

CPD	Cement, Concrete, Mortar and Aggregate Sector Group 02 of Notified Bodies for the Construction Products Directive 89/106/EEC	NB-CPD/SG02-04/001rev3 AGGREGATES Issued: 24.01.2003 Revision date: 12.09.2003 Revision N°: 3
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**POSITION PAPER
FOR THE CERTIFICATE OF FACTORY PRODUCTION CONTROL
RELATED TO AGGREGATES**

IN COMPLIANCE WITH ANNEX ZA OF :

- EN 12620** **Aggregates for concrete**
- EN 13043** **Aggregates for bituminous mixtures and surface treatments
for roads, airfields and other trafficked areas**
- EN 13055-1** **Lightweight aggregates – Part 1 : Lightweight aggregates for
concrete and mortar**
- EN 13139** **Aggregates for mortar**
- EN 13383-1** **Armourstone – Part 1 : Specification**
- EN 13242** **Aggregates for unbound and hydraulically bound materials
for use in civil engineering work and road construction**
- EN 13450** **Aggregates for railway ballast**

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3	12.09.2003	Annex 4, example added, comment removed	WG4 08.09.2003 & SG02 09.09.2003

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1. FOREWORD

This document was prepared by Sector Group 02 of the Notified Bodies working under Construction Products Directive 89/106/EEC. It is intended to give guidance to notified bodies in preparing equivalent procedures in relation to the issue of a certificate of Factory Production Control (FPC) as required in Annex ZA of EN 13043 and /or EN 13055-1 and/or EN 13139 and/or 13383-1 and/or EN 12620 and/or EN13242 and/or EN 13450 on request from a manufacturer of aggregates.

The scope of this document is only the initial assessment of the factory production control (FPC) and the continuous surveillance once the certificate has been issued. Initial type testing (ITT) does not fall under the tasks of the notified certification body for EC certification.

This document is guidance only. In all cases the relevant standard prevails.

To maintain equivalent use and interpretation of this document by the NBs it is important that any questions are communicated to the secretary of the NB-CPD/SG02. The address of the secretary can be found on the CIRCA web site.

2. SCOPE AND FIELD OF APPLICATION

This document defines and describes the sequence of the main position papers to be followed by a notified certification body in granting and maintaining a certificate of factory production control for aggregates on the basis of the requirements of Annex ZA of EN 13043 and/or EN 13055-1 and/or EN 13139 and/or 13383-1 and/or EN 12620 and/or EN13242 and/or EN 13450.

3. REFERENCE LIST

- | | |
|------------|--|
| EN 12620 | Aggregates for concrete |
| EN 13043 | Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas |
| EN 13055-1 | Lightweight aggregates – Part 1 : Lightweight aggregates for concrete and mortar |
| EN 13139 | Aggregates for mortar |
| EN 13383-1 | Armourstone – Part 1 : Specification |
| EN 13242 | Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction |
| EN 13450 | Aggregates for railway ballast |

Guidance paper B – The Definition of Factory Production Control in Technical Specifications For Construction Products.

Guidance paper K – The attestation of conformity system and the role and tasks of the notified bodies in the field of the Construction Products Directive.

Position paper NB-CPD 01/002-rev 04: Guidance on the participation of the notified bodies in the attestation of conformity under the Constructions Products Directive 89/106/EEC. (Annex 5 contains the relevant parts for the attestation of conformity for level 2+.)

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4. TERMINOLOGY

For terms used in this document that are not covered in the documents listed in clause 3, explanations are given below.

4.1 Factory

Production unit at a location identified by the manufacturer responsible for the final properties and composition of products.

4.2 Manufacturer

Company having full control and responsibility for the quality of the delivered aggregates produced by one or more factories (production units) and carrying out the factory production control. Typical activities are selection of raw material, crushing, washing, sieving, mixing and filling of transport media and, if this is the responsibility of the manufacturer, transport.

Depending on the point of release, transport can also be part of the FPC.

4.3 Supplier / trader

A company buying a CE-marked aggregate and selling it under its own (brand) name without changing the composition and properties of the aggregate. The aggregate is sold with the CE marking of the manufacturer.

When the trader mixes different aggregates to make a new aggregate, he is considered to be a manufacturer and therefore he has to carry out the appropriate factory production control (including the tests) and to affix his own CE-marking on the product or accompanying documents.

4.4 Non-compliances

In the context of these operating procedures the following degrees of non-compliances are applied. These are criteria, recommendations based on a large experience in the certification activity.

Observation:

non-compliance which affords no risk to the functioning of the factory production control but must be dealt with before the next inspection of the factory production control;

Remark:

non-compliance which affords no risk to the effective functioning of the factory production control when dealt with within a limited period of time, for example 2 months;

Non-conformity:

non-compliance that affects the functioning and the effectiveness of the factory production control in such a way that products that do not comply with the relevant standard can be put on the market. This kind of non-compliance normally makes it necessary to repeat all or part of the inspection of the factory production control.

5. CERTIFICATION PROCESS

The scheme to be followed by the Notified Certification Body to grant and maintain the Certificate of Factory production Control is divided into four main "operative phases":

1. the application (see chapter 6),
2. the initial inspection of the factory and the FPC (see chapter 7) and
3. the issuing of the certificate (see chapter 8)

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4. the continuous surveillance of FPC (see chapter 10).

In the case where a notified certification body subcontracts any of his tasks, he remains nevertheless responsible for the whole certification process. All the contacts with the manufacturer have to be done through the notified certification body.

6. APPLICATION

See 2.2 of annex 5 for general information.

The application for certification of factory production control is submitted by the manufacturer or his legal representative to the notified body. A model for an application form is given in annex 1.

There should be one application form for one Factory Production Control System with a list of all the factories under the same FPC.

Before a certificate can be issued a certification agreement between the manufacturer and the notified certification body must be signed. This can take place immediately after the application form has been submitted or before the issuing of a first certificate, depending on the certification regulations of the notified certification body.

The agreement will be dealing with (among others) the following items:

- reference to the general certification regulations of the notified certification body;
- financial obligations;
- starting date, duration of the agreement and terms for discontinuation of the contract;
- specific regulations about liability if these are not mentioned in the general regulations;
- declaration of confidentiality,
- appeal procedures

7. INITIAL INSPECTION OF THE FACTORY AND THE FACTORY PRODUCTION CONTROL

See 2.3 of annex 5 for general information.

Before carrying out the initial inspection of each factory and of the FPC the notified certification body shall verify whether all articles described in the annexes named "Factory Production Control" of the appropriate following standards EN 13043 and/or EN 13055-1 and/or EN 13139 and/or 13383-1 and/or EN 12620 and/or EN13242 and/or EN 13450 and the annex 2 of the present document are dealt with appropriately in the production control manual and related documents.

If this is not the case the Notified Certification Body will inform the manufacturer about the non-compliances found and request corrective actions and an updated version of the documents.

When the documentation is accepted by the notified certification body a date for the initial inspection of the factory and the FPC will be agreed upon. During this initial inspection the notified certification body will investigate whether the documented system is implemented in accordance with the requirements of EN 13043 and/or EN 13055-1 and/or EN 13139 and/or 13383-1 and/or EN 12620 and/or EN13242 and/or EN 13450. A checklist, prepared by the notified certification body, should support the inspector in this task. Items found not to be in compliance are classified as observations, remarks and non-conformities and reported at the end of the initial inspection. An indicative checklist is given in annex 3 of the present position papers.

The initial type testing (ITT) is not part of the factory production control but must have been carried out by the manufacturer in accordance with the test methods described in the standard. The ITT has to comply with the list given in annex 3.

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The content of the ITT is the responsibility of the manufacturer, and the certification body shall see evidence of ITT to check the results from the factory production control for similarity and credibility.

Test results from FPC must comply with the requirements of the appropriate part of EN 13043 and / or EN 13055-1 and/or EN 13139 and/or 13383-1 and/or EN 12620 and/or EN13242 and/or EN 13450 and the product specification. The manufacturer's stated values and a procedure for the evaluation of the test results must therefore be part of the production control manual of the manufacturer. The manufacturer shall be aware that national provisions (concerning which properties mentioned in the harmonised standard to be tested and conformity criteria) might apply.

Test methods used by the manufacturer should be the methods prescribed in the relevant standards. Alternative methods can be used if the results of those methods have a reliable correlation with the results of the reference method. This evidence is submitted to the agreement of the NB. Determination of the correlation of test results should be carried out on a regular basis using a procedure described in the production control manual. In case of doubt the method prescribed in the standard prevails.

