tasks		Content of the task	Evaluation of conformity clauses to apply
Tasks under the responsibility of the manufacturer	Factory production control (FPC)	Parameters related to characteristics of Tables ZA.1 to ZA.3, relevant for the intended use, which performance to be declared	9.1 and 9.3 with link to EN 12899-4
Tasks under the responsibility of the product certification body	Initial type testing	Characteristics of Tables ZA.1 to ZA.3, relevant for the intended use, which performance to be declared	9.1 and 9.2 with link to EN 12899-5
	Initial inspection of factory and of FPC	Parameters related to characteristics of Tables ZA.1 to ZA.3, relevant for the intended use, which performance to be declared	9.1 and 9.3 with link to EN 12899-4
	Continuous surveillance, assessment and approval of FPC	Parameters related to characteristics of Tables ZA.1 to ZA.3, relevant for the intended use, which performance to be declared	9.1 and 9.3 with link to EN 12899-4

ZA.2.2 EC certificate of conformity

When compliance with the conditions of this annex is achieved, the certification body shall draw up a certificate of conformity (i.e. EC certificate of conformity), which entitles the manufacturer to affix the CE marking. The certificate shall include:

- a) name, address and identification number of the certification body,
- b) name and address of the manufacturer, or his authorised representative established in the EEA, and place of production,

NOTE The manufacturer may also be the person responsible for placing the product onto the EEA market, if he takes responsibility for CE marking.

- c) description of the product (i.e. type, identification, use),
- d) provisions to which the product conforms (i.e. Annex ZA of this EN),
- e) particular conditions applicable to the use of the product (e.g. provisions for use under certain conditions),
- f) the number of the certificate,
- g) conditions of validity of the certificate, where applicable,
- h) name of, and position held by, the person empowered to sign the certificate.

The above mentioned certificate shall be presented in the language or languages accepted in the Member State in which the product is intended to be used.

ZA.3 CE marking and labelling

ZA.3.1 General

The manufacturer or his authorized representative, established within the EEA, is responsible for the affixing of the CE marking, which consists of the CE-marking symbol, as given by Directive 93/68/EEC, and the appropriate accompanying information.

ZA.3.2 CE marking on the product (i.e. simplified CE making)

The following information shall accompany the CE-marking symbol, placed on each product (i.e. either on assembled delineator, as defined in Table ZA.3, or on any of their components, as defined in Table ZA.1 or ZA.2), or given on a label attached to it/them, all representing the simplified CE marking:

NOTE 1 An assembled delineator, as defined in Table ZA.3, can bear only one CE marking. In this case its components, which are defined in Table ZA.1 or ZA.2, cannot not bear their own CE markings.

- a) identification number of the notified certification body,
- b) name or identifying mark of the manufacturer,

NOTE 2 Registered address of the manufacturer may also be added but only in the complete CE marking (see ZA.3.3).

- c) reference to this European Standard and the year of its publication (i.e. EN 12899-3:2010),
- d) description of the product and its intended use:
 - generic name of the product, as:
 - Delineator post (see Table ZA.1), or

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- Retroreflector (see Table ZA.2), or
- Assembled delineator (see Table ZA.3);
- intended use of the product, as:
 - For incorporation into an assembly of delineators intended to be installed permanently for vehicular and pedestrian traffic uses (see Table ZA.1 or ZA.2), or
 - For permanent installation for vehicular and pedestrian traffic uses (see Table ZA.3);
- type of product (for products in Table ZA.1 or ZA.2).

NOTE 3 The information on intended use is to be given in the complete CE marking only (see ZA.3.3).

Figure ZA.1 gives an example of such simplified CE marking to be given on each product.

