

English version

**Elastomeric seals - Material requirements for pipe joint seals  
used in water and drainage applications - Part 1: Vulcanized  
rubber**

Garnitures d'étanchéité en caoutchouc - Spécification des  
matériaux pour garnitures d'étanchéité pour joints de  
canalisations utilisées dans le domaine de l'eau et de  
l'évacuation - Partie 1: Caoutchouc vulcanisé

Elastomer-Dichtungen - Werkstoff-Anforderungen für  
Rohrleitungs-Dichtungen für Anwendungen in der  
Wasserversorgung und Entwässerung - Teil 1:  
Vulkanisierter Gummi

This amendment A2 modifies the European Standard EN 681-1:1996; it was approved by CEN on 25 February 2002.

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

This amendment 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 Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

## **Foreword**

This document (EN 681-1:1996/A2:2002) has been prepared by Technical Committee CEN/TC 208 "Elastomeric seals for joints in pipework and pipelines", the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by September 2002, and conflicting national standards shall be withdrawn at the latest by December 2003.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Foreword	<p>Insert the following immediately after the existing second paragraph:          'This standard has been prepared under a mandate issued to CEN by the European Commission and the European Free Trade Association and supports Essential Requirements of EU Directives.</p> <p>For the relationship with the EU Directives, see informative annex ZA, which is an integral part of this standard.'</p>
Page 4, 3	Change "classes" to "categories".
Page 4, 3, Table 1	Change "class" to "category".
Page 6, 6	Delete heading "6 Quality".
Page 6, 6.1	Delete sub-clause.
Page 6, 6.2	<p>Delete heading, insert "6 Factory production control"</p> <p>Add before first sentence "The manufacturer shall establish and maintain an effective documented factory production control system, so as to achieve conformance with product standards".</p>
Page 7, 6.3	Delete this sub-clause.
Page 7, 10 c)	Change "class" to "category".
Page 7, 10 d)	Delete.
Page 7, 10 e)	Change to "d)".
Page 7, 10 f)	Change to "e)".
Page 7, 10 g)	Change to "f)".
Page 7, 10 h)	Change to "g)".
Page 8, Table2	In second row delete "classes", insert "categories".
Page 9, Table3	In second row delete "classes", insert "categories".
Page 11, Table5	In second row delete "class", insert "category".

## Annex ZA (informative)

### Clauses of this European standard addressing the provisions of the EU Construction Products Directive

#### ZA.1 Scope and clauses of the European standard addressing the essential characteristics of the EU Construction Products Directive

With reference to Clause 1, this Annex ZA has the same scope as Clause 1, excluding uses in contact with water intended for human consumption.

This European standard has been prepared under a Mandate given to CEN by the European Commission and the European Free Trade Association.

The clauses of this European standard shown in table ZA.1 below meet the requirements of the Mandate given under the EU Construction Products Directive (89/106).

Compliance with these clauses confers a presumption of fitness of elastomeric seals – vulcanised rubber covered by this European standard for their intended use.

**WARNING:** Other requirements and other EU Directives, not affecting the fitness for intended use may be applicable to a construction product falling within the scope of this standard.

**NOTE** 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** An informative database of European and national provisions on dangerous substances is available at the Construction web site on EUROPA (CREATE, accessed through <http://europa.eu.int>).

**Table ZA.1 - Relevant clauses**

Construction product :		Elastomeric seals – Vulcanised rubber	
Intended uses:		For pipe joints used in water and drainage applications, excluding uses in contact with water intended for human consumption	
Requirement/characteristic from the mandate	Requirement clauses in this standard	Mandated levels and/or classes	Notes
Dimensional tolerance	4.2.1	-	See ISO 3302
Tightness: gas and liquid	4.2.3, 4.2.4, 4.2.5, 4.2.8	Threshold values – see tables 2 and 3	See ISO 48, ISO 37, ISO 815, and ISO 1817
Release of dangerous substance	None	-	
Durability	4.2.6, 4.2.7, 4.2.9	Threshold values – see tables 2 and 3	See ISO 188, ISO 1431-1 and ISO 3384

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 regard to this characteristic and the option “No performance determined” (NPD) in the information accompanying the CE marking (see Clause ZA.3) may be used. The NPD option may not be used, however, where the characteristic is subject to a threshold level.

## ZA.2 Systems of attestation of conformity

The system of attestation of conformity for elastomeric seals – vulcanised rubber indicated in table ZA.1, in accordance with the decision of the Commission “1999/472/EC of 1 July 1999” as given in Annex III of the mandate M 131 “Pipes, tanks and ancillaries not in contact with water intended for human consumption”, is shown in table ZA.2 for the indicated intended use(s).

**Table ZA.2 - Attestation of conformity system**

Product	Intended use	Level or class	Attestation of conformity system(s)
Joint sealings	In installations for the transport/disposal/storage of water not intended for human consumption	-	4
System 4: See CPD Annex III.2.(ii), third possibility, initial type testing by the manufacturer and manufacturer's factory production control			

The attestation of conformity of the products in table ZA.1 shall be based on the evaluation of conformity procedure resulting from the clauses of this EN indicated in table ZA.3.

**Table ZA.3. - Assignment of evaluation of conformity tasks**

Tasks		Content of the task	Clauses to apply
Tasks for the manufacturer	(1) Factory production control (F.P.C)	Parameters related to all characteristics of table ZA.1	6 and 7 (excluding 7.3)
	(2) Initial type testing	All characteristics of table ZA.1	7.3

For each product, the manufacturer shall draw up a declaration of conformity (EC Declaration of conformity) including the following information:

- Name and address of the manufacturer, or his authorised representative established in the EEA,
- Description of the product (type, identification, use,),
- Provisions to which the product conforms (e.g. Annex ZA of this EN),
- Particular conditions applicable to the use of the product
- Name of, and position held by, the person empowered to sign the declaration on behalf of the manufacturer or of his authorised representative.

This declaration of conformity entitles the manufacturer to affix the CE marking, as described in ZA.3, and shall be presented in the official language or languages of the Member State of the EU in which the product is to be used.

### ZA.3 CE Marking

The manufacturer or his authorised representative established within the EU or EFTA is responsible for the affixing of the CE marking.

The CE conformity symbol to affix shall be in accordance with Directive 93/68/EC and shall be shown on the packaging and/or on the accompanying commercial documents, together with the following information :

- Name or identifying mark of the producer
- The last two digits in which the marking is affixed
- Registered address of the producer
- Product type, e.g. seal material and hardness category
- Reference to this European Standard
- Intended use

In addition to specific information relating to dangerous substances, if any, 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 European legislation without national derogations need not be mentioned.

Figure ZA.1 gives an example of the information to be given on the packaging and/or on the commercial documents.

<p style="text-align: center;"><b>CE</b> 00</p>	<p>CE conformity marking consisting of the 'CE' symbol given in directive 93/68/EC Last two digits of year of affixing of CE marking</p>
<p>Any Co Ltd, P.O. Box 21, B – 1050</p>	<p>Name or identifying mark and registered address of the producer</p>
<p>SBR – 60 EN 681-1  GB</p>	<p>Seal material – Category Number of European Standard Intended use</p>

**Figure ZA.1 - Example CE marking information**