Checks on proper functioning and reliability should be carried out on equipment used and/or mentioned in the relevant test methods and/or EN 932-5. As provided for in EN 932-5, alternative methods can be used for the calibration of the equipment. Those alternative methods can be described in national documents.

ITT results of the aggregates mentioned in the application form must be available for at least one produced batch at the time of the initial inspection.

A report containing the results of the assessment of the works production control manual and related documents and the initial inspection of the factory will be sent to the manufacturer within an agreed time after the initial inspection, normally not longer than 6 weeks.

The manufacturer shall inform the notified certification body about the corrective actions taken by him within 3 months from receipt of the report of the initial inspection.

If the notified certification body classifies the corrective actions as not sufficient the notified certification body may cease the certification process and the applicant will be informed of this decision.

8. ISSUE OF THE CERTIFICATE

See 2.4 of annex 5 for general information.

The notified certification body shall issue a "certificate of factory production control" when the initial inspection has been conducted with a positive result. The applicant will be informed about this as soon as possible.

In the case where non-compliances have been detected during the initial inspection, all non-conformities and remarks must be dealt with to the satisfaction of the notified certification body. The notified certification body will acknowledge this in writing and a certificate of factory production control will be issued by the notified certification body to the factories concerned.

A certificate is issued covering those types of aggregates requested by the manufacturer as defined in the appropriate part of the related EN as long as the products are produced under the same system of factory production control.

Annex 4 gives an example of a certificate. Translations in other languages of the Formats exemplified in the Position Paper of GNB-CPD could be found on CIRCA.

The certificate of factory production control shall have a unique number, which shall be allocated by the notified certification body. The number is divided into three parts, separated by hyphens as follows:

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1. the notification number of the notified certification body;
2. the acronym CPD;
3. a unique reference number allocated by the notified certification body for each individual certificate. This unique reference number shall be composed of a number or an alpha-numeric combination consistent with the procedures of the notified certification body.

For each factory a single certificate is issued, independently from the number of the produced aggregates.

9. Extension of a certificate

See 2.4.1 of annex 5 for general information.

A manufacturer can use the application form to ask the notified certification body for an extension of the certificate for additional types of products complying with different technical specifications but manufactured under the same system of FPC in the same factory.

For each factory a single certificate is issued, independently from the number of the produced aggregates.

10. CONTINUOUS SURVEILLANCE OF FPC

See 2.5 of annex 5 for general information.

The notified certification body exercises the surveillance of the FPC on the basis of the requirements of the relevant harmonised standard and on the basis of the initial inspection of the factory and FPC.

At least once per year (To be confirmed by TC 154) an announced inspection of the factory production control will take place.

In case a company operates many factories under the same FPC sampling should be applied using the IAF rules (IAF guidance on application of ISO/IEC guide 62–Issue 2; annex 3–Multisite Certification/registration).

All the factories shall be visited within a period of 3 years.

The manufacturer is required to have informed the notified certification body of any changes to the factory production control, including modifications to the factory. Failure to do so may result in a non-compliance being raised by the notified certification body.

It will be the decision of the notified certification body whether or not a further inspection visit is necessary at the time of the announcement of any such changes.

The notified certification body shall examine the frequencies and results of testing within the scope of the inspection of factory production control to verify that these are effectively functioning.

Autocontrol testing and the necessity to do so is the responsibility of the manufacturer.

The test equipment and test methods used also fall under the scope of factory production control and shall be assessed as part of the initial inspection of FPC and may be assessed also during each surveillance visit.

NOTE : Comparative testing could be a suitable mean to verify the results of the manufacturer obtained under FPC.

The product technical specification includes minimum frequencies of testing required by the manufacturer under the factory production control of the aggregates. Those frequencies can be decreased (as mentioned in the Factory Production control annex of each standard) but the reasons shall

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be stated in the factory production control manual and the notified certification body has to check that these are reasonably documented.

Where the notified certification body determines that the manufacturer is not implementing the defined frequencies of continuous audit/batch testing, a non-compliance should be raised.

The notified certification body shall inform the manufacturer about the results of all continuous surveillance visits and shall also inform the manufacturer of any non-compliances (observations, remarks or non-conformities) it has raised.

The notified certification body may decide to carry out further visits if serious deficiencies in the factory production control are identified.

Where a non-compliance is identified, it is the responsibility of the manufacturer to investigate the cause of the problem and report to the notified certification body effective corrective action measures appropriate to the nature of the non-compliance raised.

In the case of non-implementation of suitable corrective action or continuing non-compliance (non-conformities), the notified certification body should advise the manufacturer of the action it intends to take.

The notified certification body may decide to withdraw the certificate of factory production control and, in such cases, the manufacturer will be informed as soon as this is practicable.

NOTE : The notified certification body must provide the possibility for appeals against its decisions.

Only in the case when the certificate of factory production control is withdrawn as a result of continuing non-conformities, the notified certification body shall inform the competent authority in its Member State

11. NON – COMPLIANCES

Non compliances apply only to the FPC and its implementation.

A non-compliance occurs when a manufacturer fails to follow the requirements detailed in his production control manual or fails to take action following a failure in the specified systems, equipment calibration or a product with test results outside the limit values stated in his FPC system. The notified certification body has to determine whether the non-compliance can be classified as a “observation”, “remark” or “non-conformity” as defined in 4.4.

The presence of one or more results outside the limit values should not be considered as a non-compliance. However, the absence of corrective actions in the production control manual to cover such deviations or the absence of corrective actions as such do qualify as a non-compliance.

12. LIST OF CERTIFICATES OF FACTORY PRODUCTION CONTROL

The notified certification body should as a minimum keep an up-to-date list of the certificates of factory production control it has issued. This list shall be made available on request.

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ANNEX 1 MODEL FOR AN APPLICATION FORM

**APPLICATION FORM ^A FOR SERVICES TO PROVIDE A CERTIFICATE OF FACTORY
PRODUCTION CONTROL**

REQUIRED AS PART OF THE EVALUATION OF CONFORMITY FOR AGGREGATES TO
EN 13043 and / or EN 13055-1 and/or EN 13139 and/or 13383-1 and/or EN 12620 and/or EN13242
and/or EN 13450

I the undersigned ^B, in my capacity as representative of ^C
.....,
with its registered office in
^D,
as a manufacturer, ^E
as authorised representative established in the EEA^F, of the manufacturer located in
^G

in compliance with Annex ZA of the relevant part of EN 13043 and / or EN 13055-1 and/or EN 13139
and/or 13383-1 and/or EN 12620 and/or EN13242 and/or EN 13450 given below, apply, for the first
time and only to this notified certification body, for the issue of a EC certificate of factory production
control for the aggregates type(s) mentioned below, produced at the factory(ies) of
^H,
with its registered office at
^I

Aggregate type/ Part of EN 13043 and / or EN 13055-1 and/or EN 13139 and/or 13383-1 and/or EN
12620 and/or EN13242 and/or EN 13450:^K

Additional information: ^L,
Additional identification:^M

It is further declared that:

- type testing of the product(s) has been / is being* performed under the responsibility of the above manufacturer
- the factory in question has/ has not* received any other valid EC certificate of factory production control.

(*delete as appropriate).

In addition I declare I have read the current rules and conditions of this notified certification body for this service under this directive and fully accept all the provisions.

I authorise the access of the inspectors appointed by the notified certification body to carry out the required initial inspection of the factory and of the factory production control, and continuous surveillance of the same as required.

The following documents are attached in support of this application:

- production control manual describing the FPC system
- list of related quality documents
- others ^N

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I authorise the notified certification body to use the above data in order to manage the relevant procedures.

I further authorise that all correspondence of the notified certification body concerning this matter is to be addressed to the named contact person.....^o

Place, Date

Signature

^A The Application shall be drawn up by the manufacturer or by his authorised representative established in the EEA.

The application shall be presented in one original, written in a language previously accepted by the receiving notified certification body.

^B Name and surname of applicant appointed by the manufacturer.

^C Acronym and full name of the applicant and relevant business name.

^D Full address.

^E If applicable.

^F If applicable.

^G Name of the extra country.

^H Name of the factory(ies), full address, phone and fax numbers and e-mail address of the factory(ies). It may be permissible to attach a separate list giving the information required for that item.