 0123	<i>CE-conformity marking symbol given in Directive 93/68/EEC</i>
AnyCo Ltd	<i>Identification number of the notified product certification body</i> <i>Name or identifying mark of the manufacturer</i> <i>NOTE Registered address of the manufacturer may be added.</i>
EN 12899-3:2010 Assembled delineator	<i>Number of the European Standard and the year of its publication</i> <i>Description of the product</i>

Figure ZA.1 — Example of a simplified CE marking on the product

ZA.3.3 CE marking in the accompanying documents (i.e. complete CE making)

ZA.3.3.1 General

The CE-marking symbol and the information a) to d), already listed in ZA.3.2, together with the following ones, shall be given on the packaging or in the commercial documents, accompanying each product (i.e. delineator, as defined in Table ZA.3, or any of their components, as defined in Table ZA.1 or ZA.2), all representing the complete CE marking:

- a) last two digits of the year in which the CE marking was affixed;
- b) number of the EC certificate of conformity;
- c) performances on the following product's essential characteristics, as they are listed either in Table ZA.3 or in Table ZA.1 or ZA.2, which are to be declared for the relevant intended uses and, where relevant, expressed as "Pass" for the pass/fail requirements (where necessary), or "NPD" (i.e. No performance determined), namely for:
 - c.1) release of dangerous substances: see Notes 1 and 2 in ZA.1;
 - c.2) mechanical resistance to horizontal loads: as defined in 6.4 and declared for the following products as given in:
 - for delineator post, in Table ZA.1, or
 - for retroreflector, in Table ZA.2, or

- for assembled delineator, in Table ZA.3;
- c.3) performance under impact: declared for the following products as given in:
- for delineator post, in Tables ZA.1, or
 - for retroreflector, in Table ZA.2, or
 - for assembled delineator, in Table ZA.3;
- c.4) visibility characteristics: declared for the following products as given in:
- for delineator post, in Table ZA.1, or
 - for retroreflector, in Table ZA.2, or
 - for assembled delineator, in Table ZA.3;
- c.5) durability: declared for the following products as given in:
- for delineator post, in Table ZA.1, or
 - for retroreflector, in Tables ZA.2, or
 - for assembled delineator, in Table ZA.3.

The “No performance determined” (NPD) option may not be used for durability and where the characteristic is subject to a threshold level. Otherwise, the NPD option may be used when and where the characteristic, for a given intended use, is not subject to regulatory requirements in the Member State(s) of destination.

In addition to any specific information relating to dangerous substances given in the examples of the CE marking below, the product should also be accompanied, when and where required and in the appropriate form, by documentation listing any other legislation on dangerous substances for which compliance is claimed, together with any information required by that legislation.

NOTE 1 European legislation without national derogations need not be mentioned.

NOTE 2 Affixing the CE marking symbol means, if a product is subject to more than one directive that it conforms to all applicable directives.

ZA.3.3.2 Complete CE marking on delineator post (see Table ZA.1)

Figure ZA.2 gives an example of the complete CE marking to be given in the commercial documents, accompanying the packaging of delineator post, as defined in Table ZA.1.

 0123	CE-conformity marking symbol given in Directive 93/68/EEC
AnyCo Ltd, Po Box 21, B – 1050 11	Identification number of the notified product certification body
0123-CPD-00234	Name or identifying mark of the manufacturer, including the registered address of the manufacturer. Last two digits of the year in which the marking was affixed
EN 12899-3:2010	No. of the EC certificate of conformity Number of European Standard and the year of its publication

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<p align="center">Delineator post; Type D1 for incorporation into an assembly of delineator installed permanently for vehicular and pedestrian traffic uses</p>		<p><i>Description of the product and its intended use</i></p> <hr/> <p><i>Performances on essential characteristics, which are to be declared for the relevant intended use</i></p>
RELEASE OF DANGEROUS SUBSTANCES	NPD	
MECHANICAL RESISTANCE, as:		
- Resistance to horizontal loads	WL1 - Pass	
PERFORMANCE UNDER IMPACT, as:		
- Dynamic impact resistance (material requirement)	Pass	
- Dynamic impact resistance (functional requirement)	Pass	
- Dynamic impact resistance (passive safety)	Pass	
VISIBILITY CHARACTERISTICS, as:		
CHROMATICITY COORDINATES and LUMINANCE, by:		
- Daylight chromaticity & luminance factor	Pass	
DURABILITY, as:		
- Resistance to corrosion	SP1 - Pass	
- Resistance to UV radiation (accelerated natural weathering)	Pass	

Figure ZA.2 — Example of a complete CE marking of the delineator post given in the accompanying documents

ZA.3.3.3 Complete CE marking on retroreflector (see Table ZA.2)

Figure ZA.3 gives an example of the complete CE marking to be given in the commercial documents, accompanying the packaging of the retroreflector, as defined in Table ZA.2.

