



**NSAI**  
Standards

Irish Standard  
I.S. EN 1790:2013

# Road marking materials - Preformed road markings

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## I.S. EN 1790:2013

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**NSAI**  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

**Sales:**  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

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English Version

## Road marking materials - Preformed road markings

Produits de marquage routier - Marquages routiers  
préfabriqués

Straßenmarkierungsmaterialien - Vorgefertigte  
Markierungen

This European Standard was approved by CEN on 5 April 2013.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION  
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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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## Foreword

This document (EN 1790:2013) has been prepared by Technical Committee CEN/TC 226 “Road equipment”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2014, and conflicting national standards shall be withdrawn at the latest by July 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1790:1998.

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 the Construction Product Directive (89/106/EEC), see informative Annex ZA, which is an integral part of this document.

Compared with the previous version, the following changes have been introduced:

- Scope updated;
- references updated (Clause 2) and terms and definitions added (Clause 3);
- requirements updated by making reference to EN 1436, EN 1824 and EN 13197;
- test methods updated by making reference to EN 1436, EN 1824 and EN 13197;
- evaluation of conformity (Clause 6) amended;
- Annexes A to F amended;
- Annex ZA introduced.

This European Standard belongs to the following package of inter-related European Standards:

- EN 1790, *Road marking materials — Preformed road markings* (the present document),
- EN 1824, *Road marking materials — Road trials*,
- prEN 1871:2008, *Road marking materials — Paint, cold plastic and thermoplastic marking materials – Physical properties*,
- EN 12802, *Road marking materials — Laboratory methods for identification*,
- EN 13197, *Road marking materials — Wear simulator Turntable*,
- EN 13212, *Road marking materials — Requirements for factory production control*,
- EN 13459, *Road marking materials — Sampling from storage and testing*.

**I.S. EN 1790:2013**

**EN 1790:2013 (E)**

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## **Introduction**

A particular category of road marking materials, used for horizontal signalisation, are preformed, i.e. manufactured products in sheet form, ready for use on the road. They can be applied by means of adhesives, pressure or heat, with or without the use of a primer. Preformed road marking materials can be linear, in pieces of a certain length or in rolls. They can also be cut out in the form of symbols or signs or parts of them, making it possible to assemble them on the road to achieve the desired shape.

Preformed road marking materials can be designed for use as permanent or temporary road markings. In both cases, they can be applied with a view to later removal and therefore the specific property of "removability" can be required.

Preformed road marking products are defined as Tape, preformed Cold Plastic road marking or preformed Thermoplastic road marking with or without drop-on materials.

Except for Thermoplastic road markings with drop-on materials, all the other type of products are fully finished during manufacturing and do not change significantly their properties during application.

They are completely covered by this standard.

Thermoplastic road markings with drop-on materials need the addition of drop-on materials during application on the road and therefore they are in some way similar to the thermoplastic products covered by prEN 1871:2008.

This standard provides all the relevant information and cross references to prEN 1871:2008 in order to cover these kinds of products.

## 1 Scope

This European Standard specifies construction products which are white and yellow, removable or non-removable, preformed road marking materials, under the form of tape, cold plastic, thermoplastics with or without drop-on materials, to be used for permanent and/or temporary road markings in circulation areas. Other products and colours intended for road markings are not covered in this European Standard.

This European Standard also gives specifications for the evaluation of conformity for white and yellow, removable or non-removable, preformed road materials under the form of tape, cold plastic, thermoplastics with or without drop-on materials to be used for permanent and/or temporary road markings in circulation areas including type testing and factory production control.

This European Standard includes an Annex ZA for tapes, preformed cold plastic road marking and thermoplastic road marking with and without drop-on materials with the clauses addressing the provisions of the EU Construction Product Directive for permanent road marking.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1436:2007+A1:2008, *Road marking materials — Road marking performance for road users*

EN 1824:2011, *Road marking materials — Road trials*

prEN 1871:2008, *Road marking materials — Paint, cold plastic and thermoplastic marking materials — Physical properties*

EN 12802, *Road marking materials — Laboratory methods for identification*

EN 13197:2011, *Road marking materials — Wear simulator Turntable*

EN 13212:2011, *Road marking materials — Requirements for factory production control*

EN 13459, *Road marking materials — Sampling from storage and testing*

EN ISO 4892-3, *Plastics — Methods of exposure to laboratory light sources — Part 3: Fluorescent UV lamps (ISO 4892-3)*

EN ISO 11358, *Plastics — Thermogravimetry (TG) of polymers — General principles (ISO 11358)*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **preformed road marking**

factory produced road marking system (or product), in sheet or roll form, capable of being applied to the substrate with adhesive, primer, pressure, heat or a combination of these

#### **3.1.1**

##### **tape**

preformed multilayer road marking, capable of adapting itself to the texture of the substrate, which may be precoated with pressure-sensitive adhesive, capable of being stuck to the substrate without heating the material, while the photometric, colorimetric and skid resistance characteristics are not significantly modified during application



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