^I If applicable.

^K Type of aggregate according to the relevant standard(s). It may be permissible to attach a separate list combining information required for items K,L and M in the case of submitting a large range of product types.

^L If applicable. It may be permissible to attach a separate list in the case of a large range of product type, see K.

^M If applicable. It may be permissible to attach a separate list in the case of a large range of product types, see K.

^N Any other needed or applicable document.

^O Name of person and job title.

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Annex 2 Guidance on the Factory Production Control annexes

Scope :

The object of this document is to complement the annexes "Factory Production Control" of the different standards listed in the normative references listed at point 3 of position paper.

1. Introduction

The present guide defines and clarifies in the "factory production control" in the context of CE marking and the normative annexes of the standards by considering the following activities.

- organization
- control procedures
- management of production
- inspection and tests
- records
- control of non conforming products
- handling, storage and conditioning in production areas
- transport and packaging
- training of personnel

2. Organization

2.1. Responsibility, authority and abilities

Organization chart (the names corresponding to the functions of the personnel should be put in an annex or kept on the factory) to describe the responsibilities required for all the functions.

2.2 Appointment of a management representative for factory production control

The management representative could have other duties in the factory. He can also be the management representative for more than one factory. He may have an assistant but he has overall responsibility.

2.3 Management review

The management shall review at a frequency of at least once per year, and as soon as necessary, the system of production control to ensure it remains effective. During this review, any conformity or non conformities shall be examined and the need for modifying the system shall be assessed. Records of such reviews shall be maintained.

The following points shall be considered during each review:

- analysis and synthesis of non conformities
- analysis of customer complaints *in order to check if the FPC has to be modified*
- analysis of corrective actions and their effectiveness
- suitability of the factory production control system
- conformity of the products

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3. Control procedures

3.1 Documents and data control

The manufacturer describes in his factory production control Manual (or in any other document) the modes and arrangements concerning the management of the different documents (preparation, codification, checking, approval, distribution, copying, archiving, withdrawal,...).

Comment : the factory production control manual can be constituted by different documents but all the documents asked for in the FPC annex of the standards are supposed to constitute the factory production control manual.

3.2 Sub-contract services

In the event that the manufacturer decides on subcontracting one or more operations (see the list below), suitable means of control shall be defined (definition of the work, means of order, acceptance of the work,...).

For information, the following list of operations can be subcontracted :

- removal and disposal of the spoiled materials at the top of the quarry
- plan of mining
- drilling
- mining
- extraction
- conveyance of the raw material
- production
- storage
- loading
- transport
- tests

Comment : The contracts are part of the Factory Production control system. The notified body has only to verify that those contracts exist and that suitable means of control exist and are applied .

3.3 Knowledge of the raw material

The manufacturer shall retain documentation detailing the nature of the raw material, its source and one or more maps showing the location and extraction plan.

The notified body has to verify that the manufacturer has a procedure to check what regulations are valid in the Member states where the product will be used. The manufacturer keeps the responsibility.

For information, the list of the dangerous substances can be found on :

<http://europa.eu.int/comm/enterprise/construction/internal/dangsub/dangcount.htm>

4. Management of production

The manufacturer shall ensure that the system of factory production control satisfies the following conditions :

- he shall have instructions for maintaining and adjusting processing equipment :
 - o flow sheets of the processing equipment
 - o instruction for using and/or controlling the processing equipment
 - o daily reports (repairs, quantities produced, problems,..)
- he shall have instructions for preservation of the storage
 - o map of the storage area
 - o identification, marking (at least size and any other indication necessary to identify the

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- product)
 - separation of the different stocks
- samples have to be taken, when necessary, to ensure that the conformity at the point of delivery is maintained
- the identification of the source is only :
 - the name of the manufacturer and the site (ex : quarry xxxx)
 - simplified petrographic description in accordance with EN 932-3 (for example : alluvial)
 - size
 - production mode (for example : crushed,...)

The terms manufacturer and trader have been defined in the position papers for the aggregates §4.2 and 4.3.

5. Inspection and test

5.1 General

When the manufacturer does not subcontract the inspection and tests, he has to undertake the following:

- make available the necessary facilities and material
- make the inspection and test in accordance with his quality manual
- respect the points 5.2 and 5.3 of the present document

If the manufacturer sub contracts partially or totally the tests, he shall provide evidence that the tests conform to the standards,

- for the laboratories who have been accredited through EN 17025 for the scope of aggregates.
- for the laboratories, which do not have any accreditation, the manufacturer has to prove that the results of the laboratory are reliable (identification of the samples,...), and the notified body has to verify that the tests are carried out according to the Factory Production Control Manual and the standards.

5.2 Measuring and test equipment

Alternative methods to EN 932-5 can be applied.

5.3 Frequency and location of inspection, sampling and tests

The manufacturer gives for each sample :

- the location
- the batch concerned
- the date
- the name of the people who made the sampling
- the designation of the product.

Tests frequencies are given in a control plan

Sampling shall be carried out as specified in EN 932-1.

Definitions concerning the **periods of production** to which test frequencies are related :

- 1 week of production : **5 days** of production in a period of 3 months *
- 1 month of production : **20 days** of production in a period of 6 months *
- 1 year of production : **at least one day** of production in the year

* from the first day of production

6. Records

For the documents below recording, filing and archiving (location, length,...) are to be given.

- management review report
- non conformity records
- customers complaints records
- records concerning products sampling, tests, conformity controls and Ce marking

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- records concerning subcontracted activities
- daily production logs
- records concerning measuring and tests equipment
- records concerning the training of the employees.

7. Control of non conforming products

All-cases of non-conforming products (including customer complaints concerning a non-conforming product) shall be recorded by the manufacturer, investigated and if necessary corrective action shall be taken.

NOTE : In the Guidance paper B (§ 3.2.4 : treatment of products which do not conform) it is also requested that "if products have been delivered before the results are available, a procedure and record should be maintained for notifying customers."

8. Handling, storage and conditioning in production areas

The manufacturer shall make the necessary arrangements to :

- ensure that the aggregates will not be polluted during handling inside the quarry
- ensure the stocks are protected from pollution
- use suitable methods to store the aggregates
- ensure the cleanliness of the stocking areas, the handling equipments and the circulating tracks
- ensure that measures are taken to limit segregation
- make available storage and handling procedures for employees responsible for handling and storage
- identification of the stocks.

9. Transport and packaging

9.1 Transport

For those aggregates delivered by the manufacturer, he remains responsible for the quality during the transportation.

For those aggregates that are sold at the production facility, the customer is responsible for the measures that are taken to prevent modification of the product.

9.2 Packaging

When aggregates are packaged, the manufacturer has to print on the packaging any precautions regarding safe handling and storage.

10. Training of personnel

The manufacturer shall establish a training plan.

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Annex 3 Indicative checklist for initial inspection and surveillance visits

CHECKLIST FOR INITIAL INSPECTION OF FACTORY AND FPC FOR AGGREGATES

	Questions to be considered	C/O/R/NC*	Answers
1	<p>For which product/standard has factory production control been established and an initial type testing of the product been carried out ? (only for products under system of attestation of conformity level 2+)</p> <p>Is there more than one factory covered by the same FPC system?</p>		See table 1 on next page
2	<p>Organization</p> <p>2.1 Responsibility and authority Is the chain of responsibility of all personnel related to production work defined and effective?</p> <p>2.2 Management representative for factory production control Is there a management representative for the factory? Has he authority to ensure that the requirements are implemented and maintained ?</p> <p>2.3 Management review Is the FPC system reviewed by the management at least once a year? Are there records of those reviews ?</p>		
3	<p>Control procedures Has a factory production control manual been established ?</p> <p>3.1 Document and data control Is there a procedure concerning the management of documents and data relevant to the requirements of FPC? Are there described responsibilities for approval, issue, distribution , administration of internal and external documents and data and for preparation, issue and recording of changes?</p> <p>3.2 Sub-contract services Are there operations covered by FPC which are subcontracted ? Has the manufacturer stated a mean of control for all these subcontracted activities ? Is it implemented ?</p> <p>3.3 Knowledge of the raw material Are there documents concerning the source and the nature of the raw material ? Have maps of the location and extraction plans been established? Has the manufacturer identified any risk of presence of dangerous substances in the raw material (depending on the place of use) ?</p>		

* C : conformity established ; O : observation ; R : remark ; NC : non conformity