0123		<p><i>CE-conformity marking symbol given in Directive 93/68/EEC</i></p> <p><i>Identification number of the notified product certification body</i></p>
AnyCo Ltd, Po Box 21, B – 1050 11 0123-CPD-00234		<p><i>Name or identifying mark of the manufacturer, including the registered address of the manufacturer.</i></p> <p><i>Last two digits of the year in which the marking was affixed</i></p> <p><i>No. of the EC certificate of conformity</i></p>
<p align="center">EN 12899-3:2010 Retroreflector, Type R1 for incorporation into an assembly of delineator, installed permanently for vehicular and pedestrian traffic uses</p>		<p><i>Number of European Standard and the year of its publication</i></p> <p><i>Description of the product and its intended use</i></p>
RELEASE OF DANGEROUS SUBSTANCES	NPD	<p><i>Performances on essential characteristics, which are to be declared for the relevant intended use</i></p>
PERFORMANCE UNDER IMPACT, as:		
- Dynamic impact resistance	DH1	
VISIBILITY CHARACTERISTICS, as:		
a) CHROMATICITY COORDINATES and LUMINANCE, by:		
- Daylight chromaticity & luminance factor	Pass	

- Night-time chromaticity	Pass
b) RETRO-REFLECTIVITY, covered by:	
- Retroreflection	Class 2 - Table 5 - Pass
DURABILITY, as:	
- Corrosion resistance	SP1 - Pass
- Water resistance	Pass
- Resistance to UV radiation (accelerated natural weathering)	Pass

Figure ZA.3 — Example of a complete CE marking of the retroreflector given in the accompanying documents

ZA.3.3.4 Complete CE marking on assembled delineator (see Table ZA.3)

Figure ZA.4 gives an example of the complete CE marking to be given in the commercial documents, accompanying the packaging of an assembled delineator consisting of:

- a delineator post (see Table ZA.1), and
- a retroreflector (see Table ZA.2).

 0123	
AnyCo Ltd, Po Box 21, B – 1050 11 0123-CPD-00234	
EN 12899-3:2010 Assembled delineator for permanent installation for vehicular and pedestrian traffic uses Components: - delineator post, and - retroreflector,	
RELEASE OF DANGEROUS SUBSTANCES	NPD
MECHANICAL RESISTANCE, to horizontal loads:	
For delineator:	
- Resistance to horizontal loads	WL1 - Pass
PERFORMANCE UNDER IMPACT:	
For retroreflector:	
- Dynamic impact resistance	DH1
For delineator:	
- Dynamic impact resistance (material requirement)	Pass
- Dynamic impact resistance (functional requirement)	Pass

CE-conformity marking symbol given in Directive 93/68/EEC

Identification number of the notified product certification body

Name or identifying mark of the manufacturer, including the registered address of the manufacturer.

Last two digits of the year in which the marking was affixed

No. of the EC certificate of conformity

Number of European Standard and the year of its publication

Description of the product and its intended use incl. its components

Performances on essential characteristics, which are to be declared for the relevant intended use

EN 12899-3:2007/prA1:2010 (E)

- Dynamic impact resistance (passive safety)	Pass
VISIBILITY CHARACTERISTICS, as:	
a) CHROMATICITY COORDINATES and LUMINANCE, by:	
For retroreflector:	
- Daylight chromaticity & luminance factor	Pass
- Night-time chromaticity	Pass
For delineator:	
- Daylight chromaticity & luminance factor	Pass
b) RETRO-REFLECTIVITY:	
For retroreflector:	
- Retroreflection	Class 2 - Table 5 - Pass
DURABILITY:	
For retroreflector:	
- Corrosion resistance	SP1 - Pass
- Water resistance	Pass
- Resistance to UV radiation (accelerated natural weathering)	Pass
For delineator:	
- Corrosion resistance	SP1 - Pass
- Resistance to UV radiation (accelerated natural weathering)	Pass

Figure ZA.4 — Example of complete CE marking of assembled delineator, consisting of a delineator post and a retroreflector, given in the accompanying documents