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TABLE 1 : LIST OF AGGREGATES (AND STANDARDS) CONCERNED BY CE MARKING WITH LEVEL OF ATTESTATION OF CONFORMITY 2+ FOR WHICH ITT HAS BEEN CARRIED OUT AND FPC ESTABLISHED

Size of the product	EN 13043	EN 13242	EN 12620	EN 13139	EN 13055-1	EN 13383-1	EN 13450	Comments
.../... mm								
.../... mm								
.../... mm								
.../... mm								
.../... mm								
.../... mm								
.../... mm								
.../... mm								
.../... mm								

For each product tick the standard(s) for which ITT has been carried out and FPC has been established

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	Questions to be considered	C/O/R/NC*	Answers
4	<p>Management of the production</p> <p>a) Are there procedures to identify and control the materials (incoming, in-process, finished)? <i>(these can include procedures for maintaining and adjusting processing equipment, inspection or testing material sampled during processing, modifying the process during bad weather)</i> ? Are they implemented ?</p> <p>b) Are there procedures to identify and control any hazardous materials and to ensure that they do not exceed the limits valid in the place of use ? Are they implemented ?</p> <p>c) Are there procedures to ensure that material is put in stock in a controlled manner and the storage locations and their contents are identified ? Are they implemented ?</p> <p>d) are there procedures to ensure that material taken from stock has not deteriorated ? Are they implemented ?</p> <p>e) Is the product identifiable up to the point of sale (source and type) ?</p>		
5	<p>Inspection and test</p> <p>5.1 General Are all the facilities, equipment and trained personnel to carry out the required inspections and tests available (including subcontracted tests)?</p> <p>5.2 Equipment Are the frequencies of calibration in accordance with EN 932-5 ? Are there procedures for the use of the equipment? Does the personnel have written instructions to carry out the tests ? Is the equipment uniquely identified ? Are there records of the calibration ?</p> <p>5.3 Frequency and location of inspection, sampling and tests Is there a document describing the frequency and nature of inspections ? Are the frequencies of sampling and tests in accordance with the relevant tables of the annex FPC of each standard concerned by CE marking? In case the tests frequencies are decreased, are the reasons for this decreasing stated in the FPC manual ?</p>		
6	<p>Records Are the results of FPC recorded ? Are the records kept at least the statutory period ?</p>		

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	Questions to be considered	C/O/R/NC*	Answers
7	Control of non conforming products Are all the cases of non conforming products (including those related to customer complaints) recorded ? Are all the cases of non conforming products investigated ? If necessary are corrective actions taken ?		
8	Handling, storage and conditioning in production areas Have the manufacturer made the necessary arrangements to avoid : - contamination of product ? - segregation ? or to ensure cleanliness of handling equipments and stocking areas ?		
9	Transport and packaging 9.1 Transport Has the manufacturer identified in his FPC manual the extent of his responsibility in relation to storage and delivery ? 9.2 Packaging Are the methods used for packaging suitable to avoid degrading the aggregate ? If precautions are needed during handling and storage within customer's premises, are the packaged aggregate marked on the packaging or accompanying documents?		
10	Training of personnel Has the manufacturer established procedures for the training of all personnel involved in the FPC system ? Are those procedures maintained ? Are there records of that training ?		

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The following questions have to be added for surveillance visits

	Questions to be considered	C/O/R/NC*	Answers
1	<p>For which new product/standard has a factory production control been established and an initial type testing of the product been carried out ? (only for products under system of attestation of conformity level 2+)</p> <p>Are there new factory(ies) covered by the same FPC system?</p> <p>Has the production and/or the technical specification changed since the previous inspection of FPC ? (If yes)Has the manufacturer adapted the documentation accordingly ? (If yes)Has the manufacturer advised the notified certification body of these changes ?</p>		
3	<p>Does the manufacturer still apply a factory production control system that covers the certified products, and is there a valid certificate ?</p>		
11	<p>Are the products duly marked with the CE marking according to ZA annex of relevant standard? <i>(for aggregates, does the accompanying document mentions all the needful information) ?</i></p>		

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EN 12620 : Aggregates for concrete							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
4	Geometrical requirements						
4.2	Aggregate sizes	none	Y	Y	Designation d/D		
4.3	Grading (tolerances at mid-size sieves)	EN 933-1	Y	Y	Tolerance/category		1/week
4.3.6	Grading of filler aggregates	EN 933-10	Y	Y	Tolerance/category		1/week
4.4	Shape of coarse aggregates	EN 933-3	IR			Test frequency applies to crushed aggregates. Test frequency for uncrushed gravel depends on the source and may be reduced	1/month
		EN 933-4	IR	Y	Category		
4.5	Shell content of coarse aggregate	EN 933-7	IR	Y	Category	Coarse aggregates of marine origin	1/year
4.6	Fines content	EN 933-1	Y	Y	Category		1/week
4.7	Fines quality	EN 933-1	IR			Only when required in accordance with the conditions specified in annex D	1/week
	Fines content <3% sand equivalent value	EN 933-8					
	methylene blue test	EN 933-9					

The first part of the table (clause, property, test method and required) is taken from the main part of the standard.

The second part of the table (ITT or ZA, notes) is taken from the ZA annex of the standard

The third part of the table (notes/reference, minimum test frequency) is taken from the Factory Production Control annex.

In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"

In the column "ITT or ZA " the letter "y" signifies that the characteristic is given in one of the tables ZA1.a or ZA1.b and is part of the ITT and covered by the CE marking.

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EN 12620 : Aggregates for concrete							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
5	Physical requirements						
5.2	Resistance to fragmentation of coarse aggregates	EN 1097-2 cl. 5 EN 1097-2 cl. 6	IR IR	Y	Category	for high strength concrete	2/year
5.3	Resistance to wear of coarse aggregates	EN 1097-1	IR	Y	Category	Aggregates for surface courses only	1/2years
5.4.1	Resistance to polishing	EN 1097-8	IR	Y	Category	Aggregates for surface courses only	1/2years
5.4.2	Resistance to surface abrasion	EN 1097-8, annex A	IR	Y	Category	Aggregates for surface courses only	1/2years
5.4.3	Resistance to abrasion from studded tyres	EN 1097-9	IR	Y	Category	Only in regions where studded tyres are used	1/2years
5.5	Particle density and water absorption	EN 1097-6	IR	Y	Declared value		1/year
5.6	Bulk density	EN 1097-3	IR				
5.7.1	Freeze/thaw resistance of coarse aggregate	EN 1367-1 or EN 1367-2	IR IR	Y	Categories		1/2years
5.7.2	Volume stability - drying shrinkage	EN 1367-4	IR	Y	Pass/fail threshold value		1/5years
5.7.3	Alkali-silica reaction	provisions valid in the place of use	IR	Y	Declared value	in accordance with the provision valid in the place of use	when required and in case of doubt

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EN 12620 : Aggregates for concrete							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
6	Chemical requirements						
6.2	Chlorides	EN 1744-1, cl. 7	IR	Y	Declared value	Aggregate of marine origin	½years 1/week
6.3.1	Acid soluble sulfate	EN 1744-1, cl. 12	IR	Y	Category	Blastfurnace slags Other than blastfurnace slag	2/year 1/year
6.3.2	Total sulfur	EN 1744-1 cl.11	IR	Y	Pass/fail threshold value		
6.4.1	Constituents which alter the rate of setting and hardening of concrete	EN 1744-1 cl. 15.1 EN 1744-1 cl. 15.2 EN 1744-1 cl. 15.3 EN 1744-1 cl. 14.2	IR	Y	Pass/fail threshold value	humus content fulvo acid (when humus content is high) comparative strength test – stiffening time lightweight organic contaminants	1/year 1/year 1/year 2/year
6.4.2.1	Dicalcium silicate disintegration of air-cooled blastfurnace slag	EN 1744-1 cl. 19.1	Y	Y	Pass/fail threshold value	Blastfurnace slag only	2/year
6.4.2.2	Iron disintegration of air-cooled blastfurnace slag	EN 1744-1 cl. 19.2	Y	Y	Pass/fail threshold value	Blastfurnace slag only	2/year
6.5	Carbonate content of fine aggregates for concrete pavement surface courses	EN 196-21, cl.5 EN 1744-1 cl.12.3	IR	Y	Declared value	Fine aggregate for concrete surface courses	½years
8	Designation and description						
8.1	Type of aggregate (simplified petrographic description)	EN 932-3	Y				1/3years

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The third part of the table (notes/reference, minimum test frequency) is taken from the Factory Production Control annex.

In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"
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EN 12620 : Aggregates for concrete							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
B	Description of coarseness/fineness of fine aggregates						
	Percentage passing the 0,5 mm sieve fineness modulus	EN 933-1 EN 933-1	IR				
H	Dangerous substances						
H.3.3 H.4	in particular : Emission of radioactivity Release of heavy metals Release of polyaromatic carbons		IR		See third paragraph of ZA.3	unless otherwise specified, only when necessary for CE marking purposes (see annex ZA)	when required and in case of doubt

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The second part of the table (ITT or ZA, notes) is taken from the ZA annex of the standard

The third part of the table (notes/reference, minimum test frequency) is taken from the Factory Production Control annex.

In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"

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EN 13043 : Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
4.1	Geometrical requirements						
4.1.2	Aggregate sizes	none	Y	Y	Designation d/D		
4.1.3	Grading (overall limits and tolerances at mid-size sieves)	EN 933-1	Y IR	Y	Tolerance/category		1/week
4.1.4	Fines content	EN 933-1	Y				1/week
4.1.5	Fines quality	EN 933-9	if $f > 3\%$	Y	Categories	only when the fines content of the fine or all-in aggregate with $D \leq 8\text{mm}$, exceeds the value specified in 4.1.5	2/year
4.1.6	Shape of coarse aggregates	EN 933-3 EN 933-4	IR IR	Y	Categories	Test frequency only applies to crushed or broken aggregate. Test frequency for rounded gravel depends on the source and may be reduced	1/month
4.1.7	Percentage of crushed and broken surfaces in coarse aggregates	EN 933-5	IR	Y	Category	Only for gravel aggregate	1/month
4.1.8	Angularity of fine aggregates	EN 933-6 – clause 8	IR			Only for fine aggregate	1/month

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The third part of the table (notes/reference, minimum test frequency) is taken from the Factory Production Control annex.

In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"

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EN 13043 : Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
4.2	Physical requirements						
4.2.2	Resistance to fragmentation of coarse aggregates	EN 1097-2 cl. 5 EN 1097-2 cl. 6	IR IR	Y	Category		1/year
4.2.3	Resistance to polishing of coarse aggregates for surface courses	EN 1097-8	IR	Y	Category	Aggregates for wearing courses only	1/year
4.2.4	Resistance to surface abrasion	EN 1097-8, annex A	IR	Y	Category	Aggregates for surface courses only	1/year
4.2.5	Resistance to wear of coarse aggregates	EN 1097-1	IR	Y	Category		1/year
4.2.6	Resistance to abrasion of studded tyres of coarse aggregates to be used for surface courses	EN 1097-9	IR	Y	Category	Aggregates for surface courses only	1/year
4.2.7.1	Particle density	EN 1097-6 clause 7, 8 or 9	Y	Y	Declared value		1/2years
4.2.7.2	Water absorption	EN 1097-6 clause 7, 8 or 9	Y				
4.2.8	Bulk density	EN 1097-3	IR				
4.2.9.1	Water absorption value as a screening test for freeze-thaw resistance	EN 1097-6 clause 7 or annex B	IR				
4.2.9.2	Resistance to freezing and thawing	EN 1367-1 or EN 1367-2	IR IR	Y	Category		1/2years
4.2.10	Resistance to thermal shock	EN 1367-5	IR	Y	Declared value		1/year
4.2.11	Affinity of coarse aggregates to bituminous binders	EN 12697-11	IR	Y	Declared value		1/year
4.2.12	"Sonnenbrand" of basalts	EN 1367-3 and EN 1097-2	if signs known	Y	Category	in cases of doubt where signs of "sonnenbrand" are known	2/year

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 In the column "ITT or ZA" the letter "Y" signifies that the characteristic is given in one of the tables ZA1.a or ZA1.b and is part of the ITT and covered by the CE marking.

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EN 13043 : Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
4.3	Chemical requirements						
4.3.2	Chemical composition	EN 932-3	IR	Y	Declared value		1/5years
4.3.3	Coarse lightweight contaminants >2mm	EN 1744-1 cl. 14.2 EN 196-2	IR			Aggregates D>2mm in cases of doubt	1/year
4.3.4.1	Dicalcium silicate disintegration of air-cooled blastfurnace slag	EN 1744-1 cl.19.1	IR	Y	Pass/fail	air-cooled blastfurnace slags only	2/year
4.3.4.2	Iron disintegration of air-cooled blastfurnace slag	EN 1744-1 cl. 19.2	IR	Y	Pass/fail	air-cooled blastfurnace slags only	2/year
4.3.4.3	Volume stability of steel slag aggregate	EN 1774-1 cl. 19.3 or EN 196-2 for MgO content	IR	Y	Categories	steel slag aggregate only	2/year

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EN 13043 : Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
5	Requirements for fillers aggregates						
5.2.1	Grading	EN 933-10	Y for added filler	Y	Pass/fail threshold value		1/week
5.2.2	Harmful fines	EN 933-9	Y	Y	Category		2/year
5.3.1	Water content	EN 1097-5	Y for added filler				2/week
5.3.2	Particle density	EN 1097-7	Y	Y	Declared value		2/year
5.3.3.1	Vooids of dry compacted filler (Rigden)	EN 1097-4	IR	Y	Category		
5.3.3.2	"Delta ring and ball" of filler aggregate for bituminous mixtures	EN 13179-1	IR	Y	Category		2/year
5.4.1	Water solubility	EN 1744-1 cl. 16	IR	Y	Category		1/2years
5.4.2	Water susceptibility	EN 1744-4	IR	Y	Declared value		1/2years
5.4.3	Carbonate content of limestone filler aggregate	EN 196-21	IR				1/year
5.4.4	Calcium hydroxide content of mixed filler	EN 459-2	IR				1/year
5.5.2	"Bitumen number" of added filler	EN 13179-2	IR the consistency of the production shall be measured on at least one of those properties	Y	Category		
5.5.3	Loss on ignition of coal fly ash	EN 1744-1 cl. 17		Y	Declared value with threshold value		
5.5.4	Particle density of added filler	EN 1097-7					1/week
5.5.5	Loose bulk density in kerosene	EN 1097-3, annex B					
5.5.6	Blaine test	EN 196-6		Y	Declared value with threshold value		

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In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"

<p style="text-align: center;">CPD</p>	<p style="text-align: center;">Cement, Concrete, Mortar and Aggregate Sector Group 02 of Notified Bodies for the Construction Products Directive 89/106/EEC</p>	<p style="text-align: center;">NB-CPD/SG02-04/001rev3</p> <p style="text-align: center;">AGGREGATES</p> <p style="text-align: center;">Issued: 24.01.2003 Revision date: 12.09.2003 Revision N°: 3</p>
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In the column "TTT or ZA" the letter "Y" signifies that the characteristic is given in one of the tables ZA1.a or ZA1.b and is part of the ITT and covered by the CE marking.

CPD	Cement, Concrete, Mortar and Aggregate Sector Group 02 of Notified Bodies for the Construction Products Directive 89/106/EEC	NB-CPD/SG02-04/001rev3 AGGREGATES Issued: 24.01.2003 Revision date: 12.09.2003 Revision N°: 3
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EN 13043 : Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
B	Dangerous substances						
B.3.3	in particular : Emission of radioactivity						
B.4	Release of heavy metals Release of polyaromatic carbons		IR	Y	See third paragraph of ZA.3	unless otherwise specified, only when necessary for CE marking purposes (see annex ZA)	when required and in case of doubt

The first part of the table (clause, property, test method and required) is taken from the main part of the standard.

The second part of the table (ITT or ZA, notes) is taken from the ZA annex of the standard

The third part of the table (notes/reference, minimum test frequency) is taken from the Factory Production Control annex.

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EN 13055-1 : Lightweight aggregates - Part 1 : Lightweight aggregates for concrete, mortar and grout							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
4	Physical requirements						
4.2.1	Loose bulk density	EN 1097-3	Y	Y	Declared value		1/day or 1/1000m3
4.2.2	Particle density	EN 1097-6 annex C	IR				1/month or 1/20000 m3
4.3	Aggregate size	none	Y				
4.4	Grading	EN 933-1	Y	Y	Declared value		1/week or 1/5000 m3
4.5	Shape of coarse aggregates	none	IR	Y	Description		
4.6	Fines	EN 933-1	IR				1/week or 1/5000 m3
4.7	Grading of fillers	EN 933-10	IR	Y	Declared value		1/week
4.8	Water absorption	EN 1097-6 annex C	IR	Y	Declared value		1/month or 1/20000 m3
4.9	Water content	EN 1097-5	IR				1/day or 1/1000 m3
4.10	Crushing resistance	annex A of EN 13055-1	IR	Y	Declared value		1/month or 1/20000 m3
4.11	Percentage of crushed particles	EN 933-5	IR	Y	Declared value		2/year
4.12	Resistance to disintegration	annex B of EN 13055-1	IR	Y	Declared value	only to be determined in absence of long term experience	2/year
4.13	Freezing and thawing resistance	annex C of EN 13055-1	IR	Y	Declared value	only to be determined in absence of long term experience	2/year

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In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"

<p style="text-align: center;">CPD</p>	<p style="text-align: center;">Cement, Concrete, Mortar and Aggregate Sector Group 02 of Notified Bodies for the Construction Products Directive 89/106/EEC</p>	<p style="text-align: center;">NB-CPD/SG02-04/001rev3</p> <p style="text-align: center;">AGGREGATES</p> <p style="text-align: center;">Issued: 24.01.2003 Revision date: 12.09.2003 Revision N°: 3</p>
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EN 13055-1 : Lightweight aggregates - Part 1 : Lightweight aggregates for concrete, mortar and grout							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
5	Chemical requirements						
5.2	Chlorides	EN 1744-1 cl. 7	Y	Y	Declared value		2/year
5.3.1	Acid-soluble sulfate	EN 1744-1 cl. 12	Y	Y	Declared value		2/year
5.3.2	Total sulfur	EN 1744-1 cl. 11	Y	Y	Declared value		2/year
5.4	Loss on ignition (for ashes only)	EN 1744-1 cl. 17	Y	Y	Declared value		2/year
5.5	Organic contaminants	EN 1744-1 cl. 15.3	Y	Y	Declared value		2/year
5.6	Alkali-silica reactivity of natural lightweight aggregates	provisions valid in the place of use	IR	Y	Declared value	in accordance with the provisions valid in the place of use	when required and in case of doubt
F	Dangerous substances						
F.3.3	in particular :		IR		See third paragraph in ZA.3	unless otherwise specified, only when necessary for CE marking purposes (see annex ZA)	when required and in case of doubt
F.4	Release of heavy metals						

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The second part of the table (ITT or ZA, notes) is taken from the ZA annex of the standard

The third part of the table (notes/reference, minimum test frequency) is taken from the Factory Production Control annex.

In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"

In the column "ITT or ZA" the letter "y" signifies that the characteristic is given in one of the tables ZA1.a or ZA1.b and is part of the ITT and covered by the CE marking.

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EN 13139 : Aggregates for mortar							
Clause	Property	Test method	required	ZA	Notes	ITT	minimum test frequency
5	Geometrical requirements						
5.2.1	Aggregate sizes	none	Y	Y	Designation d/D	x	
5.3.1	oversize and undersize limits	EN 933-1	Y	Y	Pass/fail threshold value	x	1/week
5.3.2	typical grading and tolerances		IR			x	
5.3.3	Filler aggregate	EN 933-10	Y	Y	Pass/fail threshold value	x	1/week
5.4.1	Shape of coarse aggregates	EN 933-3	IR	Y	Declared value		
5.4.2	Shell content	EN 933-7	IR	Y	Declared value		1/year
5.5.1	Fines content	EN 933-1	Y	Y	Pass/fail for category		
5.5.2	Fines quality						
	Fines content <3% sand equivalent value	EN 933-1		Y	Pass/fail for category	x	when necessary
	methylene blue test	EN 933-8				x	1/week
		EN 933-9				x	

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The second part of the table (ZA, notes) is taken from the ZA annex of the standard

The third part of the table (ITT, minimum test frequency) is taken from the Factory Production Control annex.

In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"

In the column "ZA" the letter "Y" signifies that the characteristic is given in one of the tables ZA1.a or ZA1.b and is part of the ITT and covered by the CE marking.

In the column "ITT" the letter "x" signifies that the characteristic is part of the ITT.

There are inconsistencies between the column "ITT" and "ZA"

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EN 13139 : Aggregates for mortar							
Clause	Property	Test method	required	ZA	Notes	ITT	minimum test frequency
6	Physical requirements						
6.2.1	Particle density	EN 1097-6	Y	Y	Declared value	x	when required and in case of doubt
6.2.2	Water absorption	EN 1097-6	Y	Y	Declared value	x	when required and in case of doubt
6.2.3	Resistance to freezing and thawing	EN 1367-1 or EN 1367-2	IR	Y	Declared value		when required and in case of doubt
7	Chemical requirements						
7.2	Chlorides for marine aggregates Chlorides for non marine aggregates	EN 1744-1, cl.7	IR	Y	Declared value	x	1/2years 1/week
7.3.1	Acid-soluble sulfate	EN 1744-1 cl.12	IR	Y	Category	x	1/year and in case of doubt
7.3.2	Total sulfur	EN 1744-1 cl. 11	IR	Y	Pass/fail threshold value	x	1/year and in case of doubt
7.4	Constituents which alter the rate of setting and hardening of mortar	EN 1744-1 cl. 15.1 EN 1744-1 cl. 15.2 EN 1744-1 cl. 15.3 EN 1744-1 cl. 14.2	IR	Y	Pass/fail threshold value	x x x x	In case of doubt : 1/week 1/week 1/week when required for a particular end use

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The third part of the table (ITT, minimum test frequency) is taken from the Factory Production Control annex.
In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"
In the column "ZA" the letter "Y" signifies that the characteristic is given in one of the tables ZA1.a or ZA1.b and is part of the ITT and covered by the CE marking.
In the column "ITT" the letter "x" signifies that the characteristic is part of the ITT.

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There are inconsistencies between the column "TTT" and "ZA"

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EN 13139 : Aggregates for mortar							
Clause	Property	Test method	required	ZA	Notes	ITT	minimum test frequency
7	Chemical requirements						
7.5.1	Water soluble matter	EN 1744-1 cl. 16	Y	Y	Pass/fail threshold value	x	when necessary 1/week
7.5.2	Loss on ignition (for ashes only) (applicable to manufactured aggregates only)	EN 1744-1 cl. 17	IR	Y	Pass/fail threshold value	x	when necessary 1/week
7.6.1	Alkali-silica reactivity	provisions valid in the place of use	IR	Y	Declared value		when required and in case of doubt
Clause	Dangerous substances						
E.3.3 E.4	in particular : Emission of radioactivity (for aggregates of radioactive sources intended for use in concrete buildings) Release of heavy metals Release of polyaromatic carbons Release of other dangerous substances		IR		See third paragraph of ZA.3		when required and in case of doubt

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The third part of the table (ITT, minimum test frequency) is taken from the Factory Production Control annex.

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There are inconsistencies between the column "ITT" and "ZA"

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EN 13242 : Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
4	Geometrical requirements						
4.2	Aggregate sizes	none	Y	Y	Designation d/D		
4.3	Grading (tolerances at mid-size sieves)	EN 933-1	Y	Y	Tolerance/category		1/week
4.4	Shape of coarse aggregates	EN 933-3	IR			Test frequency applies to crushed or broken aggregate. Test frequency for rounded gravel depends on the source and may be reduced	1/month
		EN 933-4	IR	Y	Category		
4.5	Percentage of crushed or broken particles and of totally rounded particles in coarse aggregates	EN 933-5	IR	Y	Category	Only for coarse gravel	1/month
4.6	Fines content	EN 933-1	IR	Y	Category		1/week
4.7	Fines quality						
	Fines content <3% sand equivalent value	EN 933-1 EN 933-8 EN 933-9	IR	Y	Pass/fail threshold value/Declared value		1/week
	methylene blue test						

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EN 13242 : Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
5	Physical requirements						
5.2	Resistance to fragmentation of coarse aggregates	EN 1097-2 cl. 5 EN 1097-2 cl. 6	IR IR	Y	Category		2/year
5.3	Resistance to wear of coarse aggregates	EN 1097-1	IR	Y	Category		2/year
5.4	Particle density	EN 1097-6 cl. 7,8 or 9	Y	Y	Declared value	Test method is dependent upon the particle size of the aggregate	1/year
5.5	Water absorption	EN 1097-6 cl. 7,8 or 9	Y	Y	Declared value	Test method is dependent upon the particle size of the aggregate	1/year

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hat the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"
In the column "ITT or ZA" the letter "Y" signifies that the characteristic is given in one of the tables ZA1.a or ZA1.b and is part of the ITT and covered by the CE marking.

EN 13242 : Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
6	Chemical requirements						
6.2	Acid soluble sulfate	EN 1744-1, cl. 12	IR	Y	Category		
6.3	Total sulfur	EN 1744-1 cl.11	IR	Y	Category		
6.4.1	Constituents which alter the rate of setting and hardening of hydraulically bound mixtures	EN 1744-1 cl. 15.1 EN 1744-1 cl. 15.2 EN 1744-1 cl. 15.3	IR	Y	Pass/fail threshold value	Air-cooled blast furnace slags only	1/year 1/year 1/year
6.4.2.1	Volume stability of steel slags	EN 1744-1 cl. 19.3 EN 196-2	IR	Y	Category	Steel slag aggregate only	2/year
6.4.2.2	Dicalcium silicate disintegration of air-cooled blastfurnace slag	EN 1744-1 cl. 19.1	IR	Y	Category	Air-cooled blast furnace slags only	2/year
6.4.2.3	Iron disintegration of air-cooled blastfurnace slag	EN 1744-1 cl. 19.2	IR	Y	Category	Air-cooled blast furnace slags only	2/year
6.4.3	Water soluble constituents	EN 1744-3	IR				
6.4.4	Impurities (wood, glass, plastic,...)	none	IR				
7	Durability requirements						
7.2	"Sonnenbrand" of basalt	EN 1367-3 and EN 1097-2	IR	Y	Category	In cases of doubt where signs of "Sonnenbrand" are known	2/year
7.3	Resistance to freezing and thawing	EN 1097-6 cl. 7 or annex B EN 1367-1 or EN 1367-2	IR	Y	Category		1/2 years
Clause	Dangerous substances						
C.3.3	in particular :		IR		See third paragraph of ZA.3	unless otherwise specified, only when necessary for Ce marking purposes (see annex ZA)	when required and in case of doubt
C.4	Release of heavy metals						

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The third part of the table (notes/reference, minimum test frequency) is taken from the Factory Production Control annex.
 In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "JR" signifies that there is a possibility of "No requirement"
 In the column "ITT or ZA " the letter "y" signifies that the characteristic is given in one of the tables ZA1.a or ZA1.b and is part of the ITT and covered by the CE marking.

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hat the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"
 In the column "ITT or ZA" the letter "Y" signifies that the characteristic is given in one of the tables ZA1.a or ZA1.b and is part of the ITT and covered by the CE marking.

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EN 13383-1 : Armourstone - Part 1 : Specification							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
4	Geometrical requirements						
4.2.1	Coarse gradings	EN 13383-2 cl.5	Y	Y	Pass/fail grading's distribution		1/20000 tons and immediately after a production break of at least 6 months
4.2.2	Light gradings	EN 13383-2 cl.6	Y	Y	Pass/fail mass distribution		1/20000 tons and immediately after a production break of at least 6 months
4.2.3	Heavy gradings	EN 13383-2 cl.6	Y	Y	Pass/fail mass distribution		1/20000 tons and immediately after a production break of at least 6 months
4.3.1	Length to thickness ratio	EN 13383-2 cl.7	Y	Y	Category		1/20000 tons and immediately after a production break of at least 6 months
4.4	Proportion of crushed or broken surfaces	none	IR			Only to armourstone for use in structures, in which rounded pieces of armourstone could lead to instability	1/20000 tons

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EN 13383-1 : Armourstone - Part 1 : Specification							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
5	Physical requirements						
5.2	Particle density	EN 13383-2 cl.8	Y	Y	Declared value		1/year
5.3	Resistance to breakage	EN 1926 annex A	Y/IR	Y	Category	Compressive strength test	1/5years
5.4	Resistance to wear	EN 1097-1 cl. 7	IR	Y	Category	Only to armourstone for a top layer, which is known to be subject to abrasion by sediment	1/2years
5.5	Requirements associated with grouting	none	IR				
5.6	Colour	None	IR				
6	Chemical requirements						
6.2	Impurities	none	Y				
6.3	Water soluble content	EN 1744-3	IR				Each batch

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EN 13383-1 : Armourstone - Part 1 : Specification							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
7	Durability requirements						
7.2.1	Dicalcium silicate disintegration of air-cooled blast furnace slag	EN 1744-1 cl. 19.1	IR	Y	Pass/fail	Blast furnace slag	2/year
7.2.2	Iron disintegration of air-cooled blastfurnace slag	EN 1744-1 cl. 19.2	Y	Y	Pass/fail	Blast furnace slag	2/year
7.2.3	Disintegration of steel slag	EN 13383-2 cl.10	IR	Y	Category	Steel slag	2/year
7.3	Water absorption as a screening test for resistance to freezing and thawing and to salt crystallization	EN 13383-2 cl.8	IR				1/2years
7.4	Resistance to freezing and thawing	EN 13383-2 cl.9	IR	Y	Category		1/2years
7.5	Resistance to salt crystallization	EN 13383-2 cl.8	IR	Y	Category		1/2years
7.6	Sonnenbrand	EN 13383-2 cl.10	IR	Y	Category	In cases of doubt where signs of sonnenbrand are possible in some basalts	2/year
9							
9.1	Simplified petrographic description	EN 932-3	IR			See annex C	1/5years
B	Dangerous substances						
B.3.3	in particular :						
B.4	Emission of radioactivity Release of heavy metals Release of polyaromatic carbons		IR	Y	See third paragraph in ZA.3	unless otherwise specified, only when necessary for Ce marking purposes (see annex ZA)	when required and in case of doubt

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In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"

In the column "ITT or ZA" the letter "Y" signifies that the characteristic is given in one of the tables ZA1.a or ZA1.b and is part of the ITT and covered by the CE marking.

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EN 13450 : Aggregates for railway ballast							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
6	Geometrical requirements						
6.2	Railway ballast size	none	Y	Y	Designation d/D		
6.3	Grading	EN 933-1	Y	Y	Category		1/week
6.4	Fine particles	EN 933-1	Y/IR				1/week
6.5	Fines	EN 933-1	Y/IR	Y	Category		1/week
6.6	Shape of coarse aggregates	EN 933-3	IR	Y	Category		1/month
		EN 933-4	IR				
6.7	Particle length	none	Y/IR				1/month

The first part of the table (clause, property, test method and required) is taken from the main part of the standard.

The second part of the table (ITT or ZA, notes) is taken from the ZA annex of the standard

The third part of the table (notes/reference, minimum test frequency) is taken from the Factory Production Control annex.

In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"

In the column "ITT or ZA" the letter "Y" signifies that the characteristic is given in one of the tables ZA1.a or ZA1.b and is part of the ITT and covered by the CE marking.

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EN 13450 : Aggregates for railway ballast							
Clause	Property	Test method	required	ITT or ZA	Notes	Notes/reference	minimum test frequency
7	Physical requirements						
7.2	Resistance to fragmentation of coarse aggregates	EN 1097-2 cl. 5 (+annex B) EN 1097-2 cl. 6 (+annex B)	IR	Y	Category		2/year
7.3	Resistance to wear of coarse aggregates	EN 1097-1 (+ annex E)	IR	Y	Category		2/year
7.4.1	Resistance to freezing and thawing	EN 1367-1 (+annex F) or EN 1367-2 (+annex G)	IR	Y	Declared value		2/year
7.4.2	Particle density	EN 1097-6 annex B	IR	Y	Declared value		2/year
7.4.3	Water absorption	EN 1097-6 annex B	IR				2/year
7.5	Sonnenbrand	EN 1367-3	when signs are known	Y	Declared value		2/year
8	Harmful components	not allowed					
9	Dangerous substances						
I.3.3	in particular :		IR		At the end of § ZA.3	unless otherwise specified, only when necessary for CE marking purposes (see annex ZA)	when required and in case of doubt
I.4	Release of heavy metals						

The first part of the table (clause, property, test method and required) is taken from the main part of the standard.

The second part of the table (ITT or ZA, notes) is taken from the ZA annex of the standard

The third part of the table (notes/reference, minimum test frequency) is taken from the Factory Production Control annex.

In the column "required", the letter "Y" signifies that the test has to be carried, the two letters "IR" signifies that there is a possibility of "No requirement"

In the column "ITT or ZA" the letter "y" signifies that the characteristic is given in one of the tables ZA1.a or ZA1.b and is part of the ITT and covered by the CE marking.

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Annex 4 Example of a certificate of FPC based on the EN 13043 and / or EN 13055-1 and/or EN 13139 and/or 13383-1 and/or EN 12620 and/or EN13242 and/or EN 13450 standards

Logo, name and address of the notified certification body

**Certificate of Factory Production Control
XXX - CPD - YYY**

In compliance with the Directive 89/106/EEC of the council of European Communities of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to the construction products (Construction Products Directive - CPD), amended by the Directive 93/68/EEC of the Council of European Communities of 22 July 1993, it has been stated that the construction products

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characterised as

**List of EN 13043 and / or EN 13055-1 and/or EN 13139 and/or 13383-1 and/or EN 12620 and/or EN13242
and/or EN 13450 and aggregates types
(example : EN 12620 Aggregates for concrete)**

intended for use in the preparation of

List of uses relative to the previous standards

and produced by the manufacturer

**Name,
address**

in the factory(ies) located at

town / city

is submitted by the manufacturer to initial type testing of the products and factory production control and that the approved body

Name of the certification body

has performed the initial inspection of the factory and of the factory production control and performs the continuous surveillance, assessment and approval of the factory production control.

This certificate attests that all provisions concerning the attestation of factory production control described in Annex ZA of the standard EN 13043 and / or EN 13055-1 and/or EN 13139 and/or 13383-1 and/or EN 12620 and/or EN13242 and/or EN 13450 and in accordance with the procedures given, were applied.

This certificate was first issued on and remains valid as long as the conditions laid down in the harmonised technical specification in reference or the manufacturing conditions in the factory or the factory production control itself are not modified significantly or at the latest until

City, Date

*Authorized signature
Title, Position*

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Annex 5 Guidance on the participation of the notified bodies in the attestation of conformity under the Construction Products Directive 89/106/EEC.

The information in this annex is a copy of relevant parts of the position paper NB-CPD -01/002 - rev 04 Issued: 07 April 2001

The certification of the factory production control under systems 2+ and 2

Under systems 2+ and 2, the task assigned to the notified bodies is the certification of the factory production control based on the Initial inspection of the factory and of the factory production control;

Under system 2+, continuous surveillance, assessment and approval of the factory production control;

2.1 Basic conditions

The basic conditions for issuing a certificate of factory production control are that the applicant follows the general rules as laid down in the harmonised technical specification and, when relevant, the additional guidelines commonly agreed by the relevant sector group of notified bodies.

These additional guidelines may be included in specific documents of the Group of Notified Bodies (GNB), which should also be taken into account. These documents should serve as guidelines to ensure that the attestation of conformity is consistent and equivalent for all manufacturers. They have to be approved by the Advisory Group NB-CPD after having consulted the relevant CEN committee according to the procedure laid down in the CEN Reykjavik Resolutions (October 2000). As far as EOTA-Guidelines are concerned the respective Working Group of EOTA should have been involved.

2.2 Application for a certificate of factory production control

The application shall be made on a special form obtainable from a notified FPC-certification body.

The manufacturer or his authorised representative established within the European Economic Area (further called "the applicant") shall, in his application, refer to the specific product or group of products determined in the relevant Decision of the European Commission and, when relevant, in the additional guidelines. It should normally cover one factory only.

A notified FPC-certification body on acceptance of a completed application form will confirm this to the applicant and provide him with any further information necessary for the processing of his application.

2.3 Initial inspection of the factory and production control

2.3.1 General

After confirmation of the acceptance of the application, the certification body shall make the necessary arrangements with the applicant for the initial inspection, in accordance with the rules of the scheme.

The notified FPC-certification body is responsible for all actions of certification of the factory production control including inspection of the factory and of the factory production control, but should pay particular attention to those characteristics identified as being relevant for FPC in Annex 3 of the mandate. Under system 2+, the notified FPC-certification body is also responsible for surveillance, assessment and approval of the factory production control.

When the inspection of the factory and of the factory production control, as well as the surveillance and assessment of the factory production control are conducted by an inspection body different from the notified FPC-certification body, a report on the performed inspections and assessments is communicated to the notified FPC-certification body.

The inspection body involved in the attestation of conformity is responsible for carrying out its tasks. The certification body is responsible for assembling all the relevant information, verifying that the tasks have been carried out according to the technical specifications and assessing and certifying the factory production control. The notified FPC-certification body shall inform the applicant of the results of the initial inspection. If the notified FPC-certification body is not satisfied that all the requirements for the certification of FPC are being met, it will inform the applicant of those aspects in which his application has failed. If the applicant can show

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that remedial action has been taken by him to meet all requirements within a specified time limit, the notified body concerned will repeat only the necessary parts of the initial inspection procedure. Otherwise the application shall be cancelled.

Re-inspection may not be needed for subsequent applications for the same product.

2.3.2 Assessment of factory production control

Assessment of the applicant's system of factory production control forms part of the initial inspection. This may be done according to the specific guidance agreed by the group of notified bodies for the product.

Ideally, guidance for these elements should be included in the harmonised standard or in the ETAG/CUAP/ETA. All records produced for the implementation of the factory production control related to certification shall be readily available for attestation body inspection.

The applicant shall ensure that the question of responsibility to the notified FPC-certification body for the factory production control is clearly defined, e.g. by appointing a designated person who is independent from production management¹ as far as the technical performance of his function is concerned and who is qualified to maintain the contact with the notified FPC-certification body, to ensure that the above provisions have been observed.

In case of ETA's it should in particular be recalled that the notified FPC-certification body shall seek to obtain from the Approval Body the relevant technical documentation which is essential for the fulfilment of its tasks of attestation of conformity (i.e. the relevant elements contained in the possible confidential part of the ETA).

The notified certification body should also inform the Approval Body of its investigation results, in particular in cases of significant non-conformity to allow it to keep the ETA-file updated.

2.4 Certificate of factory production control

The notified FPC-certification body, when complete fulfilment of the requirements laid down in Annex ZA of the harmonised standard or in the relevant ETA has been established, informs the applicant accordingly and issues a certificate of factory production control.

The certificate should normally be issued for one factory in respect of one harmonised specification. In any case, the factory(ies) covered have to be clearly identified on the certificate of factory production control.

2.4.1 Certificate of factory production control for other products from the same factory

A manufacturer wishing to obtain certificate(s) of factory production control for additional type(s) or model(s) of product(s) made in the same factory to the same harmonised standard or another ETA as the product for which a certificate of factory production control is already held, shall apply to the certification body, using the usual application form. The certification body can decide in such case not to carry out or to only carry out partial factory inspection and to grant the corresponding certificate.

If the manufacturer wishes to apply the certification of the factory production control to additional types of products made at the same factory, but to different harmonised technical specifications, or if the manufacturer wishes to apply for certification of factory production control to be applied in an additional factory that is not covered by an earlier EC-certificate or certificate of factory production control, the elements that have already be assessed during the previous assessment(s) could be used again when relevant, in accordance with sector group practices. In case of doubt, the notified body shall consult the sector group concerned.

2.5 Surveillance (system 2+ only)

The certification body exercises the surveillance of the factory production control on the basis of the requirements of the relevant harmonised technical specification and of the additional guidance of the scheme and on the basis of the original assessment of the factory production control.

The certification body may appoint an inspection body to carry out the surveillance under its authority and responsibility, exercised under agreed conditions.

The manufacturer shall be informed about the results of the surveillance.

The manufacturer shall inform the notified certification body about any intended modification of the production process or factory production control, where this is likely to have an effect on the stated properties of the product. It is up to the certification body to determine whether the announced changes require another inspection or other further investigations. In such cases the manufacturer is not allowed to release CE-marked products resulting from such changes until the certification body has notified the manufacturer accordingly.

¹ In the case of SME's with reduced staff, this condition is not of application

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In the case of ETA, the notified body shall inform the Approval Body that issued the ETA in the case of non-conformity and by any modification of the FPC to allow him either to update the ETA file of the product or to renew the ETA when relevant.

The manufacturer shall keep a record of all non-conformities and complaints relative to the product covered by the certificate of factory production control and make this available to the certification body on request.